

**Regional Connector Transit Corridor
Draft Environmental Impact Statement/
Draft Environmental Impact Report**

APPENDIX Y

CULTURAL RESOURCES -
ARCHEOLOGY (UPDATED)

LOCALLY PREFERRED ALTERNATIVE IMPACTS TO ARCHEOLOGICAL AND PALEONTOLOGICAL RESOURCES

The Draft Technical Memoranda for Archaeological Resources and Paleontological Resources were included with the Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) that was released for public comment on September 3, 2010. This addendum serves to finalize the draft report. Two variations of the Fully Underground LRT Alternative (Little Tokyo Variation 1 and Little Tokyo Variation 2) were analyzed in this report. Little Tokyo Variation 2 was subsequently dropped from consideration, and Little Tokyo Variation 1 became the sole alignment for the Fully Underground LRT Alternative.

On October 28th, 2010, Metro's Board of Directors approved staff's recommendation to designate the Fully Underground LRT Alternative described in the publicly reviewed Draft EIS/EIR for the Regional Connector Transit Corridor as the Locally Preferred Alternative (LPA). After the close of the Draft EIS/EIR comment period, refinements were made to the LPA to reduce impacts and address comments received. This addendum incorporates those refinements. The LPA would provide a direct connection from 7th Street/Metro Center Station to the Metro Gold Line near 1st and Alameda Streets. The Metro Gold, Blue and Expo light rail lines would be connected allowing trains to operate between Claremont and Long Beach, and from Santa Monica to the Eastside. In the action for approval, the Board also directed staff to remove the property located on the southeast corner of 2nd and Spring Streets from the list of potential acquisitions as well as eliminate the station at 5th and Flower Streets. This was due to its close proximity to the existing 7th Street/Metro Center Station and a need to reduce costs. The designated LPA thus includes three new stations instead of the original four described in the Draft EIS/EIR. On January 4th, 2011, the Federal Transit Administration (FTA) authorized Metro to initiate Preliminary Engineering as part of FTA New Starts funding program. In its authorization, FTA requested that Metro among other items pursue the identification of appropriate mitigations and realize potential cost savings. Consistent with FTA's authorization, refinements to the Locally Preferred Alternative have been identified and are to be analyzed as part of the development of the Final EIS/EIR.

This addendum to the Technical Memoranda was developed to describe the project refinements to the LPA. The effects on archeological and paleontological resources are the same as what was described in the Draft Technical Memoranda.

1.0 UPDATED PROJECT DESCRIPTION

On October 28th, 2010, the Metro Board of Directors concurred with staff's recommendation to designate the Fully Underground LRT Alternative as the LPA. The LPA alignment is

essentially the same as the Fully Underground LRT Alternative, except it does not include the Flower/5th/4th Street station and has a modified route through Little Tokyo. However, it still travels under the intersection of 1st and Alameda Streets rather than crossing at-grade, and connects to the Metro Gold Line within 1st Street and north of Temple Street.

LPA refinements made since the Draft EIS/EIR to reduce impacts include:

- Relocation of the proposed tunnel boring machine (TBM) insertion site to the Mangrove property northeast of 1st and Alameda Streets in order to reduce community disruption due to construction activities
- Elimination of cut and cover construction on 2nd Street in Little Tokyo
- Extension of TBM machine operation from 2nd/Hope Street station to 4th and Flower Streets, allowing an additional block of cut and cover construction to be eliminated
- Slight modifications to tunnel depths
- Rerouting of the tunnels beneath Japanese Village Plaza in order to reduce acquisitions on the block bounded by 1st Street, Central Avenue, 2nd Street, and Alameda Street

