County of Los Angeles
CHIEF EXECUTIVE OFFICE
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WILLIAM T FUJIOKA
Chief Executive Officer

Board of Supervisors
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Third District

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Fourth District

MICHAEL D. ANTONOVICH
Fifth District

April 7, 2009

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

CIVIC PARK PROJECT
(ALL DISTRICTS) (3 VOTES)

SUBJECT:

Approval of the recommended actions will allow the Grand Avenue Park Development, LLC to proceed with the completion of design services for the Civic Park Project.

IT IS RECOMMENDED THAT YOUR BOARD:

1. Approve the schematic design, including requirements for project amenities/elements, of the Civic Park Project, as recommended by the Grand Avenue Committee to both the County and the Community Redevelopment Agency of the City of Los Angeles before action by the Grand Avenue Authority pursuant to the applicable Civic Park Design Agreement.

2. Authorize to the Chief Executive Office to coordinate the relocation and/or removal of existing plaques, monuments, and artwork currently located in the County Mall.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Grand Avenue Park Development, LLC (Developer), formerly The Related Companies, L.P., has requested approval from the Grand Avenue Authority (Authority) for the schematic design of the Civic Park Project. Prior to the Authority's action, the County and the Community Redevelopment Agency of the City of Los Angeles (CRA) are required to provide their approval.

Background

The Authority was created in September 2003 through a Joint Powers Agreement between the County and CRA and is a separate legal entity which selected The Related Companies, L.P. (Related) as the developer for the Project in September 2004 after a public process.

In February 2007, your Board approved various actions relative to the phased development of the Grand Avenue Project. As part of the Phase I development, Related is required to oversee the design and construction of improvements to an expanded 16-acre Civic Park, which will stretch from Grand Avenue at the Music Center to City Hall at Spring Street. In July 2008, the Authority approved Related's request to assign its rights and obligations under the Civic Park Design Agreement to, and assumption by, a newly-formed entity called Grand Avenue Park Development, LLC, which is wholly-owned and controlled by Related.

Park Design

In accordance with the Civic Park Design Agreement, Rios Clementi Hale Studios (Rios) was hired as the park programmer by Related in 2006. Since that time, Rios has solicited input from the public, governmental agencies and other interested parties in determining the proposed park uses. Schematic design, including requirements for all project amenities/elements, is now complete and requires approval by your Board and the CRA before approval by the Authority. The attached Basis of Design describes the schematic design.

The schematic design unifies the three blocks and an eighty-two foot grade change with perimeter promenade paths at the north and south to create a pedestrian loop. The existing Arthur J. Will Memorial Fountain will be rehabilitated in its current location, new multi-use performance and event lawns will be created and new garden areas will be introduced. Throughout the park, the planting design preserves many of the site's mature trees and establishes a new palette of native sun and shade plantings along the promenade paths. The schematic design increases the green space by two additional acres and decreases the current allocation of hardscape. The design also provides for a continuous path complying with the Americans with Disability Act (ADA) accessible standards from the top at Grand Avenue to the bottom at Spring Street.

The proposed project includes four project areas known as Fountain Plaza, Performance Lawn, Community Terrace, and Event Lawn. The Fountain Plaza includes stairs, terraces, planters, accessible ramps and elevator to accommodate a grade change of approximately 19 vertical feet from Grand Avenue to the Arthur J. Will Memorial Fountain. To achieve pedestrian interest and access to the fountain plaza this project area will require the demolition, redesign and re-engineering of the existing vehicular ramps to the County Mall

garage with garage access to remain off Grand Avenue; restoration of the historic Arthur J. Will Memorial fountain; construction of a new one-story building for the relocation of the current Starbuck's Café, as well as ATM facilities, public restrooms, and park support offices; and installation of landscaping and pathways.

The second area is the Performance Lawn and includes the demolition of the existing Starbuck's Café and existing ATM facilities; reconfiguration and enlargement of the lawn area for performances; creation of a new Olive Tree Courtyard, Children's Garden with children's play sculpture elements; and refurbishment of existing hardscape walks, stairs and site walls.

The third area referred to as the Community Terrace, consists of redesign of the existing Court of Flags. This area includes more garden and planting areas as well as installation of stairs, ramps, relocated flags, and planted terraces to accommodate a grade change of approximately 15 vertical feet from the existing Court of Flags level to Broadway. If funds allow as design progresses, this areas will include multi-cultural botanic gardens with associated wayfinding, plant identification, and educational signage systems. This learning garden provides specimen plantings from over 100 biozones from regions around the world that all cohabitate in Los Angeles.

The final area is called the Event Lawn and includes relocation and engineering of vehicular ramp access to the secured parking at the Clara Shortridge Foltz Criminal Justice Center from Broadway; demolition of the surface parking lot; installation of an event lawn with high-performance turf; and construction of a marketplace and event staging area to accommodate community markets, event loading, temporary parking and pedestrian pathway.

To further assist the completion of design services for the Civic Park, it is recommended that your Board authorize the Chief Executive Officer to coordinate the relocation and/or removal of current plaques, monuments, and artwork from the County Mall to other more appropriate County facilities or locations where possible.

It is anticipated that final construction documents will be completed in spring 2010 and pursuant to Section 3.2 of the Civic Park Design Agreement require approval both of your Board and the CRA prior to the Authority's approval. Construction is tentatively scheduled for a 24 month period to begin in spring 2010.

FISCAL IMPACT/FINANCING

The total estimated cost of the proposed project is $56.0 million including $41.5 million for hard construction costs, $3.5 million for contingency fund and $11.0 million for project soft costs.

The proposed project is funded by $50,750,000 Grand Avenue Project, $970,000 City of Los Angeles Proposition 40 allocation, and $4,280,000 anticipated interest income earned between the deposit of funds from the Grand Avenue Project to proposed project completion.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Section 3.2 of the Civic Park Design Agreement dated March 20, 2006 by and between the Authority and the Developer, the schematic design drawings and cost estimates require the prior approval of both the County Board of Supervisors and the CRA Board.

ENVIRONMENTAL DOCUMENTATION

On February 13, 2007, acting as a responsible agency, your Board certified the Grand Avenue Project Environmental Impact Report as prepared and certified by the Grand Avenue Authority as lead agency for the Grand Avenue Project. The recommended action is within the scope of the Project in the previously certified Environmental Impact Report.

CONCLUSION

Upon approval of the recommendation, please forward an adopted copy of the Board letter to the Chief Executive Office, Facilities and Asset Management.

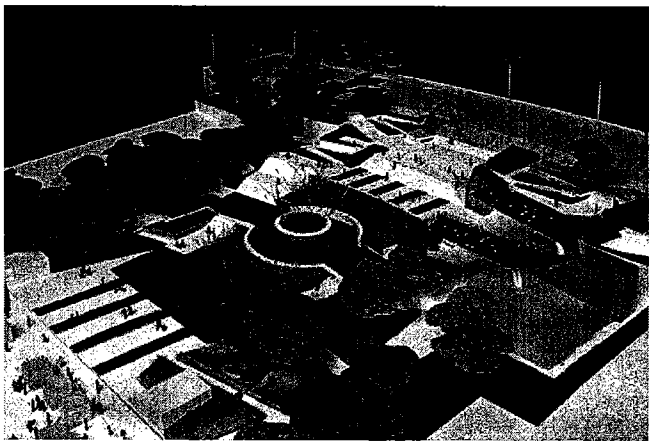
Respectfully submitted,

WILLIAM T FUJIOKA
Chief Executive Officer

Attachment

WTJ:DL:JSE
DJT:DKM:mc

c: County Counsel
The Los Angeles Grand Avenue Authority



CIVIC PARK
LOS ANGELES, CA

BASIS OF DESIGN
100% SCHEMATIC DESIGN
February 20, 2009

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February 20, 2009

CIVIC PARK

The New Civic Park, an approximately 12-acre site at the heart of downtown Los Angeles' civic and cultural center, will remake a neglected and often overlooked public space into a spectacular community gathering place for Los Angeles. The park's flexible design provides for the many facets of urban life, from passive to programmed, personal to public.

The 100% Schematic Design adheres to the programs and features of $56 million dollar budget associated with the "Base Park" presented in Spring 2008. At the same time, the current design also aspires to the connective, celebratory, multi-cultural aspirations of the "Enhanced Park," allowing for the eventual implementation of the fully realized vision at a future date.

The new Civic Park re-establishes the central axis from City Hall to the Department of Water and Power that is currently lost, and unifies the site's four blocks with perimeter promenade paths at north and south to create a 2/3 mile pedestrian loop. The existing Arthur J Will Memorial Fountain will be rehabilitated, new multi-use performance and event lawns will be created, and, at the heart of the park, a new Multi-cultural Botanical Garden (Alternate) will feature specimen plants from around the world, representing the diverse cultural make up of Los Angeles. Throughout the park, planting design preserves many of the site's mature trees and establishes a new palette of native sun and native shade plantings along the Promenade paths.

The Basis of Design document that follows establishes the assumptions, existing conditions, and intended design methodologies proposed by the Project Design Team for review and comment by oversight agencies and entities.

PROJECT DESIGN TEAM:

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PART 1 - GENERAL

1.1 GENERAL SCOPE INFORMATION

A. Rios Clementi Hale Studios (RCHStudios) is the Landscape Architect for the Civic Park project. RCHStudios Project Team structure is as follows:
   1. Principal in Charge: Mark Rios
   2. Senior Associate: Anthony Paradowski
   3. Project Manager: Jessa Chisari
   4. Project Designer: John Fishback

B. The Project Scope includes Site Design of park structures, vehicular ramps, water feature, site lighting, park event infrastructure, hardscape, planters, paving, and planting design for approximately 11.7 acres (510,000 square feet) on structure and on grade.

C. The final Schematic Design package separates park design elements into Base Scope elements and three (3) categories of design alternates.
   1. Two elements previously called out as Alternates have been incorporated into the Base Scope – Alt. 1.1a Grand Ave Elevator/Restrooms and Alt. 3.4 Broadway Terraces.
   2. Category 1 Alternates are recommended to be added to the Base Scope.
   3. Category 2 Alternates are recommended to included as alternates in the DD process
   4. Category 3 Alternates are recommended not to be included at this time.

1.2 PROGRAM

A. The Site Design Program is based on the Civic Park Pre-Schematic Program Design document dated September 20, 2006 and approved by the Los Angeles Grand Avenue Authority.

B. The Site Design is based on the Site Boundary and topographic survey prepared by the Project Civil Engineer dated December 2007, supplemental survey and scans August 15, 2008 and October 6, 2008, and the Preliminary Findings Geotechnical Report prepared by GeoTechnologies, Inc dated September 8. 2008.

C. The Site Design is based on the RCHStudios Concept Master Plan Base Park Plan dated 22 April 2008 and includes the following project areas. Please see Appendix A: Project Area Breakdown and Appendix B: Building Program Areas for further detail:
   1. Fountain Plaza (Block 1) 141,000 SF
   2. Civic Gardens (Block 2) 148,000 SF
   3. Community Terrace (Block 3) 103,000 SF
   4. The Green (Block 4) 118,000 SF

D. The Fountain Plaza (Block 1)

   Program will include the following design elements and amenities:

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1. Stairs, terraces, planters, accessible ramps and/or elevator to accommodate a grade change of approximately 19 vertical feet from Grand Avenue to the Fountain level.

2. Demolition, redesign and re-engineering of the existing Grand Avenue vehicular ramps to the County Mall garage in the preferred "J-Ramp" configuration approved by the Grand Avenue Committee September 13, 2007 and reviewed by members of the Grand Avenue Authority, CRA staff and County staff at a series of meetings during Spring 2008.
   a. The basis for design of the J-Ramps include preliminary pricing which was informed by traffic studies by The Mobility Group dated August 28, 2007, preliminary structural engineering by Walter P. Moore/Nabih Youssef and Associates, and preliminary civil engineering by Mollenhauer Group.

3. Rehabilitation and enhancement of the existing Arthur J. Will Memorial Fountain:
   - Base Scope includes Historic Renovation and mechanical updates as well as new finishes and the extension of a membrane pool for future interactive jet features.
   - Alternate Z1 includes (80) interactive jets and lights at the Membrane Pool as well as a Grotto Waterfall. This item will be included as a design alternate through the Design Development process.
   - Alternate Z2 includes choreography and control of the jets and lights in the Upper Fountain bowl. This item will be included as a design alternate through the Design Development process.
   - Alternate 1.2 includes additional (172) jets and lights at the Membrane Pool. This item is not recommended for inclusion at this time.

4. Pedestrian walks, vehicular service access, gardens, and planting design.

5. Public restrooms to be located adjacent to the future Café/Restaurant location along the North Promenade..

6. Secure area for trash and recycling as well as possible park storage and mobile cart storage/wash-down area..

7. Utility provisions for future two-story, 5,000 to 6,000 gsf food service facility serving both Grand Avenue and Park levels.

8. Provision of new ATM facility to replace those in Block 2.

9. Wet and Dry Utilities including water and sanitary supply for park restrooms, Technical Power Infrastructure to support fixed and temporary events, Cabling Distribution Pathways, Media Hydrants, Installed Structured Cabling (tele, data, AV) and Emergency Public Address System (EPA). In addition, new electrical power is provided for fountain lighting, pumps and controls..

10. Removal and/or relocation of existing plaques, monuments, and artwork as shown on the drawings and in coordination with County CEO's Office, County Arts Commission, and County Supervisors' Offices.

11. Removal, refurbishment, and relocation of existing "character-defining features" noted in the EIR: Hi Fi Speaker Poles, Precast Benches and the possible re-use

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of existing granite panels to be removed at new park features such as the Olive Court or Grand Avenue Terraces.

12. Park identity signage and wayfinding, signage and lighting enhancements at various park locations are to be integrated with the project during Design Development.

E. Civic Gardens (Block 2)

Program will include the following design elements and amenities:

1. Demolition of the existing 575 sf Starbuck's and relocation a new approximately 1500 sf Starbuck's café. Exact location to be determined in negotiations with the County CEO's Office. Alternate 2.1a, listed as a Category 1 Alternate provides for Starbucks Building Pad and Utilities. Alternate 2.1b, listed as a Category 2 Alternate provides a core and shell building for tenant improvement by Starbucks.

2. Reconfigured and enlarged lawn area for performances, to include stage.

3. Removal of existing ATM facilities (replacement in Block 1 or as part of Starbucks relocation).

4. Planting design

5. Refurbishment of existing hardscape walks, stairs and site walls and new site walls and seat walls.

6. Removal, refurbishment, and relocation of existing "character-defining features" noted in the EIR: Hi Fi Speaker Poles, Precast Benches and the possible re-use of existing granite panels to be removed at new park features such as the Olive Court or Grand Avenue Terraces..

7. Removal and/or relocation of existing plaques, monuments, and artwork as shown on the drawings and in coordination with County CEO's Office, County Arts Commission, and County Supervisors' Offices.

8. Creation of a new Olive Court as indicated on the drawings.

9. Dry Utilities including Technical Power Infrastructure to support fixed and temporary events, Cabling Distribution Pathways, Media Hydrants, Installed Structured Cabling (tele, data, AV) and Emergency Public Address System (EPA).

10. This area includes a location for Alternate 2.2 Children's Garden with children's play sculptural elements. This Category 2 alternate will be further developed through the DD process.

11. Park identity signage and wayfinding, signage and lighting enhancements at various park locations are to be integrated with the project during Design Development.

F. Community Terrace (Block 3)

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Program will include the following design elements and amenities:

1. "Broadway Terraces" shown as Alternate 3.4, will be incorporated into the Base Scope for the park - Stairs, ramps, and planted terraces to accommodate a grade change of approximately 15 vertical feet from existing Court of Flags level to Broadway and to establish an ADA accessible entrance to the Park from Broadway.

2. Demolition of existing flag plinths and relocation of existing Veterans Memorial Flags to County storage for future off-site location in coordination with County CEO's Office and County Arts Commission. Re- installation costs not included in Park Budget.

3. Alternate 3.2 (Category 2) shows a renovated planting design to include Multi-cultural Botanic Gardens feature with associated wayfinding, plant identification, and educational signage systems. The learning garden provides specimen plantings from over one hundred biozones from regions around the world that all cohabitate in Los Angeles.

4. Coordination with MTA regarding new canopy proposed by the MTA for installation at the Civic Center station as well as new pedestrian improvements proposed as Alternate 3.1 (Category 3).

5. Refurbishment of existing hardscape walks, stairs and site walls.

6. Dry Utilities including Technical Power Infrastructure to support fixed and temporary events, Cabling Distribution Pathways, Media Hydrants, Installed Structured Cabling (tele, data, AV) and Emergency Public Address System (EPA).

7. Park Operations Enclosures. An approximately 600 sf enclosure to house technology operations equipment and personnel and an approximately 600 sf enclosure to house maintenance workshop, storage, and office will be added to the garage level under the Court of Flags.

G. The Green (Block 4)

Program will include the following design elements and amenities:

1. Demolition, relocation, and engineering of vehicular ramp to existing garage at Foltz Criminal Justice Center (Criminal Courts) with a new curb cut and access drive from Broadway instead of Spring Street, and entering garage at existing location. This item includes engineering of retaining walls and planting design at new edge along south facade of Criminal Courts building.
   a. Per 8/27/08 on-site meeting with ISD Parking Services, this ramp is designed for regular vehicular loads only, as truck access is via loading dock at Spring Street.

2. Event Lawn with high-performance turf.

3. Pedestrian walks, vehicular service access.

4. Marketplace and event staging area to accommodate community markets, event loading, temporary parking, and pedestrian pathway. This area will be design to accommodate vehicular loads.

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5. Stairs and ramp at Broadway to accommodate a grade change of approximately 12 vertical feet from Broadway to Spring. Additional planted terraces resembling those at the adjacent Broadway Terraces are to be developed as Alternate 4.1 (Category 2).

6. Public restrooms – Women's Restroom with (3) standard stalls and (1) ADA stall. Men's Restroom with (2) urinals and (1) ADA Stall.

7. Alternate 4.3a (Category 1) One-story 1,890 sf Park Facilities building including technology equipment room, electrical room, and public restrooms. Event support spaces (event storage, green room, dressing room) are provided for but are not currently budgeted.

8. Utility provision for future one-story, approximately 1,560 sf food service facility.

9. Possible provision of new ATM facility at Park Facilities building location.

10. Wet and Dry Utilities including water and sanitary supply for park restrooms, technical power infrastructure to support fixed and temporary events, Cabling Distribution Pathways, Media Hydrants, Installed Structured Cabling (tele, data, AV) and Emergency Public Address System (EPA) as well as power supply for irrigation.

11. Grand Stair access from Criminal Courts building to the Park (Alternate 4.2) is not included in the current scope of work.

H. Public Art

1. The Public Art component for this project identifies locations for future commissioned sculptures.

   Two Artist Installation Gardens located at Blocks 1 and 2 were included in the SD set as Alternates 1.4 and 2.5. Although these gardens will not be included at this time, it is possible to install them at a future date as funds are made available.

I. Fire Access

The Site Design includes provisions for onsite fire truck access and designated fire lanes. Program requirements have been confirmed with the County of Los Angeles Fire Department in a meetings held July 30, 2008 at Department of Public Works headquarters with Supervisor Bernard McDeul and Captain Marcos Espiritu and February 12, 2009 with Captain Marcos Espiritu. The existing fire lanes at the County Mall (Blocks 1 and 2) will remain in place although they will be repaved to allow for ADA access requirements. New paving will meet current structural requirements for fire trucks.

J. Landscape Planting and Maintenance.

Criteria for landscape planting and irrigation systems maintenance shall be in conformance with independent Park Maintenance entity's company standards. Park Maintenance Company has not been determined. In the absence of Park Maintenance Company, standards according to LA County Department of Public Works (LACDPW) will be consulted.