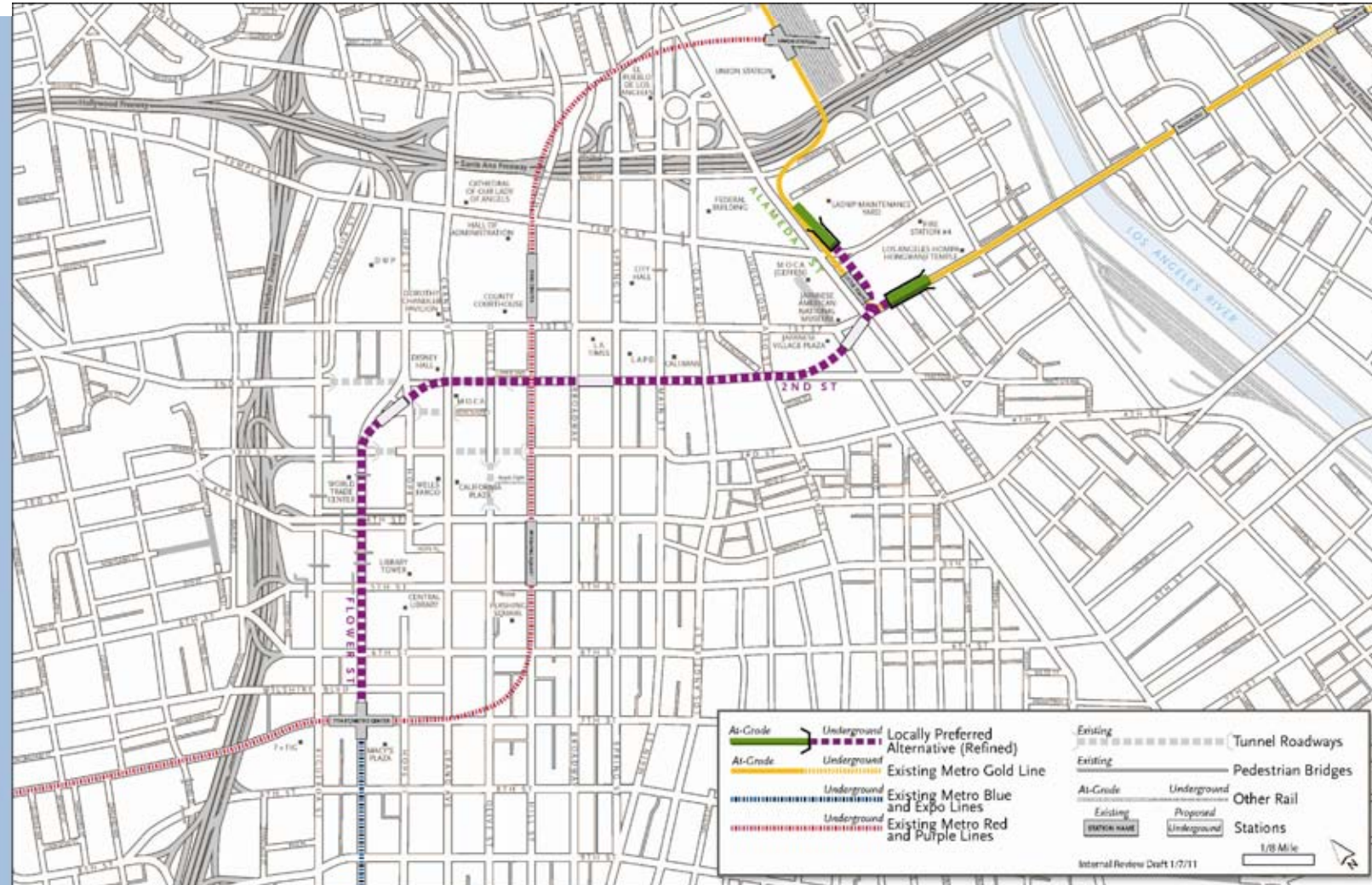


Figure 1 –Locally Preferred Alternative

1.1 Route Overview

The LPA alignment would extend north from the existing LRT platform at 7th Street/Metro Center Station and would run underneath Flower Street. An enhanced pedestrian walkway would be provided along Flower Street from the 4th Street and Flower Street area to the existing 7th Street/Metro Center Station entrance at 7th and Flower Streets, which would improve the pedestrian connection between the Financial District and the 7th Street/Metro Center Station. The tracks would then continue north underneath Flower Street and veer northeast near the intersection of 3rd and Flower Streets. A new underground station would be located just southwest of the intersection of 2nd and Hope Streets.

At 2nd and Hope Streets, a new pedestrian connection would be made to Upper Grand Avenue. A pedestrian plaza connecting to Upper Grand Avenue is currently planned above General Thaddeus Kosciuszko Way as part of the Broad Museum. Metro would construct an elevator from the station entrance to the plaza if one is not already provided. If the plaza is not built, Metro would build a pedestrian bridge to connect the elevator to Upper Grand Avenue.

Tracks would then head east underneath 2nd Street to the next proposed underground station between Broadway and Spring Street (2nd Street/Broadway station). The tracks would continue east underneath 2nd Street to just west of Central Avenue at approximately the pedestrian signal to the JVP, where the alignment would then veer northeast under privately held property and Central Avenue to a newly proposed Little Tokyo/Arts District underground station (1st/Central Avenue station). The proposed underground station would be partially located within Central Avenue and the northern half of the block bounded by 1st Street, Central Avenue, 2nd Street, and Alameda Street. The Señor Fish, Weiland Brewery, the former Café Cuba (The Spice Table), and associated parking would need to be acquired for construction of this station. However, the remaining businesses on that block would remain, including the Office Depot and associated parking. This station may include a small building at ground level on the southwest corner of 1st and Alameda Streets to house ventilation fans. This shallow station may potentially be built without a roof or mezzanine, leaving the below-grade platform level exposed.

An underground junction would be constructed beneath the intersection of 1st Street and Alameda Street. Two new portals would be located to the north and east of the junction, where trains would rise to the surface to connect to the Metro Gold Line heading north to Claremont and east to I-605.

One portal would be located north of Temple Street, northeast of the existing at-grade Little Tokyo/Arts District Station and Metro Gold Line tracks. This portal would rise to the north within the maintenance yard of the City of Los Angeles Department of Water and Power (LADWP) and connect to the existing LRT bridge over US 101, allowing a connection to the Metro Gold Line to Claremont. Tracks would run from the junction under 1st and Alameda Streets through a new tunnel crossing beneath Temple Street and the Mangrove property (the parcel on the northeast corner of 1st and Alameda Streets) to the new portal. This new tunnel

would run immediately east of the existing Little Tokyo/Arts District Station and Metro Gold Line tracks.

The second portal would be located within 1st Street between Alameda and Garey Streets. Tracks would rise to the east within this second portal and connect at-grade to the existing Metro Gold Line tracks toward I-605. 1st Street would be widened to the north to accommodate this second portal and maintain the existing number of through lanes. The widening would start at Alameda Street and continue east, significantly tapering down as it crosses Hewitt Street, returning to the existing condition prior to the Los Angeles Homba Hongwanji Buddhist Temple, to join the existing 1st Street LRT tracks, just west of the 1st Street Bridge.

Access to property northeast of 1st and Alameda Streets, the Mangrove property, would need to be acquired for insertion of the TBM, to stage construction of both portals, to connect to the Metro Gold Line LRT bridge, and to construct the tunnels beneath Temple Street and the Mangrove property. During construction, tracks would be installed in this area at-grade to allow service to proceed on the Metro Gold Line while construction activities occur within the project area. Figure 2-10 provides a map of this alternative.

The existing Metro Gold Line Eastside Extension and the Little Tokyo/Arts District Station surface tracks and station would be maintained for continued service during construction with intermittent disruptions related to construction activities. Once construction is complete, operation of the current Metro Gold Line between Pasadena and East Los Angeles and the existing, at-grade Little Tokyo/Arts District Station would terminate. In its place, Metro would initiate operations on two routes:

- Between Claremont and Long Beach
- Between East Los Angeles and Santa Monica

Crossovers could be located just east of the proposed station at 2nd and Broadway Streets, underground beneath 1st Street just east of the intersection of 1st and Alameda Streets, and underground beneath the Mangrove property, north of the rail junction. In addition, a pocket track, which could also serve as a crossover, would be located beneath Flower Street between 5th and 6th Streets. The crossovers and pocket track may not be needed at these locations and may ultimately be placed in other locations. Tunnel boring machines cannot be used for construction of crossovers since underground crossover locations require cut and cover construction. More information on these construction methods is provided in the Description of Construction, Appendix K.

1.2 Operating Characteristics

The Fully Underground LRT Alternative (LPA) consolidates the Metro Gold Line, Metro Expo Line, and Metro Blue Line into the two following routes:

East-West Route (Santa Monica to I-605 via the Metro Expo Line, Regional Connector, and Metro Gold Line Eastside Extension tracks): Metro Expo Line trains from Santa Monica would travel on existing Flower Street tracks north of the junction at Washington and Flower Streets. After stopping at the existing 7th Street/Metro Center Station, the trains would continue north along the new Regional Connector tracks to a new junction beneath the intersection of 1st and Alameda Streets. Trains would then travel to a new portal on 1st Street, and continue along the Metro Gold Line Eastside Extension tracks to I-605.

North-South Route (Claremont to Long Beach via the Metro Gold Line, Regional Connector, and Metro Blue Line tracks): After stopping at 7th Street/Metro Center Station, Metro Blue Line trains from Long Beach would continue north along the new Regional Connector tracks to a new junction beneath 1st and Alameda Streets. Trains would then travel to a new portal on the LADWP maintenance yard site, and continue along the Pasadena Metro Gold Line and the Foothill Extension to Claremont.

The east-west and north-south routes would each operate with five minute headways during peak hours, combining to yield trains every 2 ½ minutes in each direction along the Regional Connector.

2.0 LPA EFFECTS, IMPACTS AND MITIGATION FOR ARCHAEOLOGICAL RESOURCES

Construction of the Fully Underground LRT Alternative (LPA) has the potential to directly affect archaeological resources within the APE, including previously unidentified archaeological resources, the Los Angeles Zanja System, and sites CA-LAN-3588, P-19-003338, and P-19-003339 (Details regarding these resources can be found in the body of the Technical Memorandum for Archaeology).

Archaeological features associated with these sites may extend into the project area and be subject to direct alteration. This would result in a significant effect. Implementation of mitigation measures described in Sections 1.2.2.1 and 1.2.2.2 would reduce potential direct impacts to identified and previously unidentified archaeological resources to a less than significant level. The LPA would not result in operational impacts to both identified and previously unidentified archaeological resources.

Given that implementation of the mitigation measure described in Section 1.2.2.1 would reduce potential construction impacts to previously unidentified archaeological resources to a less than significant level, the LPA would not contribute to a cumulative impact on unidentified archaeological resources.

Potential destruction of portions of the Los Angeles Zanja System could contribute to a cumulative impact to this resource. Implementation of the mitigation measure described in Section 1.2.2.1.2 would reduce both direct and cumulative impacts to known archaeological resources, including the Zanja System, to a less than significant level.

2.1 NEPA Finding and CEQA Determination

Construction of the LPA has the potential to affect previously unknown resources. With implementation of mitigation measures, potential construction and cumulative impacts would not be adverse or significant under NEPA or CEQA. The LPA would not result in adverse or significant operational impacts to archaeological resources.

2.2. Mitigation Measures

Construction of the Regional Connector Transit Corridor project may impact one or more NRHP- or CRHR-eligible archaeological sites along with an unknown number of previously unidentified archaeological resources.

Since operational impacts to archaeological resources, including both previously recorded and undiscovered resources, are not expected for any of the project alternatives, mitigation for operation would not be required for this project.

In the event that resource avoidance is not possible, and to mitigate impacts to previously unidentified archaeological resources, the following mitigation measures related to construction activities are recommended.

Mitigation measures are also documented in the Mitigation Monitoring and Reporting Program (MMRP), which is part of the Final EIS/EIR.

2.2.1 Treatment of Undiscovered Archaeological Resources

A detailed Cultural Resources Monitoring and Mitigation Plan (CRMMP) would be prepared prior to implementing this project, similar in scope to the CRMMP that was prepared for Metro's Eastside Gold Line Transit Corridor (Glenn and Gust 2004). Implementing a CRMMP during ground disturbance in highly sensitive archaeological areas would ensure that cultural resources are identified and adequately protected.