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K. Refuse Containment.
The Site Design includes provisions for refuse containment and vehicular access to refuse areas. Program requirements to be confirmed with appropriate parties:
   a. County Owner's representative
   b. County Bureau of Sanitation
   c. Park Management entity. Park Management entity is yet to be determined.

L. Tree evaluation.
Existing trees have been catalogued through on-site evaluation of tree health, visual condition, and species. Determinations for retention, protection, or relocation of trees are included in the Tree Demolition and Transplant Plans.

M. B Permit Work.
1. The Site Design includes limited hardscape or planting design changes of the streetscapes along Grand Avenue, Hill Street, Broadway and Spring Street as necessary to accommodate new park elements outside of the right-of-way.
2. Enlarged crosswalks at Grand Avenue, Hill Street, Broadway and Spring Street as well as possible additional crosswalks at Hill Street and Broadway to align with the north and south promenades. To be coordinated with LADOT and BOSS.
3. Bus shelters or transit stop relocation may be necessary to accommodate new park elements. Efforts to be coordinated with MTA and LADOT.
4. Overall Streetscape design at Grand Avenue, Hill Street, Broadway, and Spring Street will be developed at Alternate 2.6, 3.5 and 4.7 through DD process.

N. Exclusions.
1. Grand Avenue Entry Pavilion/Café
2. Artist Gardens at Block 1 and 2.
3. Hill Street Ramp Roof or Trellis
4. Pedestrian Bridge to The Criminal Courts building located at Block 4
5. Spring Street Pavilion and Café
6. Water Collection System at Event Lawn
7. Full scale replacement of existing waterproofing at existing county garages and below grade structures located at blocks 1, 2 and 3. Existing leaks and problem areas have been discussed by County DPW and Building and Safety staff. Current scope of work provides only new waterproofing at areas of new structural work that comes in contact with the existing below grade structures.

1.3 CODE CRITERIA

A. The project will be designed in conformance with the 2008 LA County Building Code based on the 2007 California Building Code (CBC) based on the 2006 International Building Code (IBC).

B. The project will be designed in conformance with the applicable requirements of the following City and County Agencies. Please see Part 2 Review & Approvals and Appendix D: Agency Referral for additional information:

1. County of Los Angeles:
   a. LA County Department of Public Works
   b. LA County Building and Safety
   c. LA County Flood Control

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d. LA County Department of Public Health
e. LA County Cross Connection and Water Pollution Prevention Program
f. County of Los Angeles Fire Department
g. LA County Internal Services Department

2. City of Los Angeles (for B Permit work only)
   a. Department of Public Works (PW)
   b. Department of Water and Power (DWP)
   c. Bureau of Engineering (BOE)
   d. Department of Transportation (LADOT)
   e. Bureau of Sanitation

1.4 DOCUMENTS & DELIVERABLES FORMAT

A. All graphic documents prepared by RCHStudios for the Site Design will be initially formatted in AUTO CAD 2008.
   1. Class and Layer designations will be in conformance with the American Institute of Architects (AIA) standards.
   2. File labeling format for RCHStudios documents will be based on the following:
      a. RCHStudios Project No.
      b. Drawing Sheet No.
      c. File date Year/Month/Day
      d. Format suffix.

B. All Specification documents prepared by RCHStudios for the Site Design will be formatted based on Masterspec 2004.

C. Milestone deliverables and graphic documents for coordination will be posted to the RCHStudios ftp site.
   1. RCHStudios will coordinate printing and distribution of milestone deliverables.

1.5 SCHEDULE

A. The Site Design will be developed in conformance with the milestones established in the updated Civic Park Schedule dated February 20, 2009 as provided by Related.

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PART 2 - ENVIRONMENTAL REGULATIONS

2.1 ENVIRONMENTAL REQUIREMENTS

A. The Project is a Sub Area of the Grand Avenue Project, and is subject to the environmental requirements and mitigation measures identified in the Final Environmental Impact Report (FEIR) prepared for the Grand Avenue Authority by Christopher A. Joseph & Associates dated November 2006.

1. A summary of relevant points from the FEIR noted below:

2. Historical Resources - Rehabilitation
   Of the four "treatments" identified in the Secretary of the Interior Standards for Treatment of Historic Properties, the FEIR situates the Civic Park as a candidate for **rehabilitation.** The 100% Schematic Design is based on consultation with the *Secretary of Interior Standards for Rehabilitation of Historic Buildings* and *Guidelines for the Treatment of Cultural Landscapes.*

   a. Rehabilitation standards acknowledge the need to alter or add to a cultural landscape to meet continuing or new uses while retaining the landscape's historic character.

   b. Allows replacement of extensively deteriorated, damaged, or missing features using traditional or substitute materials

   c. Includes opportunity to make possible an efficient contemporary use through alterations and additions

   d. Character-defining features are protected and maintained.

3. Historical Resources – Character defining features
   The Historical Resources narrative identifies the following "character-defining features" found at the existing County Mall:

   a. Water feature (fountain and pools) to serve as a focal point for the park
   b. Many of the pink granite clad planters, pink granite clad retaining walls, concrete benches to be retained and re-used in place or within the reconfigured park
   c. Elevator shaft structures
   d. Many of the light poles and hi-fi speaker poles with saucer-like canopies retained in-place or relocated adjacent to or integrated with water feature, benches, retaining walls, and planter boxes

4. Mitigation Monitoring Program
   a. The County's CAO or its designee to serve as both Enforcement Agency and Monitoring Agency
   b. If any one or more of the four "character-defining" features above are not complied with, then Mitigation Measures are required. If the four items are retained as noted, Mitigation Measures are not required.
   c. Mitigation Measure would be to prepare a Historic American Building Survey (HABS) Level II-like recordation document for the Civic Center Mall by a qualified architectural historian.

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2.2 SUSTAINABILITY MEASURES

A. LEED Certification is not available for this project type. The Best Management Practices sustainability goals and guidelines recommended by the Project Team include the following. These practices will be carried out to the best of our abilities given the limited budget of the project.

1. Site Selection and Design:
   a. Redevelopment.
   Redeveloping an existing urban site, by its very nature, is a sustainable measure that not only reuses available open space but also takes advantage of existing power, drainage, sewer, transportation routes, and other infrastructural systems already in place. Its central location at the heart of downtown Los Angeles

   b. Alternative Transportation.
   The site design takes advantage of the site's proximity to alternative transportation such as the MTA Redline Civic Center subway and existing bus lines along Spring and Broadway. The design accounts for users of these mass transit methods by anticipating current and future pedestrian circulation routes in and through the park and on the street with more pedestrian-oriented street crossings, and accommodates bus stops and shelters and the future canopy design for the MTA portal. Integration with existing bike routes is also planned to be coordinated in as well as providing additional bike locker storage. Signage and wayfinding systems for the park are intended to address users of alternative transportation. Future phases of the site design anticipate additional streetscape improvements along Hill, Broadway, and Spring.

   c. Site Design.
   The site design is sensitive to microclimate zones on site, attempts to maximize plant potential and minimize water use by taking into account the predominately shady zones to the south of the park and the very sunny zones at the north. Plant selection and design accounts for species growth habits and associated water needs, and also attempts to provide shade for park users and to reduce glare and heat absorption.

2. Water Efficiency
   a. Water use reduction. The design includes water-efficient landscaping by using drip irrigation in all shrub and groundcover areas and moisture sensing equipment and smart controllers throughout the park.

   b. Water use reduction. At the Arthur J Will Memorial Fountain, reduce volume of water cycling through the pump system by minimizing the depth of the basins from 18 inches to 4 inches. This reduction in water use will also reduce the required power without changing the affect of display.

   c. Water Reuse. Add Alternate 4.5 introduces an innovative water reuse system by collecting site runoff in a subgrade cistern at Block 4 for reuse as irrigation, reducing runoff flows into stormdrain system. This alternate is not included at this time, however , the project team will continue to search for a prospective partner to make this alternate a viable possibility.

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d. Stormwater quality. Throughout the park, drainage design will control quality of stormwater runoff by filtering first ¾ inch of rain with a combinations of flow-through planters (where possible) and catch basin filter inserts.

e. Stormwater quantity. Drainage design will seek to control quantity of stormwater runoff by directing water to planting areas where possible to reduce runoff to the storm drain systems.

f. Use of permeable surfaces for filtration. Although most of the park area is over structure, open joint paving, increased planting areas, and decomposed granite will allow water to be directed into the ground for filtration. The on-grade area at Block 4 will not allow ground water recharge as per the Preliminary Geotechnical Report dated September 8, 2008, soil percolation rates do not permit direct percolation into the ground. However, water in this area could be collected and directed to a below grade cistern should water reuse alternates become possible.

3. Heat Reduction
   a. Low albedo surfaces. Use of light-colored paving surfaces to reduce heat gain and avoid "heat island" contribution.

   b. Increase total area of existing planting to increase shade and reduce heat absorption. Reduction of total existing hardscape areas and the addition of over 2 acres of green space.

4. Light Pollution Reduction.
   a. Use of Dark Sky compliant light fixtures with full cut-off optics.

5. Energy Reduction
   a. Energy efficiency.
      Replace existing inefficient incandescent site lighting and fountain fixtures with more efficient, longer-life light types such as LED and metal halide to reduce electricity loads.

   b. Power reduction.
      Modernize fountain pumping equipment with smaller, more efficient pumps and nozzles that are easier to maintain and which require less power than the original design.

   c. Onsite renewable energy.
      Alternative energy sources that can be captured on site such as solar may continue to be studied as a potential source of power for park facilities in partnership with LADWP or other entity if additional funding becomes available.

6. Materials and Resources
   a. Reuse.
      Existing pink granite cladding for walls at the Grand Avenue stairs and retaining wall may be reuseable onsite as cladding for new site walls in key areas. This possibility is to be further studied in Design Development.

   b. Recycled content.

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Where possible, building materials and products featuring recycled content will be specified throughout the project in everything from site furnishings to building paneling systems, interior finishes to landscape products.

c. Regional materials.
Where materials can be located within the region, these will be specified to reduce transit-related impacts in bringing these products and materials to the site.

d. Environmental quality.
Low-emitting materials such as low VOC finishes.

e. Recycling Systems.
The site design anticipates the storage and collection of recyclable materials onsite, and where possible, the reuse of materials directly onsite for such things as mulch and compost.

f. Waste Management Systems.
The construction plan is anticipated to provide waste management and debris control solutions for the construction period.

PART 3 - REVIEW AND APPROVALS

3.1 OVERSIGHT AGENCIES & ENTITIES

A. The Agencies and entities defined in this section are identified in the Civic Park Design Agreement and are required to review, comment and approve the Civic Park design at the milestones indicated below. Please see Appendix C: Civic Park Responsibility Matrix dated May 10, 2006 and provided by the Grand Avenue Committee for additional information.

B. Los Angeles Grand Avenue Authority (JPA)

1. Joint Powers Authority comprised of representatives from the CRA, County, and State for the purpose of overseeing the development and implementation of The Grand Avenue Project.

   JPA Board:
   County Supervisor Gloria Molina, Chairperson
   City Councilwoman Jan Perry, Vice-Chairperson
   William T. Fujioka (CEO of LA County)
   Cecilia V. Estolano (CEO of CRA)
   Secretary Dale Bonner (Business, Transportation & Housing, State of California) Ex-Officio

2. The Civic Park Design Agreement requires the JPA to approve the Civic Park design, budget, and schedule at the following milestones:
   a. 100% Schematic Design & Cost Estimate
   b. 100% Design Development & Cost Estimate
   c. 100% Construction Documents
   d. Revisions to Park Budget, if needed
   e. Revisions to Park Schedule, if needed

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f. Revisions to Scope of Work, if needed

C. Grand Avenue Committee, Inc. (GAC)

1. The Grand Avenue Committee, Inc. serves as staff to the JPA to oversee the development and implementation of The Civic Park and The Grand Avenue Project and to make recommendations to the JPA Board.

GAC Board:
Nelson Rising, Chairman
Eli Broad, Co-Chairman
Antonia Hernandez, Vice Chairman
Ayahlushim Hammond
Gerry Hertzberg
David Riccitiello

2. The Civic Park Design Agreement requires The GAC to recommend to the JPA Board development of the Civic Park design, budget and schedule at the following milestones:
   a. 100% Schematic Design & Cost Estimate
   b. 100% Design Development & Cost Estimate
   c. 100% Construction Documents
   d. Revisions to Park Budget, if needed
   e. Revisions to Park Schedule, if needed
   f. Revisions to Scope of Work, if needed

3. The Civic Park Design Agreement requires the GAC to approve Related's invoices and Design Team invoices.

4. Prime liaison contact:
   Martha Welborne, Managing Director
   Grand Avenue Committee
   California Community Foundation
   445 S. Figueroa Street, Suite 3400
   Los Angeles, CA 90071

   E: mwelborne@ccf-la.org
   T: 213.452.6219

D. Los Angeles County

1. The Civic Park Design Agreement requires the County Board of Supervisors to approve the Civic Park design, budget and schedule at the following milestones:
   a. 100% Schematic Design & Cost Estimate
   b. 100% Construction Documents

2. The Civic Park Design Agreement requires County Staff to review and comment and/or to approve the Civic Park design, budget and schedule at the following milestones:
   a. 100% Schematic Design & Cost Estimate – review & comment
   b. 100% Design Development & Cost Estimate – approve
   c. 100% Construction Documents – review & comment
   d. Construction Permits/ Plan Check – approve
   e. Revisions to Park Program, if needed – approve
   f. Revisions to Park Budget, if needed – review & comment
   g. Revisions to Scope of Work, if needed – review & comment

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3. Prime liaison contact:
   Dawn McDivitt, Property Development Section
   Chief Administrative Office
   Kenneth Hahn Hall of Administration, Room 754
   500 West Temple Street
   Los Angeles, CA 90012

   E: dmcdivitt@ceo.lacounty.gov
   T: 213.974.2620

E. Community Redevelopment Agency (CRA)
1. The Civic Park Design Agreement requires the CRA Board to approve Civic Park design, budget and schedule at the following milestones:
   a. 100% Schematic Design & Cost Estimate
   b. 100% Construction Documents

2. The Civic Park Design Agreement requires CRA Staff to review and comment and/or approve the Civic Park design, budget and schedule at the following milestones:
   a. 100% Schematic Design & Cost Estimate – review & comment
   b. 100% Design Development & Cost Estimate – review & comment
   c. 100% Construction Documents – review & comment
   d. Revisions to Park Program, if needed – approve
   e. Revisions to Park Budget, if needed – review & comment
   f. Revisions to Scope of Work, if needed – review & comment

3. Prime liaison contact:
   Len Betz, Project Manager
   Community Redevelopment Agency
   354 South Spring Street
   Los Angeles, CA 90013

   E: lbetz@cra.lacity.org
   T: 213.977.1640

F. Grand Avenue Park Redevelopment, LLC
1. Related serves as a consultant to the GAC to manage the design and implementation of the Civic Park.

2. The Civic Park Design Agreement requires Related to initiate Design Team Selection, approve Design Team Contracts, Amendments, and Invoices.

3. Related serves as the Design Team's primary contact for all of the entities listed in this section regarding approval and governance issues, scope of work, budget, program, and schedule revisions.

4. Prime liaison contact:
   Anne Guillebeaux, Project Manager- Civic Park
   The Related Companies, LP
   333 S. Grand Avenue, Suite 4050
   Los Angeles, CA 90071

   E: Aguillebeaux@related.com

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T: 213.984.4109

3.2 STAKEHOLDER COORDINATION & REVIEW

A. Review and coordination with the agencies and entities identified in this section may be required.

B. Metropolitan Transit Authority (MTA)
1. The following elements are subject to review and coordination with the MTA. Preliminary coordination meeting on July 22, 2008 at Rios Clementi Hale Studios addressed the following:
   a. Canopy at Civic Center station
   b. Alteration of existing MTA plaza and curb cuts
   c. MTA signage location and planters at plaza
   d. Structural support for trellis over Hill Street Ramps – no longer a part of the base park or alternate scope.
   e. Coordination with existing MTA blast shafts and intake vents
   f. Drainage structures at Civic Center station
   g. MTA master plan efforts regarding proposed routes, stops, transit shelters

2. Subway liaison contact:
   Aspet Davidian, AIA
   Director, Project Engineering Facilities
   One Gateway Plaza, Mail Stop 99-16-8
   Los Angeles, CA 90012-2952

   E: Davidiana@metro.net
   T: 213-922-5258, 213.210.7452 Cell

3. Bus liaison contact:
   Pete Serdienis
   Director of Stops and Zones, Metro Bus

   E: SerdienisP@metro.net
   T: 213.922.5190

C. Los Angeles Conservancy
1. In meetings September 23, 2008 and in Spring of 2008 at RCHStudios, the Project Team has and will continue to solicit review from the LA Conservancy and its consultant, Charles Birnbaum of The Cultural Landscape Foundation, regarding preservation issues identified in the EIR.

2. The following elements may be items for exhibit, review, and coordination:

   a. Hi/Fi speaker lights, precast benches, and granite clad walls
   b. Fountain restoration and enhancement
   c. Overall spatial organization and circulation

3. Prime liaison contact:
   Linda Dishman, Director
   Los Angeles Conservancy
   523 W. 6th Street #826
   Los Angeles, CA 90014

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E: ldishman@laconservancy.org
T: 213-623-2489 x107

D. Ad Hoc Downtown Street Standards Committee
   1. The Project Team may wish to receive input from the interagency Downtown Street Standards Committee on the following elements:
      a. Improved streetscapes at Hill, Broadway and Spring (Alt. 2.3, 3.5, and 4.7: to be included as Add Alternates in DD process)
      b. Enlarged pedestrian crossings at Hill and Broadway
      c. Potential temporary event (or permanent) street closure(s) at Grand, Hill, Broadway, and Spring.
      d. Coordination with walkability master plan efforts currently underway for downtown
      e. Additional funds that may be available through other means for streetscape improvements in the project area.

   2. Prime liaison contact:
      Simon Pastucha
      Urban Design Studio
      Department of City Planning
      City Hall #705
      200 N. Spring St.
      Los Angeles, CA 90012

      E: Simon.pastucha@lacity.org
      T: 213.978.1475

E. LA County Arts Commission
   1. The following elements are subject to review and coordination with the LA County Arts Commission:
      a. Facilitation and coordination of retaining/moving/decomissioning of all art/plaques/sculptures in the existing County Mall and Court of Flags deemed to be public art. (See Sheets T4.00 and T4.01 in drawing set for identification and locations).
      b. Identifying additional public funds available for new public art for possible integration throughout the park.
      c. Commissioning public art and/or artist gardens from the pre-qualified list of artists for County Projects or others.
      d. Temporary event programming
      e. Integration of the Civic Park into County Arts cultural tourism efforts.

   2. Prime liaison contact:
      Rebecca Banyas
      Civic Art Project Manager
      Los Angeles County Arts Commission
      1055 Wilshire Boulevard, Suite 800
      Los Angeles, CA 90017

      E: rbanyas@arts.lacounty.gov
      T: 213.202.3986

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PART 4 - OUTLINE SPECIFICATIONS

DIVISION 01 GENERAL REQUIREMENTS

01 14 00 WORK RESTRICTIONS

A. Noise Control. Excessively noisy or disruptive work shall be performed during Government Unoccupied Hours due to adjacent courtrooms.

B. Contractor to provide continuous access to existing Starbuck's café facility until new replacement facility is provided permit of occupancy.

02 41 00 SELECTIVE DEMOLITION

A. Removal of existing fill at Grand Avenue Terraces per structural
   1. Evaluation of soil stability and percolation properties for possible onsite reuse in other areas requiring fill or offsite disposal.