If cultural resources are discovered or if previously identified resources are affected in an unexpected manner, the CRMMP would ensure that such resources receive mitigation to reduce the impact to a less than significant level. This plan would include, but not be limited to, the following elements:

- Worker training
- Archaeological monitoring
- The scientific evaluation and mitigation of archaeological discoveries
- Native American participation, as needed
- Appropriate treatment of human remains

- Reporting of monitoring and mitigation results

Worker Training

Prior to initiating ground-disturbing activities, a qualified archaeologist would conduct a short awareness training session for all construction workers and supervisory personnel. The session would explain the importance of and legal basis for protecting significant archaeological resources.

Each worker would also learn the proper procedures to follow in the event cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection and the immediate contact of the supervisor and the archaeological monitor.

This worker education session could include visual representations of artifacts (prehistoric and historic) that might be found in the project vicinity, and it could take place on-site immediately prior to the start of ground disturbance.

Supervisory personnel may benefit from longer training sessions, while a brief training would suffice for non-supervisory workers. The brief (approximate 30- to 45-minute) training session may be conducted on-site by video, PowerPoint presentation, or similar media.

Archaeological Monitoring, Evaluation, and Mitigation

Due to poor surface visibility and high archaeological sensitivity of the direct APE, an archaeological monitor would be present during ground-disturbing activities in archaeologically sensitive areas. This would reduce the potential level of impact to buried archaeological resources to a less than significant level. This work would be completed under the direction of an archaeologist who meets the Secretary of the Interior's Standards for archaeologists. An adequate number of monitors would be present to ensure that all earth-moving activities are observed and would be on-site during all grading activities for areas to be monitored.

During the original excavation of previously undisturbed soils, the archaeological monitor(s) would be on-site at a frequency determined by the lead archaeologist. Inspection frequency may vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. Full-time monitoring is warranted within one-half block of potentially significant archaeological resources that are known or suspected to be present within the direct APE.

If potentially significant archaeological resources are exposed during ground-disturbing activities, the project manager would be notified immediately. Archaeological monitor(s) would have the authority to divert or temporarily halt ground-disturbing operations in the area of discovery to allow the resources to be evaluated. Excavation work would halt until the archaeological monitor makes a determination of the significance of the archaeological resource. Construction activities may continue in other areas.

Evaluation of such resources is typically accomplished by a test-level excavation designed to determine the horizontal and vertical extent of the resource, and to characterize its contents. If the discovery proves to be potentially eligible for listing on the NRHP or the CRHR and project plans cannot be altered to avoid affecting the site, then an adverse effect would result within the project area. This adverse effect may be resolved by implementing a Memorandum of Agreement (MOA) between Metro and the SHPO.

Before construction activities are allowed to resume in an affected area, artifacts would be recovered and features recorded using professional archaeological methods. The lead archaeologist operating under the direction of the MOA would determine the amount of material to be recovered for an adequate artifact sample for analysis.

All cultural material collected during the construction monitoring program would be processed using professional archaeological methods. An appropriate sample of recovered materials, selected by the lead archaeologist, would be curated at a curation facility that meets federal standards per 36 CFR Part 79 and made available to other archaeologists and researchers for further study.

Native American Participation

If Native American cultural resources (i.e., prehistoric or ethnohistoric-period artifacts, food remains, or features associated with Native Americans) are exposed during project-related ground disturbance, Metro would contact the Gabrielino/Tongva San Gabriel Band of Mission Indians and the Tongva Ancestral Territorial Tribal Nation. Both groups have expressed interest in the project. One or both of these groups would be asked to provide the services of a trained Native American consultant to monitor ground-disturbing work in the area containing the Native American cultural resources. This monitoring would occur on an as-needed basis, and would be intended to ensure that Native American concerns are taken into account during the construction process.

Human Remains

The discovery of human remains is always a possibility during ground disturbance. For example, an unmarked early Spanish period Native American cemetery was recently discovered near the APE (Applied Earthworks 1999).

The State of California Health and Safety Code Section 7050.5 addresses what should be done when human remains are found during construction. This code section states that when human remains are encountered, no further disturbance would occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code (PRC) Section 5097.98. The County Coroner would be immediately notified of the find.

If the human remains are determined to be prehistoric, the Coroner would notify the Native American Heritage Commission, which would determine and notify a Most Likely Descendant (MLD). The MLD shall complete inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Impacts to human remains may remain significant even after mitigation.

Reporting

If cultural resources are not discovered in the course of construction monitoring, a brief letter to that effect would be prepared by the consulting archaeologist, indicating that the monitoring activities have been satisfied. If previously unidentified cultural resources are discovered in the course of construction monitoring, a report would be prepared following Archaeological Resource Management Report (OHP 1990) guidelines that documents field and analysis results and interprets the data within an appropriate research context.

2.2.2 Treatment of Known Archaeological Resources

Destruction of a resource that is eligible for listing in the NRFP or CRHR would be a significant adverse effect. This effect may be resolved through by implementing an MOA between FTA, Metro, and the SHPO, as well as other interested parties.

Four archaeological sites that are either within or immediately adjacent to the direct APE are presumed eligible for listing on both the NRHP and the CRHR. These include the Los Angeles Zanja System (the Zanja Madre, CA-LAN-887H, and numerous unrecorded numbered zanjas) and sites CA-LAN-3588, P-19-003338, and P-19-003339.

Effects to the data potential of archaeological sites can be mitigated to a less than significant level by preparing and implementing a data recovery plan under Section 106 and CEQA. The actual mitigation measures agreed upon in the MOA may vary in substance and degree, but the MOA would include a process to resolve any adverse effects upon archaeological resources within the direct APE that are eligible for listing in the NRHP or CRHR. The treatment of sites CA-LAN-3588, P-19-003338, and P-19-003339 may include systematic and scientific exposure, evaluation, and if necessary, archaeological data recovery.

Los Angeles Zanja System

The Los Angeles Zanja system was an extensive and integrated water conveyance network that served large areas of the City for multiple generations. Generally speaking, previous construction projects in downtown Los Angeles have unexpectedly encountered and documented limited exposures of a single zanja segment, often after the segment has been damaged by construction equipment. This incomplete approach does not permit the overall Zanja system to be evaluated, given the requirements that the OHP clarified in its recent letter (Toffelmier 2009).

It is likely that other projects (such as emergency utility repair) have damaged segments of the Zanja system without documentation. This repeated damage (both monitored and unmonitored construction impacts) constitutes a cumulative effect that should be mitigated. Construction monitoring alone is insufficient mitigation to address this effect, particularly given the likelihood of damaging the zanjas prior to discovery during project construction process.

Inadvertent project-related damage to the zanjas may constitute an adverse effect under the Criteria of Adverse Effect, “physical destruction or damage” (36 CFR Part 800.5(a) (2) and material impairment as defined in CEQA. This action would contribute to, rather than mitigate, these cumulative effects.

Both Section 106 of the NHPA (as amended) and CEQA require identification, documentation, and evaluation of historic properties/historic resources in a project area (or direct APE). For a poorly mapped and buried linear resource like the Zanja system, identification alone is challenging.

Rather than a costly archaeological excavation program or a remote sensing (ground-penetrating radar, etc.) survey that is unlikely to produce clear-cut results, a proactive identification and documentation program that would facilitate preservation or mitigation in a cost-effective manner is recommended.

This would include using additional documentary research to identify, as accurately as possible, the precise alignments of the zanjas within the APE. Where these alignments are expected to be affected by the proposed project, particularly where cut-and-cover or other near-surface construction techniques (as opposed to tunneling 20 or more feet below the ground surface) are planned in the vicinity of mapped zanja segments, full-time archaeological monitoring would be instituted to ensure documentation.

The archaeological monitors would work closely with equipment operators to ensure that every effort is made to avoid damaging zanja segments prior to their adequate documentation.

Documenting and evaluating the Los Angeles Zanja system would be best accomplished with a system-wide approach that incorporates historical, archaeological, and engineering research and documentation. This systemic approach to documentation and evaluation is a particularly appropriate mitigation measure for the Regional Connector Transit Corridor project, which has the potential to impact multiple zanja segments. Documentation of the zanja segments' alignments and slopes would have the added benefit of enabling future projects to more accurately predict the location of zanja segments outside of the project area.

To mitigate potential impacts to the Los Angeles Zanja system, the project MOA would provide that the system be adequately documented under the direction of an experienced archaeologist and an experienced historical architect, architectural historian, or historian, both meeting the Secretary of the Interior's qualification standards. This documentation would include a combination of historical research, archaeological testing, and architectural documentation, and would be followed by a formal evaluation of NRFP and CRHR eligibility.

It should be noted that substantial documentation already exists for the Zanja system in the form of maps and engineering records, published books and articles, unpublished technical reports, and site records. The collation of available data for the system as a whole would accomplish much of the documentation effort that is proposed here, while intensive, original research would be restricted to the zanja segments that cross the direct APE.

Research and documentation may include such specific measures as:

- Historical research using historical maps, photographs, and other written sources to document creation, maintenance, modification, and abandonment of the system.
- Archaeological research to establish the physical condition, presence of associated features and artifacts, and precise location of each zanja segment within the project's direct APE by using physical exposure through controlled excavation following its discovery during construction monitoring. Resources would be documented using DPR series 523 primary and detail forms, maps, and photographs. The results would be presented in a detailed technical report following Archaeological Resource Management Report (OHP 1990) guidelines. The report would address research questions and assess the NRHP and CRHR eligibility of the system.

- Architectural documentation of exposed zanja segments by producing narrative records, measured drawings, and photographs in conformance with Historic American Engineering Record (HAER) standards prior to any alteration or demolition activity.
- Preserving the results of the historical, archaeological, and historic architectural studies in repositories (e.g., the local main library branch, the lead agency headquarters library, and with identified non-profit historic groups interested in the subject matter).
- Interpretation of the Los Angeles Zanja system for the public through signage along the project alignment, visual representations of zanja alignments using colored pavement, or other appropriate means such as a dedicated internet website.

3.0 LPA EFFECTS, IMPACTS AND MITIGATION PALEONTOLOGICAL RESOURCES

The LPA involves ground disturbance associated with excavations to construct three new stations and an entirely underground tunnel located from the 7th Street/Metro Center Station to east of the intersection of 1st and Alameda Streets. Any ground disturbances in areas of high sensitivity will have the potential to impact paleontological resources at the surface and at depth; areas of ground disturbance in areas of sensitivity ranging from low to high have the potential to impact paleontological resources at a depth of 5 feet or more below the ground surface. In areas where mitigation measures can be implemented, potential impacts can be reduced to a less than significant level. In areas where new underground TBM segments would be constructed, mitigation for paleontological resources would not be feasible resulting in significant and unavoidable impacts.

The LPA would not result in operational impacts to paleontological resources.

In areas where mitigation measures can be implemented, potential impacts can be reduced to a less than significant level thus reducing any cumulative impact on paleontological resources to less than significant. In areas where mitigation measures cannot be implemented, such as in areas where new underground TBM segments would be constructed, cumulative impacts may be unavoidable.