B. Removal of existing trees per demolition and tree plans will require removal of tree trunk to finish surface grade and stump grinding to 6 inch depth only to eliminate complications to existing waterproofing due to root growth.

C. Removal of pink granite cladding at Grand Avenue in large slabs for reuse as cladding at sitewalls at Block 2 Olive Court precast bench plinths or on Block 1 stair walls at the fountain. Smaller pieces may be crushed and reused onsite as concrete aggregate.

02 42 00 REMOVAL, SALVAGE, AND REFURBISHMENT OF HISTORIC MATERIALS

D. Onsite relocation and refurbishment of historic light poles, precast concrete benches, and plaques and monuments. These are to be removed intact, refinished to original condition or as specified in the drawings, and reinstalled per plan.

DIVISION 03 CONCRETE

03 33 00 CIP CONCRETE

A. The Site Design will include cast-in-place specialty concrete for custom planters and seatwalls as noted on the drawings.

B. The Block 1 restrooms/elevator and Spring Street restrooms/Park support (Alt. 4.3a – added to Base Design) will include cast-in-place walls. These buildings will establish an architectural language for future structures including the Restaurant and Café (Alt. 1.1a and 4.3b: not included in DD process)

C. .
   1. Custom architectural finish

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03 45 00 PRECAST CONCRETE

A. Custom precast benches and game tables at Block 2 Olive Court

B. Custom precast bench cap along Promenade as noted in the drawings.
   1. Custom integral color
   2. Finish: light wash
   3. Anti-skate notch
   4. Anti-graffiti coating

DIVISION 04 MASONRY

04 42 00 EXTERIOR STONE

A. Stone Bench Cladding at and around Fountain Plaza in Block 1
   1. Honed Granite ¾" inch veneer over CIP concrete
   2. Color: Champagne Mist
   3. Available from Cold Springs Granite.
   4. Associated anchors and accessories

B. Granite Paver to match existing granite bands at Olive Court in Block 2
   1. 2 ½" thick rectangular granite paver
   2. Color: to match existing
   3. Finish: Thermal (to be confirmed: to match existing)
   4. Grout, expansion joint filler and sealant, setting bed

DIVISION 05 METALS

05 10 00 STRUCTURAL STEEL

A. Per structural and as indicated on the drawings

B. Steel roof & floor at Block 1 restrooms/elevator and Spring Street restrooms/Park support (Alt. 4.3a: to be added to Base Design) :

05 70 00 DECORATIVE METAL

A. Decorative Metal Railing at Fountain

B. Hand rails throughout park
   1. Stainless steel
   2. Custom-designed iconic support and end rail

C. Custom Dumpster Enclosure: 4" painted stainless tube steel frame

D. Perforated Metal
   1. Perforated metal panel suspended ceilings at Restaurant and Café
   2. Custom corrugated and perforated metal façade panels at Restaurant and Café as indicated on the drawings

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DIVISION 07 THERMAL AND MOISTURE PROTECTION

07 14 13 HOT RUBBERIZED ASPHALT WATERPROOFING

A. Patch and repair existing waterproofing and provide new where indicated.

B. Quality: American Hydrotech, Inc.
   1. Monolithic Membrane 6125 FR Fiber Reinforced

C. Associated flashing and accessories

DIVISION 08 OPENINGS

08 43 00 STOREFRONT SYSTEM

A. Aluminum-framed system at Block 1 Restaurant (1G) and Block 4 Café (4G) as indicated on the drawings

B. Frameless storefront and pivot doors where indicated on the drawings

C. Aluminum sliding doors where indicated on the drawings

D. Quality: VersaTherm Series Storefront by Tubelight, 4847 Mackinaw Trail, Reed City, Michigan. Tel: 800.866.2277. www.Tubeliteinc.com or equivalent.

08 80 00 GLAZING

A. Self-cleaning glass railing at Fountain with nonreflective and anti-graffiti coating.

B. Metal Windows at Restaurant (1G) and Café (4G)

DIVISION 09 FINISHES

09 91 13 EXTERIOR PAINTING

1. Painted Steel: High performance coating:
   a. Tnemec Company:
      1) Primer: 90-97 Tneme-Zinc @ 2.5 to 3.5 mils DFT.
      2) Intermediate Coat: Tnemec N69 Epoxoline @ 2.0 to 4.0 mils DFT
      3) Finish Coat: Tnemec 1075 Endura-Shield @ 3.0 to 3.0 mils DFT

   b. Surface Preparation: Prepare steel surfaces to receive tnemec system using a SSPC-SP6 commercial blast cleaning.

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DIVISION 10 SPECIALTIES

10 14 00 SIGNAGE & GRAPHICS

A. Custom signage and graphic design to be determined based on budget provided by client.

10 70 00 EXTERIOR SPECIALTIES

A. Playground equipment
   1. Custom artist-designed interactive sculpture at Block 2 Children's Garden (Alt. 2.2: to be included as an Add Alternate in DD process)

B. Cultural Inlay Paving
   1. Custom graphic inlay pattern along Promenade as indicated on the Drawings
   2. Artist designed and fabricated
   3. Premium material (ie stone, metal, or precast concrete).

DIVISION 12 FURNISHINGS

12 93 00 SITE FURNISHINGS

A. Quality: Landscape Forms, Urban Accessories
   1. Trash receptacles, café tables and chairs, umbrellas, tree grates
   2. Bicycle racks

DIVISION 14 CONVEYING EQUIPMENT

14 10 00 ELEVATORS

A. 2-stop elevator at Grand with 5 ft pit depth, 16 ft total rise.

B. Quality: Kone EcoSpace Low-Rise Elevator
   1. Machine Room-less
   2. Low rise

DIVISION 32 EXTERIOR IMPROVEMENTS

32 01 29 CONCRETE PAVING REPAIR

A. This section includes areas of existing paving to remain as noted in the drawings.

32 13 13 CONCRETE SITE PAVING

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A. The Site Design includes concrete paving at grade and on structure. Concrete finishes may include exposed aggregate, seeded aggregate and/or integral color.

32 13 16 DECORATIVE CONCRETE PAVING

B. This section includes decorative concrete paving and site walls installed on structure and at grade at Block 1 Grand Avenue Terraces and Fountain Plaza, Block 2, Block 3 International Garden and Broadway Terraces, and Block 4.

C. Quality finish: Lithocrete
   1. Custom integral color as shown on the drawings
   2. Custom surface seeded aggregate as shown on the drawings
   3. Acid Wash
      a. Concrete Surface Retarder: for area to receive "Acid Wash" or "Light Wash": Grace Top-Cast No. 03 Lavender Acid Etch, produced by Grace Construction Products, 62 Whittemore Avenue, Cambridge, MA 02140. 1.888.336.9303. www.graceconstruction.com.

32 14 13 PRECAST CONCRETE UNIT PAVERS

A. Open-joint paving at promenade seatwall edges and as shown on the drawings.
   1. Quality: Hannover Architectural Pavers or equivalent
   2. Size: per drawings
   3. Color: custom

B. For Block 4 Marketplace:
   1. Precast concrete open grid paving
   2. Quality: Angelus Block Turfstone or equivalent.
      a. Color: selected from manufacturer's full range.
      b. Size: 80 mm

32 15 00 AGGREGATE SURFACING: DECOMPOSED GRANITE

A. This section includes aggregate paving surface course (decomposed granite) and associated binders and sealants at treewells, pedestrian paths, and garden areas as noted on the drawings.

B. Quality: Southwest Boulder.
   1. Size: Aggregate shall be a decomposed granite mixture (3/8" minus)
   2. Color: Brimstone

C. Non-toxic organic stabilizer binder is a patented, colorless, odorless concentrated powder that naturall binds crushed aggregate screenings. Provided by Stabilizer Solutions.

32 17 23 PAVEMENT MARKINGS

A. This section includes enhanced crosswalks at Hill Street (3A) and Broadway (4A)

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B. StreetPrint proprietary high performance pavement texturing system and manufacturer's recommended accessories, bonding, and coating systems.
   1. Pattern: Custom pattern provided exclusively by the Landscape Architect.
   2. Color: Fashion or Premium selected from manufacturer's full range

C. Reference Standards
   1. MUTCD Compliant
   2. ASTM recommended practices

32 18 00 PLAYGROUND SAFETY SURFACE

A. This section includes resilient protective surfacing at Block 2 Children's Garden (Alt. 2.2: recommend including in DD process)
   1. Material:
      a. EPDM rubber and associated binders, primers, and thinners
      b. Subbase: concrete subbase

   2. Quality:
      a. Tot Turf or equal
      b. Color: Custom composition not to include black. Selected from manufacturer's full range.

32 31 00 FENCES AND GATES

A. This section includes Block 4 Wrought Iron fence.

B. For Fence: Wrought iron fence, footings, and posts to match existing fence at Block 4

32 80 00 LANDSCAPE IRRIGATION

A. Irrigation Design will be provided for all planting areas with an automatic system conforming to County ISD standards.

B. Irrigation systems will include controller with cycling capacity and summer/winter schedules, soil moisture, anemometer, and rain sensing systems, drip/trickle/micro irrigation and low precipitation sprinkler heads with flow control devices. Irrigation system will be installed to minimize irrigation of unplanted surfaces.
   1. All shrub, tree, and groundcover areas will receive water-efficient drip or bubbler irrigation
   2. Turf areas will use low precipitation spray irrigation as they are expected to receive staking and other devices to stabilize temporary event tents

C. Block 4 Reclaimed stormwater to be collected in underground cistern and redistributed to surrounding shrub areas for subsurface (drip) irrigation per Civil and Irrigation Consultant. (Alternate 4.5 - Not included at this time. Could be added if additional funding becomes available from LADWP or others).
   1. Applicable codes and standards include
      a. Los Angeles County Cross-Connection & Water Pollution Control Program, Health & Safety Codes.
      b. California Health & Safety Code
      c. California Code of Regulations, Title 22

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d. Uniform Plumbing Code

2. Rainfall/non-potable cistern water shall be identified by continuous lettering on three inch (3") min width yellow tape with one inch black lettering bearing the continuous wording: "Caution – Non-potable Cistern Water, Subsurface Irrigation Only" permanently affixed at five-foot intervals atop all horizontal piping, laterals, and mains. Identification tape shall extend to all valve boxes and /or vaults and exposed piping.

32 90 00 LANDSCAPE PLANTING

A. This section includes Tree protection for all existing trees identified on tree protection plan, new planting at turf and shrub areas as indicated on the drawings.

B. Plants shall be in accordance with the California State Department of Agriculture's regulation for nursery inspections, rules and rating.

C. New trees: nursery specimen trees
1. Size: 48" box minimum size and as indicated on the drawings

D. Shrubs and groundcover will be primarily native species, with exotic specimen where designated.
1. Size: 40% 1 gal @ 24" o.c
40% 5 gal @ 30" o.c
20% 15 gal @ 48" o.c.

E. High-performance Lawn: The lawn areas at Blocks 2 & 4 will be high-performance turf with subsurface drainage system to promote accelerated drainage, maximize sustainability of the turf for ongoing large events, and reduce time out of service for maintenance.
1. Tifway 419 hybrid Bermuda sod available through Pacific Sod
2. 100% weed free

F. Multi-Cultural Botanical specimens
1. Additional provisions for drainage and irrigation may be necessary for the sustained growth and development of species from around the world to be determined.

G. Hydro-Seeding Fiber Mulch
1. "Hydro-Mulch" as manufactured by Conwed or approved equal

H. Mulch
1. Recycled Wood product, ¾" – 1" length
2. Forest Blend by Tierra Verde Industries

I. Metal headers

J. Guying Hardware
1. "Duck Bill" anchoring systems as manufactured by Foresight Products LLC

K. On-structure planting weight and depth specifications:

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1. On-structure planters will have the following minimum soil depths, with an additional 4-6 inches of wall height above top of soil:

Shrub planters:	min 30 inches
Tree wells (up to 48" box):	min 60 inches
Tree wells (up to 72" box):	min 84 inches

2. On-structure planters will require sloping of the structural slab or the addition of a tapered topping slab to establish a minimum 2% slope to the area drains provided within each planter basin.

3. Planting Soil for on-structure planting shall be based on the following weight criteria:

   Top Layer to a depth of 24 inches:

   Top Soil Mix
   Estimated dry bulk density: 1,900 lbs/cu. yd.
   Estimated wet bulk density: 2,400 lbs/cu. yd.

   Bottom Layer for remaining depth of planter:

   Sand
   Estimated dry bulk density: 2,500 lbs/cu. yd.
   Estimated wet bulk density: 3,000 lbs/cu. yd.

4. Planting Soil for Flow-through planters shall be engineered soil per Civil.

5. Tree planting shall be based on the following weight criteria:

   220lbs/sf.
   This estimate is based on a 60" box tree weight of 5,500 lbs distributed over a 5ft x 5ft box area.

32 96 43 TREE TRANSPLANTING

L. This section includes tree relocation onsite as indicated on the drawings.
   1. Onsite boxing and storage, protection, and re-establishment period.
   2. For Palms: No intermediate storage. Provide for immediate onsite transplanting.

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APPENDIX A: BASE SCOPE PROJECT AREA BREAKDOWN

		Hardscape	Landscape	Building	Water Feature	
Fountain Plaza						141,000 sf Total Block 1
Hardscape		75,365 sf				
Landscape			47,201 sf			
Lawn						
Planting	47,201					
Building footprint				3,434 sf		
(N) Elevator/Public Restrooms	1,000					
(N) Parking Ticket Booth	50					
(E) Escalator Bldgs	1,168					
(E) Elevator	140					
(E) Vents	1,076					
Water Feature						
Arthur J Will Fountain					15,000 sf	
Civic Garden						148,000 sf Total Block 2
Hardscape		71,134 sf				
Landscape			75,140 sf			
Lawn	24,250					
Planting	50,890					
Building						
Parking Ticket booth	50			1,726		
(e) Vents	1,676					
Community Terrace						103,000 sf Total Block 3
Broadway Terraces						
Hardscape		16,091 sf				
Planting			2,311 sf			
Other Hardscape		34,530 sf				
Other Landscape			47,121 sf			
Planting	47,121					
Building footprint				2,947		
(e) Elevators	700					
(e) MTA portal	1,582					
(e) Vents	665					
The Green						118,000 sf Total Block 4
Hardscape		38,114 sf				
Landscape			79,886 sf			
Lawn	45,744					
Planting	22,462					
Grass Pavers	11,680					
	PROPOSED	**235,234 sf**	**251,659 sf**	**8,107 sf**	**15,000 sf**	**510,000 sf TOTAL PROJECT AREA**
		Total Hardscape Proposed	Total Landscape Proposed	Total Building Proposed	Total Water Feature Proposed	

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APPENDIX B: PROPOSED BUILDING PROGRAM AREA

PROGRAM TYPE	SIZE	NOTES
Block 1 - Fountain Plaza		
Base Scope	**1380 gsf**	
Dumpster enclosure	175 sf	provision for 4 dumpsters
Cart storage	155 sf	provision for 2 kiosk carts
Parking Garage ticketing kiosk	50 sf	
Elevator/Public Restrooms	1000 sf	
Category 1 Alternates	**2000 gsf**	
Starbucks Building Pad	2000 sf	
Category 2 Alternates	**2000 gsf**	
Starbucks/ATM Pavillion	2000 sf	
Category 3 Alternates	**6015 gsf**	
Two-Story Restaurant/Café Bldg*	3375 gsf	
2nd Floor	1520 gsf	
Multi-purpose room	770 sf	
Storage	270 sf	
Restrooms	100 sf	
First Floor	1855 gsf	
Quickserve café	1550 sf	
Elevator	200 gsf	
One-Story Park Facilities Bldg	2640 gsf	
Public Restrooms	936 sf	
Satellite Elec. Equip Rm	200 sf	
Park Management Office*	770 sf	
Security*	85 sf	
Storage*	115 sf	
Employee Restrooms*	100 sf	
Block 2 - Civic Garden		
Base Scope	**50 sf**	
Parking Garage ticketing kiosk	50 sf	
Block 3 - Community Terrace		
Base Scope	**1222 sf**	
Tech Operations Work Room	135 sf	
Main Electronic Equipment Rm	375 sf	(contiguous w/ Operations Rm; needs significant cooling)
Tech Storage	56 sf	
Tech Workshop	56 sf	
Maintenance office*	200 sf	
Maintenance Wkshp/storage*	400 sf	(ventilation hood required for welding & paint)
Block 4 - The Green		
Base Scope	**3575 sf**	
Dumpster enclosure	125 sf	provision for 4 dumpsters
Category 1 Alternates	**1890 gsf**	
Park Facilities Building	1890 gsf	
Public Bathrooms	425 sf	
Electrical Room	165 sf	8 x 15 x 10 h min
Satellite Elec. Equip Rm	174 sf	(needs significant cooling)
Event Storage*	370 sf	
Green Room*	185 sf	
Dressing Room*	130 sf	
Category 3 Alternates	**1560 gsf**	
Café Building*	1560 gsf	

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CIVIC PARK RESPONSIBILITY MATRIX
as defined in the Civic Park Design Agreement

A = Approve
R/C = Review/Comment
I = Initiate
Rec = Recommend

TASK	RESPONSIBILITY							
	JPA	GAC	CRA Board	CRA Staff	County Board	County Staff	Related	Design Team
1. Civic Park Design Agreement	A	I, Rec		R/C		R/C	A	
2. Design Team Selection	R/C	A		R/C		R/C	I	
3. Design Contracts and Amendments		A					A	I
4. Initial Budget (Implementation Plan)			ALREADY APPROVED					
5. Public Outreach Process	A	Rec				A	I	I
6. Initial Park Program	A	Rec		A		A	I	I
7. Schematic Design (including costs)	A	Rec	A	R/C	A	R/C		I
8. Design Development (including costs)	A	Rec		A*		A		I
9. Revised Park Program, at DD	A	Rec		A**		A**		I
10. Revised Park Budget, if needed	A	Rec		R/C		R/C	I	
11. Revised Park Schedule	A	Rec					I	
12. Construction Documents	A	Rec	A	R/C	A	R/C		I
13. Construction Permits/Plan Check						A		I
14. Approve Related's Invoices		A					I	
15. Approve Design Team Invoices		A					A	I
16. Civic Park Development Agreement	A	I, Rec		R/C		R/C	A	

* Approval required only if DD drawings are not a logical evolution of approved SD drawings

** Approval required only if there are material changes to the Initial Park Program

BASIS OF DESIGN – SITE DESIGN
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CONTACT LIST:
County of Los Angeles Internal Services Department

ISD / Fleet Services

Nick Chico
E: nchico@isd.lacounty.gov
T: 213-974-9403

James Gilmartin
E: jgilmartin@isd.lacounty.gov
T: 323.267.3475

ISD / ITS

Nelson Chan
E: nchan@isd.lacounty.gov
T: 562-477-3928

Ed San Antonio
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T: 323-267-3442

ISD Crafts/ Facilities Operations Service

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CONTACT LIST:
County of Los Angeles Department of Public Works

Prime liaison contact:
David Howard
E: DHOWARD@dpw.lacounty.gov
T: 626-300-2300

Building & Safety Division (see also Agency Referral List)
Hassan Alameddine
E: halamedd@dpw.lacounty.gov
T: 626-458-6372

Grading & Drainage
Mitch Miller
E: mmiller@dpw.lacounty.gov
T: 626-458-6390

Architecture & Engineering
Steve Cloke
E: scloke@dpw.lacounty.gov
T: 626.458.2576

Regional Planning Department
Richard Claghorn
E: rclaghorn@planning.lacounty.gov
T: 213-974-6278

Fire Prevention Bureau
Bernard McDuel
E: bmcduel@lacofd.org
T: 323.890.4125

LA County Cross Connection and Water Pollution Prevention Program
Carlos Borja
E: caborja@ph.lacounty.gov
T: 626 430 5290

LA County Department of Public Health
Contact has not been established. Items for coordination may include the following:

- Restaurant & café
- Water treatment/filtration at Fountain
- Greywater reuse for irrigation at Event Lawn
- Requirements for certified Farmer's Market
- Requirements for potential dog-walking use•
- Mobile food cart storage and washdown, proximity to handwashing facilities

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COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY DIVISION

AGENCY REFERRAL

EAST LOS ANGELES DISTRICT OFFICE
4801 East 3rd Street
Los Angeles, CA 90022-1601
Telephone: (323) 881-7030, FAX (323) 264-7917
Office Hours 8:00 a.m. – 4:30 p.m.
Plan Checker Hours: 8:00 a.m. – 11:30 a.m. Appointments are recommended

Central office
900 S. Fremont Ave
Alhambra, CA 91803

Prepared By	HNM	OM Initial	Date
S.Q.			2/18/08

Applicant's Signature: _____

Plans for (Grading/ Structure) at Civic Park (Address) Los Angeles (Locality)

Plan Check No. _____ was submitted on _____

Land Use Zone _____ Proposed Occupancy _____ Type of Construction _____

Description of proposed work: Renovation of park/plaza from Spring St. to Grand Ave.