3.1 NEPA Finding and CEQA Determination

The LPA could have adverse effects on paleontological resources. With implementation of mitigation, potential construction and cumulative impacts would not be adverse under NEPA. The LPA would not have significant effects on paleontological resources with implementation of proposed mitigation measures with the exception of areas where tunneling operations cannot be mitigated. In areas where new underground TBM segments would be constructed, mitigation for paleontological resources would not be feasible and thus construction and cumulative impacts would be significant and unavoidable.

The LPA would not result in adverse or significant operational impacts to paleontological resources.

3.2 Mitigation Measures

3.2.1 Construction Mitigation Measures

The following mitigation measures have been developed in accordance with the SVP (1995) standards and guidelines and meet the paleontological requirements of CEQA. Mitigation measures are also documented in the Mitigation Monitoring and Reporting Program (MMRP), which is part of the Final EIS/EIR.

- A qualified paleontologist would produce a Paleontological Monitoring and Mitigation Plan for the proposed project and supervise monitoring of construction excavations. Paleontological resource monitoring would include inspection of exposed rock units during active excavations within sensitive geologic sediments. The monitor would have authority to temporarily divert grading away from exposed fossils to professionally and efficiently recover the fossil specimens and collect associated data.
- All project-related ground disturbances that could potentially affect the Puente Formation, Fernando Formation, and Quaternary older alluvium and terrace deposits would be monitored by a qualified paleontological monitor on a full-time basis (where feasible) because these geologic sediments are determined to have a high paleontological sensitivity (Figure 4.12.3-3). Very shallow surficial excavations (less than 5 feet) within Quaternary younger alluvium would be monitored on a part-time basis to ensure that underlying sensitive units are not adversely affected (Figure 4.12.3-3). Construction monitoring during any tunneling activity is not warranted as any potential fossil specimens present within sensitive geologic units would be crushed and destroyed by the nature of tunneling methodology.
- At each fossil locality, field data forms would be used to record pertinent geologic data, stratigraphic sections would be measured, and appropriate sediment samples would be collected and submitted for analysis.
- Due to the likelihood of the presence of microfossils, matrix samples would be collected and tested within the Puente Formation and Fernando Formation. Testing for microfossils would consist of screen-washing samples (approximately 30 pounds) to determine if significant fossils are present. Productive tests would result in screen-washing of additional bulk matrix up to a maximum of 2,000 pounds per locality to ensure recovery of a scientifically significant sample.
- Recovered fossils would be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and repositied in a designated paleontological curation facility (such as the Natural History Museum of Los Angeles County).

- The paleontologist would prepare a final monitoring and mitigation report to be filed, at a minimum with Metro and the repository.

3.2.2 Operational Mitigation Measures

No mitigation is required because operational impacts to paleontological resources are not expected for any of the project alternatives.

California State Office of Historic Preservation Coordination

The Cultural Resources – Archaeology Technical Memorandum for the Regional Connector Transit Corridor project contained in this appendix was submitted to the California State Office of Historic Preservation. The State Historic Preservation Officer (SHPO) reviewed the technical memorandum including the determinations of eligibility for all potentially eligible properties within the Area of Potential Effect (APE). On June 1, 2010, the SHPO concurred with the determinations of eligibility and with the findings of effect from project alternatives. That concurrence letter is included in the following pages.

**OFFICE OF HISTORIC PRESERVATION
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1 June 2010

Reply To: FTA090409B

Dolores Roybal Saltarelli
Project Manager, LACMTA
One Gateway Plaza
Los Angeles, CA 90012-2952

Re: Determinations of Eligibility and Finding of Effect for the Regional Connector Transit Corridor Project, Los Angeles, Los Angeles County, CA

Dear Ms. Saltarelli:

Thank you for your letter of 19 April 2010 continuing consultation on behalf of the Federal Transit Authority (FTA) for the above referenced undertaking in order to comply with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulation at 36 CFR Part 800. You are requesting that I review the determinations of eligibility and assessment of effects for the Regional Connector Transit Corridor Project.

After reviewing the enclosed cultural resources report, I am able to concur with FTA's determinations of eligibility. 289 properties were identified in the APE for the project. Of those 289, 118 were of sufficient age to be considered for inclusion in the National Register of Historic Places (NRHP). Fifteen properties were previously listed in the NRHP and 33 were determined eligible by FTA. FTA has determined the following properties are eligible for inclusion in the NRHP:

1. Barker Brothers, 818 West 7th Street
2. Fine Arts Building, Global Marine House, 811 West 7th Street
3. 811 Wilshire Building, Tishman 615 Building, Wilflower Building, 811 Wilshire Boulevard
4. The California Club, 528 South Flower Street
5. 2nd Street Tunnel, Bridge# 53C 1318
6. Los Angeles Civic Center Historic District
7. Los Angeles Department of Water and Power Building, John Ferraro Office Building, 111 North Hope Street
8. Ahmanson Theater, 135 North Grand Avenue
9. Mark Taper Forum, 135 North Grand Avenue
10. Dorothy Chandler Pavilion, 135 North Grand Avenue
11. Los Angeles County Hall of Administration, Kenneth Hahn Hall of Administration, 500 West Temple Street, 222 North Grand Avenue
12. El Paseo de los Pobladores de Los Angeles, 224 North Grand Avenue
13. Los Angeles County Courthouse, Stanley Mosk Los Angeles County Courthouse, 111 North Hill Street
14. County of Los Angeles Central Heating and Refrigeration Plant, 301 North Broadway
15. Los Angeles County Hall of Records, 320 West Temple Street
16. Court of Historic American Flags, 224 North Hill Street, 100 block Hill Street
17. Los Angeles County Law Library, Mildred L. Lillie Building, 301 West 1st Street
18. Hall of Justice, Los Angeles County Jail, 211 West Temple Street