THIS NOTICE IS TO INFORM YOU THAT APPROVAL FROM THE AGENCIES MARKED BELOW, IN ADDITION TO BUILDING PLAN CHECK APPROVAL, MUST BE OBTAINED PRIOR TO PERMIT ISSUANCE. You may need to submit the pertinent plans, plan check number, calculations, reports, etc., directly to these agencies. To assist you, we have listed below the information which you will need to contact these agencies. *Follow-up is your responsibility.* Please be aware that some items resulting from these agency plan reviews may affect your building plan check. These should be communicated to your Building Plan Check Engineer as soon as possible to prevent unnecessary delays. Submit all agency approvals 48 hours prior to permit issuance. Notify the Plan Check Engineer when all agency approvals have submitted and request review.

ADDITIONAL AGENCY CLEARANCES MAY BE REQUIRED BY YOUR BUILDING PLAN CHECK ENGINEER

COUNTY AGENCIES

DEPARTMENT OF PUBLIC WORKS

___ **AVIATION DIVISION**
1000 S. Fremont Ave., Bldg. A9 East, 1st Flr., Alhambra, CA 91803
(626) 300-4600 Mon-Thurs 7:00 a.m. - 5:45 p.m.

✓ **BUILDING AND SAFETY DIVISION**
Headquarters M-Th 8:45 - 5:30 (626) 458-3173
900 S. Fremont Ave., 3rd Fl, Alhambra, CA 91803-1331
Approval for the following sections is required as noted below:

✓ ELECTRICAL SECTION
900 S. Fremont Ave., 3rd Fl, Alhambra, CA 91803-1331
(626) 458-3180
Approval is required for:
☐ Energy Plan Check ☐ Electrical Code Check
☐ Emergency Egress Illumination (O.L. ≥ 100)

✓ MECHANICAL SECTION
900 S. Fremont Ave., 3rd Fl, Alhambra, CA 91803-1331
(626) 458-3182
Approval is required for:
☐ Energy Plan Check ☐ Mechanical Code Check
☐ Plumbing Code Check ☐ Roof Drainage

☐ Research Section
900 S. Fremont Ave., 3rd Fl, Alhambra, CA 91803-1331
(626) 458-3173
(Alternate Materials, Methods, SMRF,..)

✓ GRADING AND DRAINAGE SECTION
Sarah Curran – Regional Drainage and Grading Engineer
Lomita/Lennox Office
24320 S. Narbonne Ave, CA Lomita 90717
(310) 534-3760

☐ Grading Plan Check.
☐ "Rough Grade" approval is required prior to issuance of building permit.

☒ Building Drainage (NPDES COMPLIANCE)
☐ Building Site Drainage Review
☐ Disturbed Area ≥ 1 Acre
☐ Commercial or Industrial
☐ Hillside Development (i.e. slope ≥25%)
☐ Adjacent to an Environmentally Sensitive Area

___ **CONSTRUCTION DIVISION**
Permits are required for road excavations and encroachments within County roads and Flood Control easements.

☐ 11282 S. Garfield Ave, Downey, CA 90241
(562) 869-0218

☐ PERMIT SECTION
900 S. Fremont Ave., 8th Fl, Alhambra, CA 91803-1331
(626) 458-3129

✓ **ENVIRONMENTAL PROGRAMS DIVISION**
Plan approval is required for most commercial and industrial buildings for:

☐ INDUSTRIAL WASTE / UNDERGROUND TANKS

East Los Angeles Office
5119 E. Beverly Blvd.
Los Angeles 90022
(323) 260-3450
8:00-9:30 a.m. Mon-Fri

Headquarters
900 S. Fremont Ave., Annex 3rd Fl
Alhambra, CA 91803-1331
(626) 458-3539
6:45-5:30 Mon-Thurs

✓ NPDES/SUSMP Approval
Industrial Waste Unit
900 S. Fremont Ave, Annex 3rd Fl
Alhambra, CA 91803-1331
(626) 458-3517

☐ DUMP AREAS (structure within 1,000 ft from a landfill)
900 S. Fremont Ave., Annex 3rd Fl
Alhambra, CA 91803-1331
(626) 458-3517 6:45-5:30 Mon-Thurs

☐ SOLID WASTE MANAGEMENT
900 S. Fremont Ave., Annex 3rd Floor
Alhambra, CA 91803-1331
(626) 458-3561 6:45-5:30 Mon-Thurs

✓ CONSTRUCTION & DEMOLITION DEBRIS RECYCLING AND REUSE PLAN
900 S. Fremont Ave., Annex 3rd Fl, Alhambra, CA 91803-1331
(626) 458-3548 www.CleanLA.com 6:45-5:30 Mon-Thurs

___ **GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION**
GEOLOGY/SOILS SECTIONS - Plan approval is required for site stability and geologic hazard.

All submittals must be made at the District Office public counter or the Land Development Division public counter, see below.

✓ **LAND DEVELOPMENT DIVISION**
900 S. Fremont Ave., 3rd Fl, Alhambra, CA 91803-1331
(626) 458-4921 6:45-5:30 Mon-Thurs

☐ SUBDIVISION PLAN CHECK SECTION

✓ LANDSCAPE (non-residential landscaped area > 2500 square feet)

☐ HIGHWAY DEDICATION Form "48-0040-DPW" (RD 490) should be filled out when plan approval for street improvements and/or dedication is required for commercial and multiple residential buildings. "Bridge & Major Thoroughfare (B&T) Fee" is also required for commercial, multiple residential buildings and designated tracts.
(626) 458-4915

___ **TRAFFIC AND LIGHTING DIVISION**
Clearance is required for traffic requirement.
1000 S. Fremont Ave., Bldg A-9E,4th Fl, Alhambra, CA 91803
(626) 300-4708 Mon-Thur 7:00-5:30pm

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OTHER COUNTY DEPARTMENTS

✓ ENVIRONMENTAL HEALTH DIVISION - Approval is required for:
5050 Commerce Dr., Baldwin Park, CA 91706
(626) 430-5380

- ☐ Private Sewage Disposal Systems
- ☐ Food Service Establishments
  (626) 430-5400
- ☐ Public Swimming Pool- Recreational Health
  (626) 430-5360
- ☐ X-Ray Machine Installation
  Radiation Management
  3530 Wilshire Blvd., 9th Fl, Los Angeles, CA 90010
  Mon – Fri 8:00 a.m. – 5:00 p.m.
  (213) 351-7597

✓ FIRE PREVENTION BUREAU - Plan approval is required
5823 E. Rickenbacker Rd, Commerce 90040-3027
(323) 890-4125

- ☐ FIRE STATION DEVELOPER FEE is required
  590 S. Park Ave., Pomona, CA 91766
- ☐ "HAZMAT" form must be submitted to and approved by the Fire Department for non-residential occupancies if hazardous materials are being handled. Obtain form from Building and Safety and submit to:

  Fire Prevention Bureau
  Hazardous Materials Section
  5825 E. Rickenbacker Road
  Commerce, CA 90040-3027
  (323) 890-4000
- ☐ FIRE SPRINKLER SYSTEMS
  Fire Prevention Division Area 6 Fire Station 64
  6301 Santa Fe Ave, Huntington Park 90255
  (213) 585-3554
- ☐ OTHER APPROVALS (Sprinklers<20 Heads, Sprinklers: Residential & Remodel, Pool draft Hydrant, Alarms, Hoods, Restaurants with new cooking, Tanks, and TI<2500 sq. ft.)

  5823 E. Rickenbacker Rd., Commerce, CA 90040
  (323) 890-4125
- ☐ FUEL MODIFICATION
  Brushing Clearance Office, Fire Station 181
  590 S. Park Ave., Pomona, CA 91766
  (909) 622-8342

___ COUNTY PUBLIC LIBRARY
Payment of Library Facilities Mitigation Fee is required. A Certificate of Payment or a Certificate of Clearance must be obtained from the Public Library.

7400 E. Imperial Highway, Downey, CA 90242
(562) 940-8430 Mon-Fri 8:00 - 5:00

___ PARKS AND RECREATION DEPARTMENT
Approval for building plans is required for construction adjacent to a "General Plan Designated Trail."

433 S. Vermont Avenue
Los Angeles, CA 90020-1975
(213) 738-2118

✓ REGIONAL PLANNING DEPARTMENT
320 W. Temple St., 13th Floor (Rm. 1360)
Los Angeles, CA 90012-3282
Public Counter : 1:00 p.m. to 6:00 p.m. M-Th
Telephone Hours: 7:00 a.m. to 12:00 p.m. (213) 974-6411 M-Th

___ COUNTY SANITATION DISTRICT
Payment of sewer connection is required
1955 Workman mill Rd., Whittier 90601
(562) 699-7411

STATE AGENCIES

___ CALTRANS
Permits are required for outdoor signs, excavation, encroachment (including driveway aprons) and improvements (including grading or structures that affect drainage) on State Highways:

120 S. Spring Street, Room 112
Los Angeles, CA 90012-3606
(213) 897-3631

___ STATE DEPT. OF INDUSTRIAL RELATIONS - CAL/OSHA DIVISION OF OCCUPATIONAL SAFETY & HEALTH
Permit is required for excavation of trenches which are 5 ft. or more deep into which a person is required to descend or for the construction or demolition of any structure 4 or more stories. Brick-lined seepage pits may require permit.

9459 E. Stauson Ave., Pico Rivera, CA 90660
(562) 949-7827 Tue, Wed & Thurs - By appointment only

___ STATE DEPARTMENT OF CONSERVATION DIVISION OF OIL AND GAS
Obtain clearance for the requirements of abandonment of oil wells.

5816 Corporate Ave., Ste. 200
Cypress, CA 90630-4731
(714) 816-6847

OTHER AGENCIES

___ SCHOOL DISTRICT
Development fee must be paid to the District for residential and commercial construction. A "Certificate of Payment of Developer Fee" must be submitted to Building and Safety prior to obtaining a building permit.

- ☐ Montebello Unified School District
  500 N. Hendricks St., Montebello, CA 90640
  (213) 887-3044
- ☐ Garvey School District
  2730 N. Del Mar Ave, Rosemead, CA 91770
  (626) 307-3404
- ☐ Los Angeles Unified School District
  600 E. Pico Blvd., Los Angeles, CA 90015-3116
  (213) 743-3670

  For mailing service only
  Los Angeles Unified School
  Business Service Center
  Developer Fee Program Office
  P. O. Box 2298 Terminal Annex
  Los Angeles, CA 90051

✓ SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)
Applicants for non-residential buildings must fill out "Air Quality Permit Checklist" furnished by Building & Safety. If "Yes" is marked, a written release will be required before occupancy is allowed. Notification form required for demolition and alteration permits where ASBESTOS is involved.

21865 E. Copley Dr., Diamond Bar, CA 91765-4182
(909) 396-2000, (800) 288-7664

✓ WATER AVAILABILITY LETTER - Provide a copy of the attached form, completed by the water company serving the site. Form 195/196.

OTHER

- Metropolitan Transit Authority (MTA)
  Mr. Aspet Davidian (213) 922-5258
  One Gateway Plaza, Mail Stop 99-16-8
  LA, CA 90012
- LA Conservancy
  Linda Dishman (213) 623-2489 x107
  523 W. 6th Street #826
  LA, CA 90014

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PART 1 - GENERAL

1.1 GENERAL SCOPE INFORMATION

A. Fluidity Design Consultants (FDC) is the Water Feature Consultant for the Civic Park project. FDC's Project Team structure is as follows:
   1. Principal in Charge: Jim Garland, AIA
   2. Senior Design Manager: Karen Adhikari
   3. Project Engineer: John Perry
   4. Concept Design Manager: Shannon Hoff

B. The fountain project scope is documented in the FDC 100% Schematic Design drawings, dated 3 October 2008. The scope includes, but is not limited to, the renewal of the existing Arthur J. Will Memorial Fountain based on the conclusions of the EIR - that the Fountain serve as a focal point for the park and that the 'treatment' be a Rehabilitation. The scope includes retaining the original water character of the Fountain, the renewal of existing Fountain elements and the replacement of Fountain equipment, lighting and finishes. All alterations to the original design are proposed as design improvements and are intended to mitigate any breakdown in the original design. Major issues addressed are staining on dry surfaces, non-sustainable water depths and poor water display. An Enhanced scope for the project, clarified in Section 1.2:Program below, includes motion design of the bowl nozzles, theatrical lighting of the entire fountain and an interactive play zone.

C. Structural design is to be provided by the project structural engineering consultant.

D. Signing and sealing of drawings is to be provided by project MEP engineering consultant.

1.2 PROGRAM

A. The existing Fountain, approximate area 15,000 SF, is located along the central axis of Civic Park and is comprised of three terracing pools. The waters are conducted downward through these pools via a series of infinity edges and water walls of various characters. The Upper Pool contains two arrays of arching jets, mirrored about the central axis. At the center of the Central pool and on axis with the Park, sits a large granite-clad Bowl containing programmed jets and overflowing spouts. The Lower Pool is proposed to be altered. All equipment is to be new, the existing equipment room and water storage tank is to be reused. Options for the Fountain are categorized in 3 distinct options outlined below:
   1. **BASE**
      The Base Option rehabilitates the existing Fountain, water effects are programmed to match historical references, finishes are upgraded.
      In the Upper Pool, the jet arrays are programmed to change size in unison. In the Central Pool Bowl, the jet arrays hold programs in 3 distinctly different modes. The proposed Lower Pool's water level is almost flush with the surrounding paving, creating an accessible membrane pool, 1/4" deep. The waters for this Lower Pool are treated as Interactive and will comply with the Los Angeles County Design Guidelines for Interactive features. There are no jets in the Membrane Pool. The Upper Pool jets, the Bowl and the entire display of jets will be lit in underwater color-changing LED light. All equipment will be new, the existing Equipment Room and existing water storage tank is to be reused. The area under the Bowl is proposed as a reservoir and is to be explored in a later phase for feasibility of efficient water circulation.
   2. **ALT Z3**
      This Option is based on a desire for more interactivity and excitement in the park. This Option incorporates an Interactive Fountain within the Lower Membrane Pool. This Interactive Fountain is comprised of 80 jets arranged in linear groups across the

membrane pool. The surface of the pool waters, the water quality and the height of these jets are safe for children's play and lit in underwater color-changing LED light. Additionally, the overflow between the Central and Lower Pool is enhanced, creating a 'waterfall grotto' scaled for children to play in and behind. Additional power is required for this option and is to be explored in a later phase with the project Electrical Engineer. See also P.4

3. **ALT Z2** (also referred to as Base Plus Option)
This Option includes all of the features of the Base Option with the addition of enhanced programming capabilities, through the use of waterswitches for the jets in the Central Pool Bowl. This programming will create a range of dynamic water shows utilizing individually-controlled water arches and monumentally scaled vertical jets. Additional power is required for this option and is to be explored in a later phase with the project Electrical Engineer. See also P.4
4. **ALT 1.2**
This Option enhances ALT Z3, the Interactive area of the Fountain. This Alternate adds 172 jets and lights to the existing 80 jets.

NOTE: The combination of ALT Z3 and ALT 1.2 is the Enhanced Option as shown in the 100% Schematic Drawings, dated 3 October 2008. This Enhanced Option is comprised of 6 rows of programmed vertical jets, 252 jets on 18 manifolds, arranged in linear groups across the Membrane Pool. The jets are lit in underwater color-changing LED lights.

1.3 CODE CRITERIA

A. The Fountain will be designed in conformance with the 2006 International Code (IBC), the 2006 Uniform Plumbing Code (UPC) and the 2008 City of Los Angeles Electrical Code, the 2008 National Electric Code (NEC), Article 680, Part E, Fountains.

B. All fountain waters will be filtered in accordance with all California State & County health codes. The Interactive Play Zone waters will be a separate system and filtered under more stringent guidelines as required by the Los Angeles County Guidelines for Construction & Operation of Interactive Water Fountains. These guidelines include filtration, turnover rates and non-slip surfacing.

1.4 PRELIMINARY SPECIFICATIONS

NOZZLES –

3/4" smoothbore nozzles in Upper Pool
1-1/2" aerated nozzles in Central Bowl
7/8" smoothbore nozzles in Central Bowl Inner Ring
1-1/4" aerated nozzles in Central Bowl Outer Ring
(Waterswitches for all Central Bowl Nozzle in ALT Z2 Option)
1/2" smoothbore nozzles in Interactive membrane Pool **(ALT Z3 and ALT 1.2 Options)**

LIGHTS

Underwater C-Splash 2 color-changing LED light fixtures
Underwater icolor MR2 color-changing LED lamp in MR16 base light fixture **(ALT. Z3 and ALT. 1.2 Options)**

WATERPROOFING

All concrete walls and basin slabs in contact with water to have a continuous fluid-applied elastomeric waterproofing coating system. Waterproofing will include a combination of the following products or equal - basecoat liquid urethane rubber membrane; epoxy for concrete primer, epoxy for concrete sealing, vapor reduction system if required. Approved waterstops to be used at all conduit and pipe penetrations in concrete slabs. Link seals to be used where existing structural slabs are cored.

BASIN FITTINGS - METAL

No aluminium will be used in any submersible application. All fasteners and hardware in basin to be stainless steel Grade 304 where concealed and Grade 316 where exposed. All exposed hardware to be stainless steel. Anti-vortex plates over piping in troughs to be blackened stainless steel.

GROUT, MORTAR, SEALANT & ADHESIVES

All grout, sealant, mortar and adhesives to be compatible with waterproofing membrane. Only epoxy grout to be used. Joint sealants to be polysulfide-based or elastomeric.

STONEWORK

All existing stonework to receive restorative cleaning by experts and have minor repairs as required.

All stone to be granite (specification, color and finish to be determined). All mortared stone to have a minimum thickness of 1-1/4"; all removable stone to have minimum thickness of 2" with sizes no larger than approximately 6SF. Cobblestones in Central Pool to be 4" x 4" x 2-1/2" thick. All stone in Interactive area to be non-slip when wet (thermal / flamed finish).

CONCRETE

All basin concrete for Fountain to be minimum 4000psi at 28 days. All pipe and conduit penetrations and other embedded equipment to be cast so that all components are accurately located. All electrical penetrations to be made with rigid red brass risers, no PVC for electrical conduits in slab.

MECHANICAL

Existing equipment room and All underground and parking garage piping and equipment is to be new. All underground piping to be stainless steel. All pipe routing to use a minimum number of fittings. All piping to be installed straight and true without air entrapping high points or reverse slopes. Parallel pipe runs to be installed within common trenches wherever possible. All piping to be supported continuously and uniformly both on horizontal and vertical runs. Piping and equipment which tend to cause noise and vibration are to be isolated.

ELECTRICAL

The entire electrical systems are to be ground fault interruption protected. All electrical equipment to be installed per US NFPA National Electrical Code, Article 680, Part E, Fountains. All copper piping to be Type K or L. Electrical panels to be listed per UL 508 or equal. Enclosure shall be rated minimum IP65 with front-door power disconnect and pump/lights hand-off-auto control switches and status indicators. Control panel shall contain programmable logic controller, overcurrent devices, motor controls and terminal blocks for field device connection. Disconnects shall be suitable for use in equipment or machinery as manual motor controllers and shall be horsepower and ampere rated, conforming to IEC 947-3. Disconnects shall have provision for padlocks..Motor starters for three-phase motors shall be UL listed category E combination motor controller, verified to meet "Type 2" coordination protection per IEC 947-4 and "Total Coordination" per IEC 947-6. Variable frequency drives shall be pulse-width modulated (PWM) type. DC power supplies shall be switcher type. All components shall be completely wired and labeled. Control logic shall be per piping and instrumentation diagram. Panel fabricator shall submit fabrication drawing, wiring diagram and control-logic ladder diagram to Water-Feature Engineer for approval before commencement of fabrication. Water-Feature Engineer shall witness panel testing before shipment. As-built panel-wiring diagram shall be delivered with the panel.

UTILITY REQUIREMENTS

Base Option
Cold water supply - existing
Sewer - existing
Power - 460VAC, 60Hz, 3 phase, 3 wire, 225 amps

ALT Z2 (in addition to Base Option)
Cold water supply - existing
Sewer - existing
Power - 460VAC, 60Hz, 3 phase, 3 wire, 100 amps

ALT Z3 and ALT 1.2 (in addition to Base and ALT Z2)
Cold water supply - existing
Sewer - existing
Power - 460VAC, 60Hz, 3 phase, 3 wire, 100 amps

PART 1 - GENERAL

1.1 GENERAL SCOPE INFORMATION

A. Mollenhauer Group (MG) is the Consulting Civil Engineer for the Civic Park project. MG Project Team structure is as follows:

1.	President and CEO:	Greg Hindson, PLS
2.	Vice President Civil Engineering:	Paul LaCiura, PE
3.	Project Engineer:	Lisa Chow, PE
4.	Design Engineer:	Louiza Shmit, EIT

B. The Civic Park is a 16-acre park that is part of the Grand Avenue Phase 1 project. It is the first phase of a planned three-phase development of the "Grand Avenue" redevelopment in downtown Los Angeles, California.

The Civic Park site is bounded by Temple Street to the north, Grand Avenue to the west, 1st Street to the south, and Spring Street to east.

The Project Scope for civil engineering services for the Base Park Program Elements includes grading and drainage for the proposed hardscape and landscape design, new elevations and alignment for the proposed Grand Avenue J-ramps and Foltz Criminal Justice Center driveway, and demolition, horizontal control and erosion control plans for the project site. In addition, SUSMP best management practices will be incorporated into the grading and drainage plan per City of Los Angeles SUSMP requirements

C. The design of on and off site dry utilities will be provided by other consultants but the vertical and horizontal locations of these utilities can be coordinated with any crossings of on and off site wet utilities.

1.2 PROGRAM

A. The demolition plan is based on the Site Plan prepared by RCHS dated October 10, 2008. Existing features that conflicted with the proposed Site Plan will be removed or relocated. The demolition plans included in the civil drawings pertains to existing features that do not have any structural impact.

Several existing pavement areas are called out to refer to architectural plans. The architectural plans will provide specific directions for pavement removal in these areas.

The removal of structural elements pertaining to the Grand Ave J ramps and remodeling of the fountain will be provided by the structural engineer.

B. The horizontal control plan is based on the Site Plan prepared by RCHS dated October 10, 2008. The dimensions and coordinates of any new features are provided. The coordinates are in the same coordinate system as the topographic survey.

C. The grading and drainage plan is based on the Site Plan prepared by RCHS dated October 10, 2008. Moderate to extensive work are proposed for Blocks 1 through 4. SUSMP requirements apply to Blocks 1 through 4 because more than 5,000 SF of impervious surface area within the project site will be disturbed.

A 50-year storm event will be used to size the proposed drains and storm drain pipes.

The assumptions made for the SUSMP requirements are based on a meeting with Mitch Miller of County of Los Angeles Department of Public Works Building and Safety. LA County SUSMP requirements will apply to Blocks 1 through 3 because no new storm drain connections are being made into LA City's storm drain line. LA City SUSMP requirements will apply to Block 4 because a new storm drain connection may be needed.

Based on Geotechnologies, Inc. soils report dated on September 8, 2008, infiltration is not feasible for the Civic Park because the percolation rate is too low.

In addition, all existing invert elevations will need to be field verified before construction.

1. Block 1 and Block 2
   There is approximately 19 feet of vertical difference between Grand Ave. and the mall level. New stairs, landscape planters, accessible ramps, and Grand Ave J ramps are proposed for Block 1 to accommodate for the elevation difference. Additional new features include Olive Tree Court and extended lawn area in Block 2. The concept of the grading and drainage plan is to utilize as much of the existing site drainage system as possible. Proposed drains are placed in areas near existing drains that will be removed. Some storm drain pipes will be removed in order to accommodate for new features and new drains. 4" trench drains are placed after flights of stairs and in areas where large amount of runoff is anticipated. 9" atrium grates are placed in many of the large planter areas. 12"x12" area catch basins with cast iron grates are placed in landscaped lawn areas.

   Storm runoff from approximately 10,000 SF of pavement in Block 1 is being directed into a proposed flow-through planter through a series of drains and storm drain pipes. The proposed flow-through planter is located northeast of the Stanley Mosk courthouse and will treat the storm runoff from the tributary pavement area. Treated storm runoff will reenter the storm drain system through new storm drain pipes.

   The storm runoff from the remaining pavement in Block 1 and Block 2 will be collected through a series of drains and storm drain pipes. New filter inserts will be installed into these new drains to treat the storm runoff before entering the storm drain.

   All storm runoff from Block 1 and Block 2 will eventually enter an existing storm drain lateral connected to the existing 10" storm drain main along Hill Street.

   Alternative:

   New filter inserts are called out for proposed drains placed in areas outside the 10,000 SF area. The primary treatment unit for the 10,000 SF area is the proposed flow-through. The other alternative is to have the flow-through planter act as a secondary treatment unit and install filter inserts into the drains located within the 10,000 SF area. In this case, the primary treatment unit will be the filter inserts.

2. Block 3

New stairs, landscape planters, and accessible ramps are proposed for Block 3. Additional new features include an extended lawn area and decomposed granite walk paths. 4" trench drains and new storm drain pipes are placed in areas where there is sufficient room between the existing garage and proposed finish surface. The Broadway Terrace Cross Sections provided by RCHS dated September 25, 2008 were used to determine the elevation difference. 4" atrium grates are placed in many of the small planters. 12"X12" area catch basins with cast iron grates are placed in landscaped lawn areas.

All storm runoff from Block 3 will enter the existing storm drain pipes through proposed drains and storm drain pipes. It will eventually enter the existing storm drain through an existing lateral connected to the catch basin on the southwest side of Broadway.

Alternative:

A rain harvesting system is an alternative for Block 4. The storm runoff from Block 3 can be redirected into the storage tank in Block 4. A new storm drain pipe will be required to intercept the storm runoff from Block 3 and direct it across Broadway.

Block 4

A new event lawn, landscape planters and driveway ramp are proposed for Block 4. The storm water runoff from the new pavement area will slope towards the Event Lawn. The lawn area will be the primary treatment unit for the storm runoff in Block 4. New area drains and perforated storm drains are placed in the Event Lawn to collect the treated storm runoff. A new storm drain connection will be made into the existing 15" storm drain main along Spring St. All the storm runoff from Block 4, except the runoff from the proposed Criminal Courts ramp, will enter the 15" storm drain main.

The existing trench drain and sump pump will be remodeled to accommodate the new Criminal Courts ramp. The sump pump currently serves approximately 13,300 SF of area. Storm run off from approximately 11,800 SF of area will enter the existing sump pump. Based on these figures, the capacity of the existing sump pump should be sufficient. This assumption needs to be verified by determining the amount of storm runoff and size of the existing pump.

Alternative:

A rain harvesting system is an alternative for Block 4. Based on guidelines provided by Carlos Borjas of LA County Department of Public Health Cross Connection and Water Pollution Control Program, a rain harvesting system is proposed.

The concept is to reuse storm runoff for irrigation purposes. The shrubs in Block 4 will require approximately 198,415 gallon of water per year. A 200,000 gallon storage tank is proposed to hold the annual amount of irrigation water needed for the proposed planter areas in Block 4.

Storm runoff from Block 3 and Block 4 will be collected through a series of proposed storm drain pipes. These storm drain pipes will convey the storm runoff into the storage tank. A proposed 6' diameter storm drain sump manhole will hold a pump that will provide the storage tank water to the planter areas. In addition, a new domestic water line and backflow preventor will be connected to

the downstream end of the pump. The domestic water line will provide irrigation water to the planters when the water in the storage tank is low. A custom made automatic control valve will be required to switch the water service between the storage tank and domestic water line. A new storm drain connection will be made into the existing 15" storm drain line along Spring St. to provide an overflow outlet for the storage tank.

Area drains are placed within the planter areas to recollect the irrigation water for reuse. These area drains are connected to the storage tank through a series of proposed pipes.

D. The alignment and elevations of the proposed Grand Avenue J-ramps are based on existing features. The goal is to avoid as much of the existing features as possible while joining the existing helical ramps at the Mall level. In addition, the ramps do not start sloping until it reaches the top of the existing concrete steps. The proposed ramps will match the existing elevations at the top of concrete steps and began sloping after that point. The soffit line of the proposed ramps is established based on a proposed finish surface elevation of 385, a 2 ft thick slab, and a vertical clearance of 8'-2".

Cross sections of the proposed Grand Ave J ramps are provided by cutting sections through the Civic Park 3D Model prepared by the Mollenhauer 3D Survey Team. These cross sections provide a look at how the proposed Grand Ave J ramps will affect the existing structure. The 3D model for the proposed Grand Ave ramp is based on the plan and profile provided by Mollenhauer.

Alternative:

The existing fuel tank located on Grand Ave. may pose a reason for the proposed north Grand Ave. J ramp to be relocated. Based on a ground penetrating radar scan, it was determined the fuel tank is approximately 9.5' in diameter and 29' long. The tank is approximately 3' below existing sidewalk. The current proposed north J ramp is approximately 1'-6" from the existing fuel tank.

Based on Ken Bishops', of II Fuels, recommendations, no minimum horizontal separation is required for concrete pavement. However, the close proximity of the proposed north J ramp to the existing fuel tank may make ramp construction difficult and require the ramp to be relocated.

The relocation of the proposed north J ramp is not only restricted to the location of the existing fuel tank but also the existing flag pedestal and air vent.

The alignment and elevations of the proposed Foltz Criminal Justice Center driveway are based on both proposed and existing features. A walkway that extends over the driveway is proposed to allow pedestrians to enter the Event Lawn from the Foltz Criminal Justice Center building. The proposed elevations of the driveway allow the driveway to join at the parking garage entrance and have a vertical clearance of 9'-7" to the bottom of the proposed walkway.

E. The utility plan for Block 1 and Block 4 are based on locations of existing utilities. New sanitary sewer and water services will be required for the proposed café and restrooms located in Block 1. The location of the proposed services is based on the assumption the existing services for Starbucks will be available for the new structures. If the existing services are not available, a new water meter and sanitary sewer connection will be required. There are existing public mains along Hill St that could potentially provide service to Block 1.

New sanitary sewer and water services will be required for the proposed café and restrooms in Block 4. In addition to domestic water, Block 4 will require irrigation water for the proposed Event lawn and landscaped planters. One domestic water meter and one landscape irrigation meter are proposed for Block 4. A new sanitary sewer connection is proposed for Block 4. The sanitary sewer connection will be made into the sanitary sewer main located on Broadway.

F. The erosion control plan is based on the topographic survey dated and the Site Plan prepared by RCHS dated October 10, 2008. Areas that will be disturbed are addressed within the erosion control plan. The erosion control plan is a part of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP satisfies the State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity. The erosion control plan presents the best management practices necessary to prevent storm water pollution during construction activities. The BMP are selected from the California Stormwater BMP Handbook – Construction, January 2003.

1.3 CODE CRITERIA

A. The project will be designed in conformance with the 2007 California Building Code (CBC) based on the 2006 International Building Code (IBC).

B. The Project is a Sub Area of the Grand Avenue Project, and is subject to the Environmental Impact Report (EIR) prepared for the Grand Avenue Authority by Christopher A. Joseph & Associates dated November 2006.

C. The grading, drainage, and hydrology design are based on the guidelines provided by Mitch Miller of County of Los Angeles Department of Public Works Building and Safety Division.

D. The majority of the project's best management practices will be designed in conformance with the County of Los Angeles Department of Public Works SUSMP requirements. Per County of Los Angeles SUSMP requirements, the flow of runoff produced from the first 0.75 inch of rainfall must be mitigated prior to discharge into a storm water conveyance system.

E. A portion of the project's best management practices will be designed in conformance with the City of Los Angeles Watershed Protection Division and the City of Los Angeles SUSMP requirements. Per City of Los Angeles SUSMP requirements, the flow of runoff produced from first 0.75 inch of rainfall must be mitigated prior to discharge into a storm water conveyance system.

F. The proposed curb cuts for the proposed Grand Avenue J-ramps and Foltz Criminal Justice Center driveway are pending approval from the Los Angeles Department of Transportation.

PART 2 - CIVIL SPECIFICATION

2.1 Outline Specifications

02 41 00 - Demolition

A. Protect existing work to remain.

B. Remove all items, as indicated on the drawings. Salvageable items are to be delivered to the owner.

C. Legally dispose of all debris and equipment.

31 10 00 - Site Clearing

A. Clearing site of debris, grubbing, removal of all unsuitable material, including above and below grade improvements scheduled to be demolished.

B. Clearing, removal and disposal of trees scheduled to be removed.

C. Stripping of topsoil from areas of new construction and stockpiling topsoil on site for future reuse.

31 22 00 - Grading

A. Excavate and fill as required to bring area within limits of grading to required grade or subgrade elevations.

B. On-site excavated soil shall be used where fills are required.

C. Excavated materials not suitable for fill shall be exported from the site.

D. Additional fill material needed shall be imported and approved by the Geotechnical Engineer.

E. Uncompacted soils below bottom of areas to be excavated or filled shall be removed and replaced with compacted fill to the satisfaction of the Geotechnical Engineer.

F. All earthwork operations shall be performed under the direction of the Geotechnical Engineer.

G. Areas around the buildings shall be rough and finish graded so that surface drainage is directed away from the buildings to insure that site paved areas in particular remain free from standing water. Finish grade shall be at least six inches below the first floor slab around the building perimeter unless otherwise indicated.

32 12 16 - Asphalt Paving

A. Asphalt concrete pavement shall be C2-AR-4000, unless otherwise indicated on the drawings, in conformance with the Standard Specifications for Public Works Construction, thickness in conformance with the project geotechnical report.

B. Base material shall be crushed aggregate base conforming to the requirements of the Standard Specifications for Public Works Construction with thickness conforming to the project soils report.

32 13 13 - Concrete Paving

A. Concrete pavement, sidewalks, curbs, curb and gutter, and gutters shall conform to the requirements of the Standard Specifications for Public Works Construction.

33 11 16 - Site Water Utility Distribution Piping

A. Pipe 4 inches and larger in size shall be cement lined ductile iron pipe conforming to AWWA C151, pressure class 350. Pipe 2-1/2 inches and smaller in size shall be Type "K" copper.

B. Valves, back flow devices and appurtenances shall be installed on all water lines.

C. Pipe bedding shall be select granular materials.

33 30 00 - Sanitary Sewerage Utilities

A. Pipe shall be PVC pipe (SDR 35).

B. Pipe bedding shall be select granular material.

C. Manholes, cleanouts and pipe bedding shall be as detailed and specified on the drawings. Manholes shall be precast conforming to ASTM C478.

33 40 00 - Storm Drainage Piping

A. Pipe: Reinforced concrete pipe (2000-D) or PVC pipe (SDR 35) as indicated.

B. Catch basins, cleanouts, manholes and sidewalk culverts shall be traffic weight with galvanized cast iron grates and covers as detailed and specified on the drawings. Manholes shall be precast conforming to ASTM C478.

C. Pipe bedding shall be select granular material.

D. Storm water mitigation structure: Flow-through planter and drain filter inserts.

PART 1 - GENERAL

1.1 GENERAL SCOPE INFORMATION

A. Nabih Youssef and Associates (NYA) is the Consulting Structural Engineer for the Civic Park project. NYA Project Team structure is as follows:
   1. Principal in Charge: Nabih Youssef
   2. Project Manager: Jacob Rodriguez
   3. Project Designer: Kate Ayars

B. The Project Scope includes the vehicular ramp renovation at Grand Avenue, historic fountain renovation, event plaza at the Grand Avenue parking structure, café shell at Grand Avenue ramps, event stage at the Green/Event Lawn and relocation of the vehicular ramp at the Criminal Courts building. The Hill Street trellis, Broadway Terraces and café shell at Block 4 are also included in addition to the Base Park scope. The schematic design is based on Geotechnologies' Preliminary Findings dated September 8, 2008.

C. The materials used throughout this project include concrete, steel, mild and PT reinforcing, metal deck and structural foam. In order to maintain the integrity of the waterproofing membrane, the existing fill should be excavated to within 1'-6" to 2' of the existing parking structure roof when able to so. The demolition of the existing planter walls and additional features should leave adequate structure in place when able to do so in order to leave adequate clearance to the roof as well. Where additional load is added to the existing structure below beyond its capacity, fiber wrap reinforcing will be used to strengthen columns, slabs and beams. Per the geotechnical engineer's suggestion, all fill must be removed and recompacted with the exception of the fill buffer above the existing structure before the new structures are constructed. See the description of Block 4 below for additional geotechnical issues. When constructing new features in close proximity to existing structures, shoring will be required and appropriate action will be taken in order to minimize the surcharge onto these structures. See below for additional materials and methods for each block.

1.2 PROGRAM/DESCRIPTION

A. Blocks 1 & 2 (Grand Avenue to Hill Street)
   1. Description: Existing two story underground parking structure with helical ramps at Grand Avenue and Hill Street designed in 1963. The parking ramps at Grand Avenue will be modified so that they enter the parking structure at the Mall Level in order to allow for new planters, stairs and pedestrian ramps at existing ramp locations. In addition, the existing fountain will be renovated, a shell for a future café at the north side of the fountain and a trellis over the parking ramps at Hill Street will be added. There is an existing subterranean parking structure at this location which may require strengthening upon further analysis. Per the landscape architect's recommendation, all shrub planters are to be a minimum of 30" deep, tree wells with a box size of up to 48" a minimum of 60" deep, and tree wells with a box size of up to 72" a minimum of 84" deep. . The large planters, along with the large trees at locations yet to be determined, will require the existing structure to be strengthened at limited areas. Per the geotechnical engineer's preliminary recommendations, all fill under the new proposed

structures must be removed and recompacted within 1'-6" to 2' of the existing parking structure roof. This will require shoring of the existing structure during recompaction.