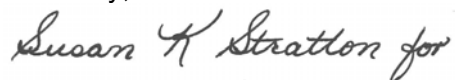
19. Clara Shortridge Foltz Criminal Justice Center, 210 West Temple Street
20. Los Angeles City Hall, 200 North Spring Street
21. City Health Building, City Hall South, 111 East 1st Street
22. Federal Building, North Los Angeles Field Office, 300 North Los Angeles Street
23. The Police Facilities Building, Parker Center, Motor Transportation Division, 150 North Los Angeles Street and 151 North Judge John Aiso Street
24. Mark Kuwata Real Estate, 301 East 1st Street, 104-106 North San Pedro Street, 104-106 Judge John Aiso Street
25. Koyasan Buddhist Temple, Koyasan Church, Koyasan Temple, 342 East 1st Street
26. John A. Roebling's Sons Co., Robert Arranaga & Company, Incorporated, 216 South Alameda Street,
27. Los Angeles Times Building, 202 West 1st Street
28. The Mirror Building (Site of Butterfield Stage Station), Los Angeles Times-Mirror Annex, Times Building South, Mirror-News Building, 145 South Spring Street
29. Cathedral of Saint Vibiana, 214 South Main Street
30. Cathedral of Saint Vibiana, Rectory, 114 East 2nd Street
31. J.R. Newberry Company Building, 900 East 1st Street
32. 1st Street Viaduct, 1st Street between Vignes Street and Mission Road
33. Walt Disney Concert Hall, 111 South Grand Avenue

I concur with the NRHP determinations but will not comment on those properties identified solely for CRHR determination. The remaining resources in the APE are not eligible for inclusion in the NRHP.

Only one historic property, the 2nd Street Tunnel will be adversely affected by the project. I concur with the FTA's determination of adverse effect. Once FTA has submitted a draft MOA for the consultation I can comment on the mitigation measures for the undertaking.

Thank you for considering historic properties in your planning process. If you have any questions, please contact Amanda Blosser of my staff at (916) 654-7372 or e-mail at ablosser@parks.ca.gov.

Sincerely,



Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

MWD:ab

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**Regional Connector Transit Corridor
Cultural Resources - Archaeology
Technical Memorandum**

April 2, 2010

Prepared for

Los Angeles County Metropolitan Transportation Authority

One Gateway Plaza

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State Clearinghouse Number: 2009031043



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ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
California Register	California Register of Historical Resources
CDPR	California Department of Parks and Recreation
CEQA	California Environmental Quality Act
CHL	California Historical Landmark
CHRIS	California Historical Resources Information System
CRMMP	Cultural Resources Monitoring and Mitigation Plan
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HAER	Historic American Engineering Record
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority (LACMTA)
MLD	Most Likely Descendant
MOA	Memorandum of Agreement
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act

NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places (National Register)
OHP	California Office of Historic Preservation
PRC	Public Resources Code
SCCIC	South Central Coastal Information Center
SHPO	State Historic Preservation Officer
TCP	Traditional Cultural Properties/Places
TPS	Transit Priority System
TSM	Transportation Management System
USDOT	US Department of Transportation

1.0 SUMMARY

1.1 Purpose and Scope

SWCA Environmental Consultants (SWCA) conducted a cultural resources inventory of the project area that may be affected by the proposed Regional Connector Transit Corridor project. The project is 1.9 miles in length and located in the City of Los Angeles, Los Angeles County, California.

The purpose of the Regional Connector project is to improve the region's public transit service and mobility. The overall goal of the project is to improve mobility within the corridor by connecting to the light rail service of the Metro Gold Line to Pasadena, the Metro Gold Line to East Los Angeles, the Metro Blue Line, and the Metro Expo Line. This link would serve communities across the region, allowing greater accessibility while serving population and employment growth in downtown Los Angeles.

1.2 Dates of Investigation

SWCA conducted an initial cultural resources records search for the project on February 10, 2009; additional data were requested and assessed between February 2009 and January 2010. The Native American Heritage Commission (NAHC) performed a Sacred Lands File search on February 11, 2009. SWCA conducted an intensive pedestrian survey of the direct Area of Potential Effects (direct APEs) on March 16 and April 7, 2009, and on January 7, 2010. This report was completed on January 11, 2010.

1.3 Investigation Constraints

Most of the direct APE is covered in buildings, pavement, or landscaping due to the urban nature of the project area. Consequently, ground-surface visibility ranges from extremely poor (0 to 5 percent) to good (70 percent) throughout the project area. Average visibility was extremely poor (less than 5 percent). Three parts of the direct APE were fenced to protect to active construction projects and not accessible to SWCA archeologists.

1.4 Summary of Findings

The records and literature search indicated that 24 previously recorded cultural resources are located within a 0.25-mile radius of the APE, including 21 historic archaeological sites, one prehistoric archaeological site, one multi-component site, and one historic isolate. Of the 24 previously recorded archaeological resources, five (CA-LAN-887H, CA-LAN-3588, P-19-003097, P-19-003338, and P-19-003339) are located within the project direct APE and four are adjacent (within one city block) to the direct APE.

The records and literature search also identified 143 previously conducted cultural resource studies within a 0.25-mile radius of the APE. Of these, 23 are located within the project direct APE, and 12 are adjacent to the direct APE.