2. New Grand Avenue Ramps and Stairs: The new ramps will consist of concrete slabs on grade between concrete walls supported on continuous footings. There will be a construction joint where the ramp crosses the boundary of the existing parking structure below. At this point, the slab and walls will be supported by new beams and columns over the existing structure. The existing ramp slabs and walls will need to be partially demolished per the structural drawings. The existing beams of the roof will be partially demolished with new reinforcement connecting the proposed and existing slabs where the two intersect. In addition to tying the new and existing structures together so that they act as one in these locations, the existing structure way need to be strengthened if adequate strength is not attainable.
3. Event Plaza at Grand Avenue Ramps: The new plaza is at a significantly higher elevation than the existing elevation. For this reason, this area will be built up, removing the existing fill so that it leaves 1'-6" to 2' of soil above the parking structure roof as not to touch the waterproofing membrane. The built-up structure will be new columns to match the existing below with new beams spanning between them supporting the new 12" one-way slab. There will also be new columns at the midspan of approximately two beams with strengthening of the existing beams and columns under the new 5' planters. The new columns on existing columns will form a moment frame in one direction and will be cantilevered columns in the other in order to resist the lateral loads acting on the elevated area. A new wall will surround the perimeter of the built-up area in order to prevent the adjacent soil from entering, leaving the space vacant and inaccessible.
4. Fountain Renovation: The new fountain slab will be built up using light-weight concrete over structural foam. In the fountain basins where the top of slab is being raised, the new slab will span between new concrete walls to match the existing walls below at the fountain that are at 9'-5" on center. The new fountain slab has 4" architectural pavers on top of the structural slab per the fountain plans.
5. New café shell at Grand Avenue Ramps: The new shell located north of the fountain is supporting proposed data rooms, public bathrooms and a two story café. These structures have not been designed yet, for that reason the columns for the proposed structure must be located on the existing beams below since the new slab is only designed for the first floor surface loads. The new slab is to be supported by new walls over the existing beams in areas where there is a greater amount of fill opposed to a thickened slab in order to minimize the superimposed load on the existing structure. The new slab and walls should be designed to transfer the shear from the proposed structures to the existing parking garage roof.
6. Hill Street Trellis: The trellis structure is framed using tube steel columns and beams supporting 18" deep built-up steel beams acting as planters. The trellis is segmented into five mini-trellises at different elevations; each one supported by steel moment frames in the northeast-southeast direction and cantilevered columns in the northwest-southwest direction. In order to span across the parking ramps and provide clearance below, there are additional columns and transfer beams at a lower elevation between the columns bearing on the existing 14" ramp walls. There are to be no new structural features bearing on the soil between the ramp walls and Hill Street as no borings were taken at this location in order to stay within the MTA clearance requirements.
7. Existing Parking Structure Gravity System:
    a. Columns: The parking structure consists of four rows of interior columns running longitudinally down the length of the structure, spaced 62' and 9'-

5" o.c. These columns are typically 24"x24" in size and are composed of 5000 psi concrete.

b. Floor Slab: The Second Level floor slab is 5" concrete slab on grade composed of 2000 psi concrete with #3 reinforcing bars spaced at 18" o.c. each way. The First Level floor slab is a 6" pretensioned slab composed of 4000 psi concrete spanning between pretensioned tee-beams composed of 5000 psi concrete.

8. Existing Parking Structure Lateral System: There are 12" thick shear walls surrounding the perimeter of the structure composed of 2000 psi concrete.
9. Existing Parking Structure Foundations: The existing parking structure utilizes a system of spread footings set a minimum of 2' below the adjacent floor slab and a minimum of 3' below natural grade. The walls have continuous footings composed of 3000 psi concrete and the columns have spread footings composed of 4000 psi. The allowable soil bearing pressure for this structure is 10,000 psf.

B. Block 3 (Hill Street to Broadway)

1. Description: The Broadway Terraces will consist of slabs on grade as well as built-up structural slabs, concrete stairs, pedestrian ramps and a new stage over an existing vent area. There is an existing subterranean parking structure at this location which may require strengthening upon further analysis. Per the geotechnical engineer's preliminary recommendations, all fill under the new proposed structures must be removed and recompacted within 1'-6" to 2' of the existing parking structure roof. This will require shoring of the existing structure during recompaction.
2. New slabs, walls and planters over existing structure: The new features over the existing parking garage at the southeast end of Block 3 are at a higher grade than the existing features and must be built up as efficiently as possible in order to avoid adding excessive loads to the existing structure. This will be done through a series of light-weight concrete slabs over metal deck spanning between steel beams that support various raised floor slabs at the sidewalk areas. The planters will be supported by structural slabs spanning between planter walls, allowing for a maximum of 5' planter depth where applicable.
3. Existing Parking Structure Gravity System:
   a. Columns: The columns in the north half of the parking structure are spaced at 30' in the north-south direction and 32' in the east-west direction. The columns range in size from 24" square to 28" square with drop capitals at the top. The south half of the parking structure has two rows of interior walls that range from 12" to 24" with a row of columns at the center running north-south. The walls are composed of 3000 psi concrete and the columns are composed of 3000, 4000 and 5000 psi concrete.
   b. Floor Slab: There are five floors labeled A through D and Roof. Level D, the lowest level, is a 6" concrete slab on grade of 8" gravel base. The Level C floor is a 7" prestressed slab spanning between prestressed tee-beams. The south bay of this floor is a 7" concrete slab spanning between regularly reinforced concrete beams. The north portion of this floor is a 6" concrete slab on grade over 8" gravel base. Level A and B floors are a 7" prestressed slab spanning between prestressed tee-beams. The south bays of these floors are a 7" concrete slab spanning between regularly reinforced concrete beams. The north portion of these floors is a 13" two-way concrete slab. The Roof floor is a 10" concrete slab between concrete beams that span east-west. The north portion of this floor is a 22" thick two-way slab over a majority of the area. The slabs on grade are composed of 2000 psi concrete, all slabs and non-prestressed beams are 4000 psi concrete and all prestressed tees are 5000 psi concrete.

4. Existing Parking Structure Lateral System: There are 12" to 20" thick shear walls surrounding the perimeter of the structure composed of 3000 psi concrete.
5. Existing Parking Structure Foundations: The existing parking structure utilizes a system of spread footings set a minimum of 3' below the adjacent floor slab. The walls have continuous footings composed of 3000 psi concrete and the columns have spread footings composed of 4000 psi. The allowable soil bearing pressure for this structure is 12,000 psf.
6. Existing Parking Structure Retrofit: The existing parking structure was designed in 1968 and retrofit in 2008. New tube steel columns and fiber wrap reinforcement was added to the existing cracked beams. These latest repairs will be taken into consideration when analyzing the existing structure for possible strengthening at the southeast end of the parking garage where the Broadway Terraces are located.

C. Block 4 (Broadway to Spring Street)
1. Description: The proposed ramp at the Criminal Courts Building will enter from Broadway at street level and slope down along the south side of the building until it enters the existing underground parking structure. This will require a series of walls for landscaping purposes and a slab on grade for the ramp. Per the geotechnical engineer's preliminary recommendations, all fill under the proposed structures in the southeastern block must be removed and recompacted. The fill ranges from 2' to 31'-6" below grade, which makes removal and recompaction problematic. An alternative solution is a post-tensioned (PT) slab on grade over 5' compacted fill blanket. The later concept is used mostly in Block 4 in order to minimize shoring due to the close proximity of new to existing structures.
2. New café shell: A new PT slab on grade over a compacted fill blanket has been provided at Block 4 to serve as the shell for the proposed café and miscellaneous structures that have yet to be designed. The proposed design is based on the assumption that the café is a one-story steel, lightly loaded structure. It is possible to further design the PT slab foundation system for the café based on additional design information for the structure.
3. New hardscape features: The hardscape structures at Block 4 are over a large amount of fill, making it advantageous to use PT slabs on grade over a fill blanket opposed to removing and recompacting all fill. These slabs will have both post-tensioning reinforcement and mild reinforcement to reduce cracking.
4. Relocation of the parking ramp at the Criminal Courts Building: Borings 1, 3, 4, 5 and 6 of the geotechnical engineer's preliminary report are located along the new parking ramp at the Criminal Courts. These borings show bedrock locations ranging from 3' to 11' below the existing grade level. The proposed ramp slopes below bedrock and it must be excavated to the desired elevation per the architectural plans. The proposed retaining wall is 6' away from the Criminal Courts Building per the current architectural plans. In order to not surcharge the existing building, the wall must be within 6' from the bottom of the existing building's foundations. At this depth the wall will be retaining approximately 20' of soil and bearing on bedrock. According to the 2006 IBC Table 1804.2, bedrock has an allowable bearing pressure of 4000 psf, a lateral bearing of 400 psf/ft and a friction coefficient of 0.35 for sedimentary and foliated rock. The preliminary structural design is based on these values until further design information has been provided by the geotechnical engineer.
5. Existing State Site: The record drawings received from Jonathan Heim with the Asset Department for the State of California show one level of structure 15' below grade at the boundary area shown on the Civic Park plans. The loading conditions at Block 4 within 15' of the existing structure are not changing; therefore they will not be causing additional surcharge.

1.3 CODE CRITERIA

A. The project will be designed in conformance with the 2008 Los Angeles County Building Code (LACBC), based on the 2007 California Building Code (CBC) and the 2006 International Building Code (IBC).

B. Loading Criteria:
1. Gravity loads for existing parking structure at Blocks 1 and 2:
   a. Design Live Loads (not reducible):

Mall Roof	100 psf
First Level Parking	50 psf
Garage Ramps, Stairways	100 psf
Storage Rooms	125 psf

   b. Design Earth Loads:
      Mall Roof – 5' of wet earth at 120 pcf = 600 psf
      Earth and Live Load – skip load from 700 psf to 350 psf
2. Gravity loads for existing parking structure at Block 3:
   a. Design Live Loads:

Mall Roof	100 psf
Garage Ramps and Floors	50 psf
Stairways	100 psf
Storage Rooms	250 psf

   b. Design Earth Loads:
      Mall Roof – depth of earth varies, weight per cubic foot = 120 pcf
3. Gravity loads for new construction:
   a. Design Live Loads:

Parking Ramps Not Subject to Trucking	50 psf
Stairs	100 psf
Yards and Terraces	100 psf
Restaurants	100 psf
Stage Floors	150 psf
Parking Ramps and Sidewalks Subject to Trucking	250 psf or 8000 lb

      Wet soil and planting loads per the landscape architect's specifications.
4. Wind design criteria:
   Basis of design – 2007 CBC, 85 mph
5. Seismic design criteria:
   a. The following seismic coefficients were taken from an adjacent project on Grand Avenue given that the geotechnical engineer has not provided us with design values yet:
      Site Class: C (very dense soil and soft rock)
      Site Coefficients: Fa = 1.0, Fv = 1.3
      Sds = 1.469 g
      Sd1 = 0.643 g

Electrical Systems

Part 1: GENERAL

1.1 GENERAL SCOPE INFORMATION

A. Levine/Seegel Associates (LSA) is the Consulting Electrical Engineer for the Civic Park project. LSA Project team structure is as follows:
   1. Principal in Charge: Mark Seegel
   2. Project Designer: Johnny Nguyen

B. The project scope includes power for all new Park lighting, technology systems, fountain equipment, new building structures and kiosks.

1.2 SYSTEM DESCRIPTION

Power Services: Electrical service for blocks 1, 2, 3 and 4 will be provided from the existing electrical service to the County Mall, Phases 1 and 2. Power for Blocks 1, 2 and 3 is currently distributed from the 4800 volt main switchboard in the County Courthouse to electric rooms at various locations in the parking garages below the existing mall and at the Court of Flags. New electrical service for Block 4 will be provided from the existing electrical service by way of the existing utility tunnel running beneath Broadway with conduit extensions and pull boxes in the new Park area.

The existing electrical service has adequate capacity to provide power to the new Civic Center Park program. Existing circuit breakers will be utilized to feed Park power and lighting with additional breakers and panels as required. All wiring to Park areas will be new.

Capacities of all existing systems have been verified with the Los Angeles Department of Water and Power.

Power Distribution Systems: Existing electrical rooms will be utilized where possible and infrastructure, including conduits only for future buildings and additional technology and security, will be provided. Building and event power to future buildings (actual installation of conductors and low voltage wiring) will be installed as part of the alternates.

A. Park lighting at Blocks 1 and 2 shall be served from the existing panels feeding Mall lighting located on the A Level of the parking garage below. Panels are designated as MLA, MLAA, MLBA, MLCA and MLDA.

B. Fountain lighting shall be fed from existing panels feeding the fountain lighting located on the A Level of the parking garage below. Panels are designated as MPA, MPB and MPC.

C. Park lighting at Block 3 shall be served from the existing panels feeding the Mall lighting located on the A Level of the parking garage below. Panels are designated as 4AA and 4A.

D. Park lighting at Block 4 shall be served from new panels located in the Café Building at Block 4.

E. Park general power for Blocks 1, 2 and 3 shall be served from the existing lighting panels as described above.

F. Park general power for Block 4 shall be served from a new panel and transformer located in the Block 4 Toilet Building. See single line diagram for transformer sizing.

G. Technology power for Blocks 1, 2 and 3 shall be served from a new panel and isolation transformer located at the Block 1 garage level technology room. See single line diagram for transformer sizing.

H. Technology power for Block 4 shall be served from a new panel and isolation transformer located in the Block 4 Toilet Building. See single line diagram fro transformer sizing.

I. Conduits with pull strings shall be provided for all low voltage wiring systems.

J. Power for new fountain pumps shall be from a new distribution panel located in the fountain pump room.

K. Power for food service buildings shall be served from new breakers in existing distribution panels located on the A Level of the parking garage below.

L. Emergency Power System:

1. .At Blocks 1 and 2, emergency egress lighting for the Park shall be provided on the facades of adjacent buildings, fed from the emergency power in those buildings. Existing emergency power capacity will have to be determined, but it is anticipated that there is adequate capacity.

2. At Blocks 3 and 4, emergency lighting will be located on light poles. Capacity of the existing emergency generator will be verified.

M. Power for new low rise elevator at Grand, to replace existing elevator.

N. Dedicated 120 volt branch circuits for irrigation controllers.

O. Pump for Block 4 rain harvesting system alternative to deliver storage tank water to planter area. (See civil drawings).

1.3 Electrical System Characteristics:

A. Fluorescent and HID lighting will be served at 277 volts.
B. Motors ½ HP and larger will be served at 480 volts, 3 phase.
C. Incandescent lighting will be served at 120 volts.
D. Small power equipment will be served at 120 volts, single phase or 208 volts, single or 3 phase.

1.4 CODE CRITERIA

A. The project will be deigned in conformance with the 2008 California Electrical Code and the 2005 Title 24 requirements for lighting.

B. Materials and fixtures will be designed in conformance with standards and guidelines of independent park operator. Park operator has not been determined. In absence of park operator, standards according to County Internal Services Department (ISD) will be consulted.

1.5 EXCLUSIONS

A. The park may include, but does not currently include the following:

1. Solar/photovoltaic integration
2. Roadway lighting and traffic signal control
3. Cathodic protection
4. Lightning protection grounding design for flagpoles or light towers

PART 1 – GENERAL (LIGHTING DESIGN)

1.1 GENERAL SCOPE INFORMATION

A. Lighting Design Alliance, Inc. (LDA) is the Consulting Lighting Designer for the Civic Park project. LDA Project Team structure is as follows:

1. President: Chip Israel
2. Assistant Designer: Anne E. McMills

B. The project scope includes all exterior lighting areas outlined in the Base Park budget of the approximate 12 acres of the park. The scope does not include the restaurants or retail areas. This area is covered in the 4 blocks between Grand Avenue to Spring Street and between Temple Street and First Street.

C. The current scope does not include flood lighting or building lighting of any existing or future structures. It also does not include any streetlighting or traffic signals for the adjacent roadways. Emergency lighting shall be provided as documented by the project engineer, Levine-Seegel.

1.2 PROGRAM

A. The exterior lighting layout is based on the drawings received from Rios Clementi Hale Studios.

B. The exterior lighting will be based on the following concepts:

Block 1: The lighting for Block 1 will emphasize the fountain as the focal point. Along the center of the park, we will work to minimize the poles or other taller fixtures that may block the view of the fountain. The fountain renovation is broken into three variations: "Base", "Base Plus", and "Enhanced" as described in the fountain design package by the fountain consultants, Fluidity. The lighting design for the Base and Base Plus packages are the same.

The Base and Base Plus fountain options will use color-changing LED technology hidden within the tiles of the fountain floor for longer lamp-life as well as dramatic effect at night. This will also give the option of static or animated cueing to provide dynamic or subtle effects which can be changed for everyday or for specific events that may happen in the park. The fountain lighting will be integrated with the water consultant's work. This fountain option would be a one-for-one trade-out of existing fixtures.

For the Enhanced option of the fountain, the contractor is to provide a price to coordinate with the additional fixtures required for the new pop-jets and other features as added by the Fluidity package and as indicated on the drawings. CAT 5 ethernet programming jack for the lighting system shall be located in fountain programming enclosure so that the fountain lighting can be programmed within easy visual access of the fountain. Electrical engineer and Contractor to confirm all programming equipment, power supplies, and other technical equipment to comprise a complete system for the LED fountain lighting with easily accessible programming capabilities.

In general, for safety and security in the park, we will use lower level soft lights to help direct the pedestrians along the pathways. The stairways will be lit by softly glowing handrail lights as well as low-level steplights on the sides. We will create one long pathway of light throughout the entire park that creates a soft directional

area for the pedestrians to enjoy. On the ramps, the steplights are mounted so that they do not glare in one's eyes while looking down the park to the structures beyond. In general, the pathways will be well lit, and the turf zones will drop down a little in brightness near the middle to create beauty and contrast. All poles will be full-cutoff to reduce light pollution. As indentified in the EIR Cultural Resources section, the existing Hi-Fi light poles will be refurbished to working condition and relocated to the olive grove in the plaza located between blocks 1 & 2. These fixtures are original fixtures containing both a light source and a speaker. We suggest having these fixtures completely disassembled, regalvanized, new wires and components installed, and add a new and modernized ballast as well as a new optical head system. Having these fixtures evaluated for the cost impact of refurbishment is recommended. We will no longer use the speaker when refurbishing these fixtures to reduce renovation costs and because a background music sound system will be provided throughout the park as indicated in the Technology package.

2. Block 2: The lighting for Block 2 will be similar to Block 1 in the fact that the pedestrian areas will be softly lit and the turf areas will decrease slightly in brightness towards the middle. Short bollards will be added to the smaller pathways to help with safety and security. The Hill Street parking ramp roof structure will be lit from both above with sconces mounted inside the new trellis feature. These sconces will be full cut-off so that we reduce the amount of light pollution cast into the sky. For cost efficiency, we are suggesting relamping and reballasting all the existing steplight fixtures in the parking ramp so that they are all restored to working order. Contractor to provide add/alternative number (#2A) for the lighting of the ramp roof cover. Select poles on this block, as well as in the other blocks, (as determined by the Technology package) will be equipped with Wi-Fi antennas, convenience outlets, programming jacks, and/or ethernet jacks behind lockable covers in the base of the poles for easy accessibility for the park operator and others that use the park for special events. As with all of our fixtures, these panels will be vandal-resistant to deter crime-related incidents. These poles should also contain internal raceways and external mounting channels for maximum flexibilities. There shall be at least two easily-accessible programming jacks per block so that any lighting programming that needs to be done (either for the park or for special events) can be easily accessed within plain view of the lighting.