Historic maps indicate that the direct APE was completely developed prior to 1888, and that several streets within the project area have been realigned over the past 120 years. The Los Angeles zanja system (the city's original water system, which operated from 1781 through the early 1900s) also crosses the direct APE in numerous locations.

The NAHC Sacred Lands File search indicated the presence of cultural resources important to Native Americans in the project area. The NAHC response included a list of five Native American contacts that may have knowledge of cultural resources in the project area. SWCA sent location maps, a description of the proposed project, and its APE to these five groups via U.S. mail; each letter was followed up with a telephone call.

Responses were received from two of the five Native American contacts. These responses are documented in Table 3-1. SWCA recommends that Metro consult with the Gabrielino/Tongva San Gabriel Band of Mission Indians and the Tongva Ancestral Territorial Tribal Nation.

In the course of the pedestrian survey, a single archaeological site (RC-1) within the direct APE was encountered. This resource consists of a historic brick alignment, likely representing part of a late nineteenth/early twentieth century structure foundation. Available evidence suggests that RC-1 lacks sufficient integrity; it is recommended not eligible for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (California Register).

None of the five previously recorded archaeological sites within the direct APE were observed during the pedestrian survey. Site P-19-003097, a historic site consisting of nineteenth and twentieth century features and artifacts, was considered to be significant by its excavators.

Data recovery in 2002 indicated that impacts to this resource would be mitigated to less than significant levels and the site was subsequently destroyed. Site CA-LAN-3588, a historic site consisting of features and artifacts dating to ca. 1880–1935, is presumed eligible for listing on both the NRHP and California Register due to its association with earliest Japanese occupation of Little Tokyo.

Sites P-19-003338 and P-19-003339 are American period artifact deposits that have not been formally evaluated. For purposes of this analysis they are presumed eligible for both registers.

The Los Angeles zanja system (recorded as CA-LAN-887H, P-19-003103, and P-19-003352) crosses the direct APE in numerous places. A segment of the zanja system (P-19-003103) north of the APE was nominated for listing in the National Register under Criterion A at the local level of significance for its direct role in the development of Los Angeles between 1781

and ca. 1900. The system as a whole is presumed eligible for listing in the National Register and California Register for the same reason.

Resources are “presumed eligible” when, in the professional opinion of a qualified archeologist, there are reasons to believe that it may be eligible for listing in the National Register or California Register, but there are factors that inhibit excavation or direct examination of the resource. Therefore, resources presumed eligible may or may not ultimately be determined eligible.

1.5 Potential Impacts

The background research and archaeological survey results indicate that subsurface archaeological deposits are commonly encountered during construction projects in downtown Los Angeles. Consequently, most of the direct APE is considered highly sensitive for the presence of historical resources, including both prehistoric and historic archaeological sites.

Although the No Build Alternative would not affect archaeological resources, the remaining alternatives have the potential to alter, remove, or destroy both known and previously undiscovered archaeological resources within the APE. These potential impacts include direct construction impacts and cumulative impacts.

1.6 Recommendations

This evaluation identified four extant properties within the direct APE that are presumed to be eligible for listing in the National Register and California Register: the Los Angeles zanja system (CA-LAN-887H) and sites CA-LAN-3588, P-19-003338, and P-19-003339. The build alternatives have the potential to adversely affect these resources. Implementing two mitigation measures—Treatment of Previously Unrecorded Archaeological Resources (MM-A-1) and Treatment of Known Archaeological Resources (MM-A-2)—would reduce both direct and cumulative impacts to these resources. After mitigation, potential construction and cumulative impacts would not be significant under both the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA).

1.7 Disposition of Data

This report will be filed with the Federal Transit Administration (FTA), Metro, CDM, the South Central Coastal Information Center (SCCIC) located at California State University in Fullerton, and SWCA. All field notes and records related to the project will remain on file at the South Pasadena office of SWCA.

2.0 INTRODUCTION

This technical memorandum identifies and evaluates archaeological resources and potential effects of construction and implementation of the proposed Regional Connector Transit Corridor project. Historic built environment and paleontological resources are addressed in separate reports.

2.1 Regulatory Setting

National Environmental Policy Act (NEPA) guidelines include compliance with related federal laws that require identification of historic properties, and consideration of project-related effects on those properties. This report was prepared to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and with regulations contained in 36 Code of Federal Regulations (CFR) Part 800. These regulations require federal agencies to consider the effects of proposed projects on historic properties as part of the environmental assessment process.

Section 106 of NHPA requires federal agencies take into account effects of undertakings on historic properties and allow the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on those undertakings, following these regulations (36 CFR Part 800).

This technical memorandum was also prepared to comply with requirements of CEQA and the CEQA Guidelines (CERES 2009) as they apply to cultural resources. Under CEQA, it is necessary for a lead agency to evaluate proposed projects for the potential to cause significant impacts on “historical resources.” A proposed project that may affect historical resources is submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval by the lead agency and before any project-related clearance, demolition, or construction activities are commenced.

If a proposed project could be expected to cause substantial adverse change to a historical resource, environmental clearance for the project would require evaluating alternatives and/or implementing mitigation measures to reduce or avoid impacts. If a project is expected to result in an impact on historical resources, CEQA Guidelines require analysis of a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most the basic objectives of the project and avoid or substantially lessen any significant impacts on the historical resource.

Properties that may be historic resources within the identified project APE were evaluated for National Register of Historic Places (National Register)-eligibility according to criteria set forth in 36 CFR Part 60.4. The age criterion for inclusion in the National Register is 50 years and older, except in cases of overriding significance (criteria consideration G).