3. Block 3: The lighting for Block 3 will emphasize the central pathway which leads pedestrians through the pleasant courtyards of the park. Again, the stairways and pathways will use low-level lighting to softly lead the way safely without causing obtrusive glare. Some of the poles in Block 3 will have small posts integrated into either side of the pole. This is to provide the flexibility for theatrical lighting to be used to light the stage in the middle of Block 3. This will give special events the flexibility of mounting their lights on existing positions rather than having to supply every mounting position themselves which will in turn save money. The Broadway Terraces (Add Alternative #3B) will be lit by features integrated into the planters and steps leading down to Broadway. These will be long, linear glowing fixtures integrated into the walls that help to enhance the overall design of this area. Short poles will also be added here to enhance the lighting levels to the required safety levels.

4. Block 4: The lighting for Block 4 will primarily be lit with large thematic structures designed by the architect. These will be large decorative structures that also integrate functional lighting – each containing (8) quartz-halogen fixtures for instant-on applications such as emergencies or cleaning purposes and (16) Metal Halide fixtures for general coverage. The flood lights can light the

central landscape area in cases where there are special events covering the lawn. There will also be integrated accessible hanging positions for theatrical lighting that can be used when performances are onstage. The outer pathways will be lit with shorter poles so as not to detract from the look of the larger, thematic structures. The stairway ramps near Broadway will have the same linear features as found on Block 3 to enhance the look of the architecture.

5. In general, emergency lighting is recommended as large quartz halogen flood lights from the tops of the buildings that cover Blocks 1 and 2. For Blocks 3 and 4, we recommend adding quartz halogen fixtures to the tall poles in Block 3 and the large structures on Block 4. We recommend this as a source because wide general light will be the most convenient if there is any sort of large scale emergency or large event cleanup. Also, quartz-halogen fixtures will have instant-on capabilities. Not only will this be easier, but also more cost effective than attaching emergency ballasts to each of our fixtures. This way all the floods that light up the entire area can be switched on when needed very easily. The electrical engineer shall confirm all necessary emergency lighting levels are met. If exterior ATMs are provided, the engineer shall provide lighting to meet California state-wide ATM safety codes. All emergency lighting to be fed from building emergency power system, and must provide 1 footcandle minimum along emergency egress pathways. Final lamp and wattage to be determined by electrical engineer.

1.3 CODE CRITERIA

A. The project will be designed to meet the footcandle code requirements for safety and visual comfort as stated by the Illuminating Engineering Society (IES). In general, the IES prefers all pedestrian walkways in a park setting like this to register at 1 footcandle for safety and security. The lighting plan will be calculated to reach these levels on all walkways. The lighting plan will also strive to eliminate glare and light pollution in all instances by providing specifications for full cut-off luminaires and using lower, softer sources when possible such as steplights and lit handrails.

B. The project will also be designed to meet the Californian statewide wattage requirements of Title 24. Depending on the zone designated and the compliance path chosen, the lighting plan will comply with the wattage restrictions relating to those requirements with the help of the electrical engineering team. This will also help the park be more environmentally-friendly by using less overall wattage. We will also strive to use more efficiently-sourced luminaires so that each fixture more efficiently produces more light for less wattage, thereby helping reduce wattage as well.

C. If desired by the owner, the project will be designed to be LEED compliant. Even if the renovation is not trying to achieve LEED certification, the lighting layout will still work to minimize tree uplighting, reduce light pollution by using full-cutoff luminaires, and reduce lighting power densities whenever possible. All of these techniques will help ensure that the park be as environmentally-conscious as possible.

1.4 EXISTING CONDITIONS

A. Existing lighting levels of the existing park have been measured by a light meter in representative areas and documented. In general, most of the existing park levels measure at 0.0 footcandles. Our new design will provide more efficiently sourced fixtures that create a better light output in order to achieve the desired light levels as specified by the IES. This will provide pedestrians with a more safe and secure visit to the park during

the evening hours. The existing Hi-Fi light poles do not meet the required light output to create the required lighting levels needed for safety. Therefore, clustering several of them together will provide the appropriate light levels.

PART 2 – SPECIFICATIONS

2.1 CODE REQUIREMENTS

A. Codes:

1. Luminaires, components, and installation shall be in accordance with the American National Standards Institute, the latest revision of the National Electrical Code (N.E.C.) and applicable federal, state, and local codes and regulations.

2. Lamps shall be in accordance with the Energy Policy Act of 1992 (Public Law #102-486).

B. U.L. Listing:

1. Luminaires, ballasts, transformers, and other electrical components shall be manufactured in strict compliance with the appropriate requirements of the Underwriter's Laboratories, Inc. and others that may be applicable. The appropriate Underwriter's Laboratories, Inc. labels shall be affixed to luminaires.

2. The Contractor shall be responsible for coordinating the characteristics and the appropriate U.L. labeling of luminaires and their components with the ambient conditions which will exist when the luminaires are installed.

2.2 GENERAL LUMINAIRE DESIGN AND CONSTRUCTION

A. Manufacture luminaires to the specifications described above, hereafter, and as indicated in the luminaire schedule and contract documents. Acceptable manufactures are listed in the luminaire schedule shown on the drawings.

B. Provide proper thickness of code gauge sheet steel so that luminaires are rigid, stable, and will resist deflection, twisting and warping under normal installation procedures, re-lamping, and maintenance.

C. Luminaire designs shall include, as applicable, plaster frames, trim rings, shrouds, flanges, backboxes, support hardware, and other components required for proper installation of the luminaire.

D. Luminaires with covers, cones, or diffuser frames, which are to be mounted above twelve feet from the finished floor level, shall be provided with safety chains or other acceptable backup means of support to properly secure such items to main housing.

E. Fixtures shall be Underwriter Laboratory approved for their application and location and have the appropriate U.L. label adhered to the fixture visible within the housing of each fixture.

F. Rows of luminaires shall be designed with concealed splice plates and shall be free of light leaks. Components such as reflectors, trims, diffusers and other visible items shall be properly aligned with no overlaps, gaps, or other imperfections.

G. Adjustable fixtures shall provide methods to lock fixture in place. This includes rotation and tilt adjusting.

H. Hardware shall be concealed where it is appropriate, unless it is a design feature. Fixture and hardware shall be tamper and vandal-resistant.

I. Where hardware is exposed the hardware is to be painted to match adjacent surfaces unless otherwise noted.

J. Materials, accessories, and other related fixture parts shall be new and free of defects, which may impair their character, appearance, strength, ability, or function. Fixtures must be protected from damage from the time of fabrication until final acceptance of work.

K. Contractor is responsible for coordination of special mounting conditions for custom fixtures and must supply necessary mounting devices.

L. Fixtures shall be completely wired at the factory. Fixtures shall come with electrical wiring in accordance with local codes and in accordance with actual installation requirements.

M. Provide neoprene gasketing, stops, and barriers where required to prevent light leak and/or water and water vapor penetrations.

N. Provide finished product with smooth clean ground metal edges, trims, and frames as well as tight fitting connections, hinges, and closures.

O. Provide access for servicing the installed luminaire and for replacement of electrical parts without removal or disassembly of the luminaire.

P. Unless otherwise noted, provide emergency battery packs, emergency quartz re-strike, or stand-by systems as required for luminaires connected to emergency circuits.

Q. High intensity discharge luminaires, connected to emergency circuits, shall be provided with a quartz re-strike or stand-by system which is activated during loss of power until the high intensity discharge lamp returns to full light intensity.

R. High intensity discharge luminaires shall be completely enclosed, unless otherwise noted.

S. Where acrylic is used for lenses, refractors, and diffusers with luminaires with H.I.D. sources, the luminaires shall be designed not to exceed a 65°C luminaire ambient temperature.

T. Incandescent luminaires utilizing tungsten halogen sources shall be designed and constructed so that lamp seal temperatures do not exceed 350°C. at an ambient of 25°C when tested in accordance with U.L. Standard #57, and shall maintain an operating bulb wall temperature of approximately 600°C and not less than 250°C.

U. LED fixtures which use a remote power supply must be supplied with power supplies as necessary to complete a working installation. Power Supplies must be supplied by the fixture manufacturer or approved by the fixture manufacturer to maintain the U.L. rating.

V. Lead wires for luminaires utilizing tungsten halogen lamps shall be rated for not less than 200°C operation, and shall be rated for 250°C when temperature warrants. Minimum individual fixture wiring shall be number 18 gauge. Terminate wiring for recessed fixtures, except fluorescent units, in external splice box.

W. Temperature at any point on reflectors of tungsten halogen luminaires shall not exceed 205°C.

X. Luminaire doors shall be provided as follows: Positive light seal, concealed safety hinges, and inconspicuous "positive spring loaded" holding latches, which are hingeable from either side and operable without the use of tools.

Z. Where luminaires are mounted in tandem in continuous runs, the Contractor shall field coordinate fixture quantity and length required to provide a continuous band of light without gaps to within 6" of row ends.

2.3 LENSES

A. Plastic used for lenses and diffusers shall be formed of colorless 100% virgin acrylic as manufactured by Rohm & Haas, Dupont, or acceptable equal, unless otherwise noted.

B. Glass used for lenses, reflectors, diffusers, and luminaires shall be tempered for high impact and heat resistance. The glass shall have a transmittance of not less than 88%, unless otherwise indicated. For exterior luminaire use tempered borosilicate glass Corning #7740 or acceptable equal.

C. Lenses, louvers, and other light diffusing elements shall be removable and positively held so that hinging or other normal motion will not cause them to drop out.

D. Lenses shall be turned over to the Owner clean and free of dust or finger prints.

E. Spread lenses shall be provided with notches or locking devices to insure that lens orientation is not disturbed during luminaire lamp replacement or cleaning.

F. Unless otherwise noted, metal halide luminaires shall be provided with heat and shock tempered glass enclosures capable of containment of hot quartz arc tube particles as recommended by luminaire and lamp manufacturers.

2.4 LAMPS

A. Provide lamps as indicated on the luminaire schedule and the applicable contract documents.

B. Lamps of a given type shall be produced by one manufacturer..

C. Linear fluorescent lamps shall be T-5 or T-8, energy saving type with electronic ballasts unless otherwise noted.

D. Provide 10% spare lamps for fixtures.

2.5 FLUORESCENT BALLASTS AND HIGH INTENSITY DISCHARGE BALLASTS

A. Fluorescent and high intensity discharge lamp ballasts shall conform to the following:

1. U.L. and ANSI specifications with labels and/or symbols of approval by the U.L. and certification by C.B.M. as tested by E.T.L.

2. Ballasts shall be rated for operation on the electrical system voltage to which they are shown connected.

3. The component parts shall be designed, fabricated, and assembled in accordance with the N.E.C. and other applicable codes.

4. Ballasts shall provide safe and reliable operation of the specified lamps.

5. Ballasts installed within the same luminaire type shall be identical.

6. Fluorescent lamp ballasts shall be rigidly mounted to the inside of the top of the luminaire housings, with ballast surfaces and housing in complete contact for efficient conduction of ballast heat to prevent overheating or cycling. Ballasts shall be readily removable for replacement.

7. Ballasts shall be designed for operation at 60 Hz. nominal, and shall operate at the nominal voltages indicated on label.

8. Secure ballasts firmly in luminaires to prevent vibrations.

9. Contractor shall provide ballast with operating voltage compatible with branch circuit voltage as shown on contract drawings.

10. Unless otherwise noted, ballasts shall be electronic and comply with the following specifications.

11. Unless otherwise noted, ballasts shall be factory installed and wired.

12. Fluorescent ballasts installed in fixtures outdoors or in enclosed loading docks shall have an ambient temperature rating of 0°F.

13. Ballasts for HID fixtures shall be high power factor, regulating type, with voltage regulation of 10%, (+7.5%, -10% for 400W or 1000W high pressure sodium) and crest factor of not more than 1.8. Primary starting current shall not exceed operating current.

14. HID ballasts in luminaires installed out of doors shall have ambient temperature rating of -20°F.

15. Fluorescent T5 and T8 lamp ballasts

a. Shall be capable of starting and maintaining operation at a minimum of 50°F, unless otherwise indicated.

b. Total harmonic distortion (THD) shall be less than 15%.

c. Input wattage: 62W or lower when operating two F32T8 lamps, 92W or lower when operating three F32T8 lamps, 115W or lower when operating four F32T8 lamps.

d. Provide three and four lamp fixtures with two ballasts per fixture to accommodate multilevel switching where indicated on drawings.

B. Electronic ballasts shall conform to the following:

1. Ballasts shall be integrated circuit type as manufactured by Advance (Mark V) or approved equals, unless otherwise noted in fixture specification.

2. Ballast shall have a frequency of operation of 20 KHz or greater, and operate without visible flicker.

3. Ballasts shall withstand 4000 volt surges as specified in ANSI C62.41.

4. Light level output shall be continuous, even and flicker-free over the entire dimming range.

5. Ballast shall be inaudible in a 27dB ambient throughout the dimming range.

6. Ballast shall be capable of striking lamps at any light level. This shall be accomplished without first flashing to full light.

7. Ballasts must comply with FCC Part 18 regulations for non-commercial RF lighting devices.

8. Ballasts shall be CSA certified.

9. Ballasts shall have a power factor of 95% or above.

10. Ballasts shall be sound rated "A".

11. Ballasts shall have an average lamp current crest factor below 1.4.

12. Ballasts shall maintain constant light output over operating ranges of 90V to 145V (120V ballasts) and 200V to 320V (277V ballasts), 50/60 Hz.

13. Ballasts shall have a sequenced start progression which first heats cathode filaments and then ignites the lamp to ensure rated lamp life is not diminished.

14. Ballasts shall withstand line transients as defined in ANSI/IEEE C62.41, Category A.

15. Ballasts shall meet the requirements of the Federal Communications Commission Rules and Regulations, Part 18, for non-consumer equipment.

16. Where applicable, ballasts shall meet minimum efficacy standards of Public Law No. 100-357, National Appliance Energy Conservation Amendments of 1988, and Canadian Efficiency Standards.

17. Ballasts power factor shall be 85% or above.

18. Ballasts shall have a full replacement warranty of 5 years from date of manufacturer.

2.6 LIGHTING CONTROLS

A. Photo controls shall conform to the following:

1. Photo control shall be for use on system voltage to which they are shown connected.

2. Switching mechanism shall be hermetically sealed and shall be calibrated to close circuit when illumination drops below two-foot candles and open circuit when illumination exceeds five-foot candles.

3. Switching mechanism shall contain delay feature to prevent circuit opening in transient illumination such as headlights from passing vehicles.

4. Photocell shall be rated at not less than 1800-volt amps with standard EEI-NEMA 2-3/4" ID locking base.

5. Control shall be mounted on twist lock receptacle on conduit fitting.

6. When mounted on roof locate device twelve inches above roof and orient photo control light sensing element north.

B. Time switches shall conform to the following:

1. Time switch used for control of exterior lighting shall be twenty four hours type with skip-a-day feature reserve spring for maintaining time schedule during power outage and astronomical dial factory set for latitude of project.

2. Time switch enclosure shall be NEMA One weatherproof.

3. Operation shall be for 277 volt lighting circuits with 277 volt control circuit.

4. Time switch shall be four pole momentary contacts.

5. Where number of lighting circuits to be controlled exceeds number of time switch load contacts, provide auxiliary lighting contactor to control additional circuits.

C. Magnetic contactors shall conform to the following:

1. Magnetic contactors shall be multi-pole, mechanically held, electrically operated with contacts rated for not less than twenty amps at 480 volts A.C. or Tungsten load within a NEMA 1 enclosure.

2. Separate contactors shall be provided for each control function.

3. Contactors shall break underground conductors of circuits being controlled. Use multiple contactors with operating coils in parallel when number of contacts required exceeds contactor pole limit.

4. Contactor shall have coil clearing contacts.

5. Control coil shall be rated 277V.

6. Contactor shall be U.L. listed for short circuit withstand rating of the source panel serving the contactor load circuits.

D. Exterior lighting shall be controlled by lighting control center to provide lighting control by level of exterior illumination as well as by time control.

E. The lighting control center shall conform to the following:

1. The lighting control center shall consist of time switch electrically operated, mechanically held magnetic contactors, terminal blocks, selector switches and internal wiring.

2. Enclosure shall be N.E.M.A. type one, wall mounted with latching facilities.

3. Manual-off-automatic selector switch for each mode of operation shall be mounted on hinged door.

4. The lighting control center shall be wall mounted.

5. Internal circuitry of control center shall prevent exterior lighting circuits from being energized until outside illumination level falls below setting of the photo electric control device and to de-energize circuits when setting of photo electric control device is exceeded.

6. Within limits of photo control, designated circuits shall be time controlled while other circuits are photo controlled only. Manual override shall be provided.

7. DMX control for the fountain lighting shall have access of a CAT 5 programming jack located in the fountain programming enclosure located within plain sight of the fountain lighting for easy programming.

2.7 COORDINATION WITH AMBIENT CONDITIONS

A. The Contractor is responsible for coordinating the characteristics and the U.L. labeling of the luminaires and their components with the ambient conditions which will exist when the luminaires are installed. These areas of coordination include, but are not limited to, the following:

1. Wet location labels.

2. Damp location labels.

3. Low temperature ballasts.

4. Very low heat rise ballasts.

2.9 PRODUCT FIXTURE SCHEDULE AND CUTSHEETS

A. See following pages for fixture schedule and cutsheets.

I. PROJECT SUMMARY

The Related Companies, the project's developer, has engaged Vantage Technology Consulting Group to perform Technology Consulting Services for the Civic Park in Downtown Los Angeles. Vantage's effort will help to develop an effective strategy for the integration of Technology infrastructure and systems within the Civic Park project. This document will begin to describe and recommend Technology implementation strategies to support the planned uses of the park and recommend alternative strategies for developing Technology infrastructure and systems. These recommendations will be presented in a tiered structure that identifies increasingly greater levels of functionality within each area of the Civic Park. Additionally, the analysis will take into consideration the overall project budgets and construction staging strategies.

Accompanying documentation provides "schematic level" specifications for technical infrastructure (e.g. equipment rooms, power loads, etc.) needed to support the proposed Technologies. These schematic level technical specifications provide the basis for estimated costs for each of the Technology development options, which will assist the project team in establishing project budgets.

II. TECHNOLOGY PLANNING

Planning for technology infrastructure and systems is being developed based on the anticipated Event and Operations spaces throughout the Civic Park. Central to this planning is the design assumption that the Civic Park will be equipped with sufficient power and technology connections, resulting in the Park's ability to avoid bringing in auxiliary power generators and supplemental audio and video cabling to support the typical Event Spaces listed below. Specific technical details concerning the Civic Park's facility technology impact needs are provided in an accompanying report, Appendix B: Technology Integration Facility Impact: SD Report.

A. Description of Event Spaces

RCHS has provided documents describing the possible functions at locations throughout the park. The following section outlines the possible functions that could occur in these areas:

1. Block 1

Grand Avenue Event Terrace

- Reception
- Light or Sound Show Viewing

Fountain Plaza

- Private Dinner, Dance Event
- Light or Sound Show Viewing
- Featured Artist Event

Marketplace Promenade (and in Block 2)

- Art/Book/Health Fair
- Food Vendor Carts
- Farmer's Market

- Gala Dinner
- Graduation Ceremony

2. Block 2:

   Marketplace Promenade (and in Block 1)

   - Art/Book/Health Fair
   - Food Vendor Carts
   - Farmer's Market
   - Gala Dinner
   - Graduation Ceremony

   Lawn at Civic Gardens

   - Performance and Film
   - Wedding
   - Speaker Event

3. Block 3:

   Community Terrace

   - Performance and Film
   - Food Vendor Carts
   - Reception
   - Festival
   - Expo

4. Block 4:

   Performance Green

   - Food Vendor Carts
   - Performance and Film
   - Art and Book Fair
   - Farmer's Market
   - Civic Ceremony
   - Community Festival

   Café Pavilion

   - Reception

5. Parkwide Events

   - Parkwide could include all Venues simultaneously
   - Marathons
   - Festivals
   - 4th of July and New Year's Eve celebrations
   - Parades

B. Operations Spaces

The following spaces have been identified as locations that require Technology planning and infrastructure to support Operations, budget permitting. Those areas identified as "Technology" are part of the Base Civic Park budget.

1. Parks and Facilities Building (Block 1)
    - Offices
    - Satellite Electronic Equipment Room (Technology)
2. Future Restaurant Building (Block 1)
    - ATM Location
3. Parking Garage below (Block 3)
    - Park Maintenance Room
    - Security Room
    - Main Electronic Equipment Room (Technology)
4. Future Café Building (Block 4)
    - Event Storage
    - Satellite Electronic Equipment Room (Technology)
    - ATM Location

C. Technology Infrastructure and Systems

Civic Park Infrastructure consists of the low voltage cable routing pathways, technology equipment rooms, associated power and HVAC services and all other building elements designed and constructed to support the initial and long-term deployment of technology within the park. This specifically includes all conduits, vertical risers, technology spaces (e.g. Main Electronic Equipment Rooms, Satellite Equipment Rooms (or equipment closets), technical power, emergency power etc.

Additional infrastructure to support events and promotional activities at the Civic Park shall include provisions for temporary support of staging, rigging and decorations, electrical power service for lighting and audiovisual equipment, pathways for temporary power and signal cable distribution, and support resources for technical operation and event staging/production.

Integrated and portable technology systems planning will be provided to support technologies such as Background Music (BGM), integrated control systems, event audio reinforcement and video presentations, and Digital Signage and Kiosk systems.

Three tiers of Technology implementation are recommended for the Civic Park:

- Base Scope is recommended 'Day One' implementation. The Base Level scope includes only the most essential Technology elements and a minimal level of investment.
- Category 2 Alternates are recommended 'Day One' if there is room in the budget. This level represents a modest level of additional development to provide slightly enhanced Technology capabilities with a modest level of additional investment.
- Category 3 Alternatesl are recommended for future implementation. This level includes a comprehensive scope of Technology infrastructure and systems to support the broadest range of anticipated activities.

The following describes the individual Technology components in these three tiers of Technology implementations:

III. BASE SCOPE

1. Technical Power Infrastructure (Fixed and Temp. Events)
    - 100 amp, 200 amp, and 400 amp services will be provided at the strategic locations shown on the Technology Plans to support Events.
    - These electrical connections will be in lockable back boxes or Light Pole enclosures and include 'Spider box' connections and Nema disconnects.

2. Cabling Distribution Pathways (conduit and pathways)
    - Cabling Sleeves will be provided to manage cabling pathways for Special Events. These pathways will help to manage audio, video, and power cabling away from foot traffic and hazardous areas.
    - EMT (Electrical Metallic Tubing) Rigid conduit will provide permanent Riser pathways from Parking Garage to Equipment Rooms (where possible).
    - EMT Rigid conduit will supply cabling pathways to Media Hydrants and horizontally between Technology locations.
3. Technical Equipment Rooms
    - One Main Electronic Equipment Distribution Room will be located under Block 3 in the Court of Flags Parking Structure and is approximately 360 square feet.
    - One Satellite Electronic Equipment Room is located in Block 1 Park Facilities Building and is approximately 80 square feet.
    - One Satellite Electronic Equipment Room (future) is located in Block 4 in the Café and is approximately 80 square feet
4. Media Hydrant (AV and IT and 20/30amp power connections)
    - Technology infrastructure to support distribution of electronic media (i.e. audio, video, control) will consist of a limited network of connection points identified as "Media Hydrants" at selected locations.
    - Media Hydrants will provide optical fiber and copper ties to a technical "head end" location where signals may be patched between locations and also tied into the property Background Music System.
    - Media Hydrants will also provide 20 amp and 30 amp power services, data network and telecommunications connections. Connection Panel infrastructure will be coordinated and integrated with other Event Infrastructure, including Lighting and Electrical device locations.
    - The Light Poles are being designated as prime locations for Media Hydrant integration. Each Media Hydrant is expected to require a weatherproof enclosure that can house audio, video, data, and telecommunications connectors on 2-3 gang box sized faceplates.
5. Facility Impact (Back of House and Storage)
    - A Security Control Room / Monitoring Center will be needed for day to day Security monitoring and Special Event Support.
    - Storage for AV Equipment, including microphones, stands, large speakers, stages, and portable racks of electronic equipment will be required.
6. Installed Structured Cabling (tele, data, AV)
    - Cabling is the low voltage cable connecting incoming telecommunications services (i.e. telephone, television and data services) between the Main Point of Entry (MPOE) and the property's Main Distribution Frame (MDF) room.
    - The telecommunications service providers will bring their cable feeds into the property and terminate in the MPOE. From this room, there will be at

least one main location (MDFs) where the cabling is distributed, one for each area (or block).

- This cabling will likely include fiber optic cable for data services, twisted-pair copper cabling for telephone voice services and coaxial cable for television distribution (CATV) services.

7. Emergency Public Announcement (EPA)
   - EPA provides emergency evacuation and paging and may be tied into Background Music System. (See following section)
   - EPA Loudspeakers may be integrated into Light Poles at select locations throughout the Park.

8. Security
   - Security Systems include access control, surveillance, monitoring, command and control, blue-light emergency phones, security and emergency responder radio systems, etc.
   - Security Systems may utilize a shared data network and other communications infrastructure.

9. Wireless Communications (WiFi, RF)
   - A site wide radio frequency (RF) System supports the use of two-way radios for Special Events and Maintenance communication.
   - Wireless Internet (WiFi) is currently in the Cost Estimate and SD design. However, it is possible that Wifi could be provided by a third party to cover selected areas of the Civic Park.
   - Coordination with the WiFi provider is required to locate adequate antenna signal coverage and final locations of WiFi antennas.
   - Preliminary placement of antennas is on the Lightpoles that do not already have Loudspeakers.

IV. CATEGORY 2 ALTERNATES (TO BE INCLUDED AS ALTERNATES IN DD DOCUMENTS)

1. Event Sound Reinforcement (Alt P1-4)
   - Event Sound Reinforcement would be supplemental to general background music distribution within specified areas of the property. Small public address (PA) systems may be available for connection to the Media Hydrants, or as stand-alone systems.
   - For activities requiring more sophisticated sound reinforcement systems, rental equipment will be utilized on a temporary basis.

2. Background Music (BGM) (Alt P1-4)
   - A distributed audio and background music system will be provided within common areas of the property (except the parking levels). This system will provide audio programming to individually selectable audio distribution zones. It will enable separate audio playback and reinforcement to individual or all zones for music, emergency announcements, etc.

- Small scale activities requiring voice reinforcement or light music may be supported by the zoned background music distribution system and other Event Infrastructure.
- Light Poles will support the loudspeaker mounting in most locations. In some instances, additional support structures will be needed to support the loudspeakers.
- The Technology equipment rooms will be required to house the electronic equipment.
- In the Event Spaces, audio zones will be created to keep local audio programming confined to a specific area. In these zones, portable audio devices such as music systems or microphones may be connected via audio jacks or media "hydrants" located within the zone such as a kiosk or auto display.

3. Information Stations/Kiosks (Alt P1-4)
   - Way finding and Informational Kiosks will be located at strategic points in the Civic Park to support either automated touch screen based informational displays, or a human operated informational station.
   - Each Kiosk location needs a Telecommunications and AV cabling and infrastructure as well as a System in the Main Electronic Equipment Room

V. CATEGORY 3 ALTERNATES (NOT INCLUDED AT THIS TIME)

1. Specialty & Venue Systems
   - Event Lighting planning will be accommodated through the strategic placement of High Level power and the Lighting Consultant's lighting design.
   - Event Lighting controls support may be accommodated through the data connections at the Media Hydrants.

2. Data Networking
   - A "Parkwide Network" is required to Support the Technology Systems and Operations departments. This network connects to the Main and Satellite equipment rooms as well as the Media Hydrants .
   - The Civic Park operator may choose to implement its own private internal Wireless network for Operations purposes. The network would be separate from the WiFi provided for public use and described in "Wireless Communications."

3. Telecommunication Services
   - ATM machines and voice telephone services will likely take advantage of the structured cabling distribution. Telephone connections are required in all Operations Spaces listed above.
   - Basic telecommunications connections and cabling are included above in "Installed Structured Cabling". This section includes any active electronics, park installed Voice Over IP (VOIP) and Civic Park operated machines.

- ATM locations are expected at the Restaurant in Block 1 and the future Café building in Block 4. Additional ATM locations have been located near the paths to each Civic Park Block.
- Voice and Data outlets will be located in other strategic places, including Media Hydrants, to support Operations and Events.

4. Satellite Broadcast Systems
   - Satellite Broadcast System connections will be provided for in Block 4, near the future Café. These Satellite System connections will provide a way for a television broadcaster to receive or transmit audio/video feeds to the Civic Park's Technology Systems.
   - News Truck parking space in Block 4 will provide a dedicated location for New Trucks to access the Southern Sky's satellites.
   - Background music may be provided by a Satellite Based provided (like Muzak or DirecTV).
5. Digital Signage
   - Throughout the project, high-traffic areas may benefit from digital signage. These could be flat-panel displays be used for way-finding, property and sponsor branding, event schedule listing, and advertising.
   - Currently, a minimal amount of Digital Signage locations have been planned, as it is anticipated that Digital Signage (displays) may be incorporated into the Kiosks.
   - During major events, these signs may be tied into the event marketing by displaying event themed content. Signs used by Event tenants could also produce a revenue stream that can assist in offsetting the cost of deployment.
   - An assessment of the signage deployment needs to be made and ideal locations can be determined based on the desired functions of the signage. Digital signage displays will utilize a shared data network and other common communications infrastructure.
6. Event Video Image Display (large format)
   - Opportunities for integration of large format displays will likely occur during special Events requiring infrastructure and connectivity to support temporary large format video displays. These events could include 'movie night' or video art installation on a large temporary screen.
   - Power and audio and video signal connections will be provided at strategic locations to support these Events.
7. Parkwide Control Systems Integration
   - Parkwide control systems may be utilized by the property maintenance and operations team to enable automated management of common landscape functions, including irrigation monitoring and control, moisture sensing, etc.
   - Additionally, these systems may be utilized to control common area lighting fixtures remotely via software and an integrated building management system.

- Daylight and occupancy sensors combined with software management systems provide cost-effective lighting to maximize both economy and guest safety.
- Integrated Lighting Control Systems may utilize a shared data network and other common communications infrastructure.

VI. BUDGETARY COST ESTIMATE EXCLUSIONS

The Budgetary Cost Estimate in Appendix C includes gross allowances and is not based on any specific Systems Designs. This estimate is associated with the functional expectations of the Technology Systems implementation only, and does not include:

- Conduit, Power, and Electrical pathway and boxes equipment and installation costs
- Architectural Build-out of Technology Spaces
- Lighting and Lightpoles
- Operational Costs
- Cost Escalations and Taxes

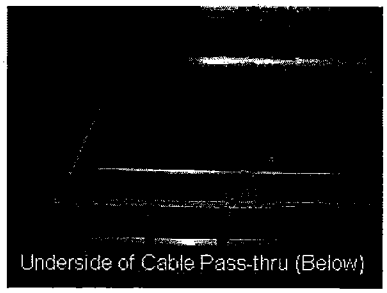
VII. NEXT STEPS

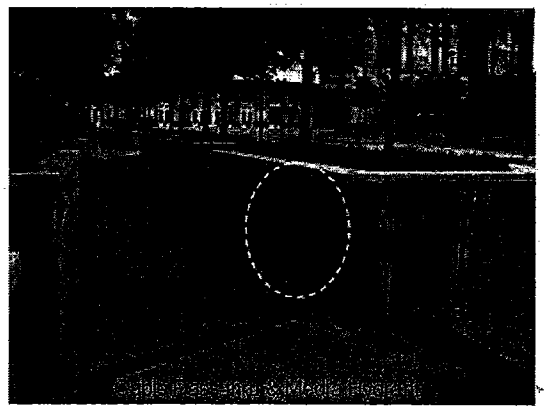
Below is a list of some of the items that need resolution as technological designs become more refined in the Design Development phase of the project:

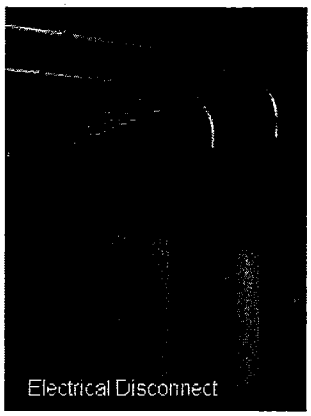
- MDF and IDF room layouts – as the architecture becomes more defined, the rooms can be designed to ensure they will support both day-one requirements as well as future growth.
- Riser quantities and sizes – the amount of riser space needed is dependent upon the number of service providers requiring dedicated pathways and what other property operations requirements become identified. The count and size of the vertical risers needs to be determined.
- Generator power requirements – until the final configurations of technology systems are determined, the required backup power required is not known.
- Technology service provider routes and requirements – information on what services the Civic Park will be requiring.
- Integration with other properties – information on what buildings will tie into the Civic Park and if there is shared antenna or rooftop space for Radio Frequency and Satellite Broadcast needs. Considerations should include connections to other Grand Avenue Redevelopment components.
- Specific Media Hydrant and Loudspeaker integration details and coordination for integration into Lightpoles and concrete walls.
- Definition of specific Security needs by a Security consultant, including monitoring and emergency phone strategies.

VIII. REFERENCES

A. Photos







Event Infrastructure Example

B. Appendix A
See Attached Technology Plans, T1.10, T1.20, T1.30, T1.40 that depict Schematic locations of the implementation of Technology in the project.

C. Appendix B
See Attached Technology Integration Facility Impact Schematic Design Report.

D. Appendix C
See Attached Technology Deployment Recommendations Worksheet and Cost Estimate

GRAND AVENUE CIVIC PARK

Appendix B: Technology Integration

Facility Impact: 100% Schematic Design Report

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I. INTRODUCTION

This report is intended to provide an overview of the Grand Avenue Civic Park technology infrastructure and facility impact of the technology systems on the facility design and construction. The information presented is based on the current Civic Park operational program and the architectural concepts and schematic designs approved to date.

As the general architectural concepts progress and the programmatic requirements of the Grand Avenue Civic Park are further developed, the specific requirements of the building infrastructure will continue to be refined. Technology Systems Infrastructure Technology Systems Infrastructure describes the back-of-house systems and facility requirements that enable the technology systems.

II. ELECTRICAL POWER SERVICE (*REF. NOTE 1*)

All construction documentation, including plans and specifications, describing electrical power service associated with this report and the project's Grand Avenue Civic Park Basis of Design program shall be engineered and documented by the project's Electrical Engineer.

A. Technical Power Service

Line voltage (i.e., 110/208/277 VAC) power service specified to support technology systems, equipment and related activities shall be identified as Technical Power Service. The following shall apply to Technical Power Service for the project:

1. Conditioning and UPS: All conditioning and UPS devices shall be specified as part of the technology systems and shall be integrated into the electronic equipment racks where required. Such devices will generally be employed to protect critical system components such as computers, processors, controllers, and audio and video servers. Power service to audio power amplifiers and visual display screens will not be distributed through the component power conditioning and UPS devices in the equipment racks.
2. Grounding: Unless otherwise noted, Technical Power Service shall provide an isolated ground with a separate insulated copper ground wire from each receptacle to a dedicated Technical Power ground bus bar at the electrical panel board. Technical Power receptacles must not be grounded to the building structure. Power service to the Technical Power electrical panel board shall be supplied through dedicated isolation transformer (s). Grounding bus bars for technology equipment shall be installed in each Electronic Equipment Room. The Electrical Engineer shall identify and specify all grounding requirements.
3. Circuiting and Breaker Panels: Dedicated electrical panels shall be located inside each Electronic Equipment Room servicing the circuits for the equipment racks in that room.
4. Isolation Transformers: It is highly recommended that isolated "clean" power be provided to the Main and Satellite Electronic Equipment Rooms via isolation transformers integrated into the power service.

B. Convenience Power

Convenience power shall be defined as electrical outlets that do not service technology (audio, video, computer, displays) electronic equipment racks. Convenience Power service shall be provided throughout the technical and support areas described in this report to facilitate general operations and maintenance activities.

C. Auxiliary Show Power (Company Switch)

"Company Switch" type technical electrical power service (400 amps, 3 phase, 208 volt) is shown in the project to support special events in that area. The specific final location(s) for Auxiliary Show Power will be determined in the coming design phases.

III. CABLING DISTRIBUTION

A. Cabling (Ref. Note 2)

The following criteria are identified for development of low voltage signal cabling distribution infrastructure:

1. All low voltage cabling for technology systems will be routed through conduit.
2. The project electrical contractor will be expected to install the conduit required for all low voltage technology cabling.
3. Pull cords are to be installed in the technology conduit by the electrical contractor to facilitate later installation of the low voltage cable by the AV contractor.
4. All pull boxes and conduit riser locations shall be accessible for initial installation, future installation and ongoing servicing of signal cabling.
5. Conduits for low voltage signal cables shall maintain a minimum 12" separation from line voltage electrical conduit. Where low voltage cabling/conduits must cross a line voltage feed, the conduits shall intersect at 90 degree angles.
6. Pull boxes should be installed every 90 feet and/or after two 90 degree turns.
7. All conduits specified to support the technology systems shall be EMT type. Flexible metal conduit may be used in runs of less than ten feet (10'), or where approved by the AV Consultant.

B. Ties to Other Building Services (Ref. Note 6)

The ongoing function of the technology systems and related daily support operations must be integrated with basic facility services, including the systems identified below. The design team shall coordinate to ensure that the needs of the Civic Park operation is met as the specific requirements are identified.

Two 1.5" conduits from the Main Equipment room or Satellite equipment room is recommended for each of the following connections within the Park:

1. Security
2. Telephone
3. Fire & Life Safety
4. Building Management Systems
5. Fountain/Water
6. Lighting

C. Ties to Outside Services (Ref. Note 6)

As the specific operational structure and requirements of the Civic Park program are developed it will become clearer how those operations will be linked to outside services. It is anticipated that links will be required between the Civic Park infrastructure (Main Electronic Equipment Room) and the following outside services:

1. High Speed Data Service (e.g., Frame Relay)
2. Broadband Internet Access
3. City and/or County of Los Angeles Administrative Data Network
4. Civic Park property Web-based Services
5. Television Broadcast – Satellite Truck connections
6. Grand Avenue retail mall development center

IV. ELECTRONIC EQUIPMENT ROOMS (REF. NOTE 3)

Electronic Equipment rooms will be required to house the equipment serving the various elements of the Civic Park technology systems. Distribution of signals to technology elements will branch from the main equipment room to satellite equipment rooms or closets via dedicated conduit infrastructure. All pathways shall be accessible for installation and service. The Equipment Rooms do not supply electrical power to the various displays, only audio, video, control, and data signals.

There will be two types of electronic equipment rooms, the Main Electronic Equipment Room and Satellite Electronic Equipment Rooms. The Main Electronic Equipment Room may be located in the parking garage below Block 3, while the Satellite Equipment Rooms will be located in the Park Facilities Room in Block 1, and the Café in Block 4.

The design team will identify locations, configurations and final sizes of the Equipment Rooms. The list below details the general equipment room locations and desired sizes. Due to equipment rack access, it is required that one wall is at least 8 feet long.

Room Name	Location	Qty.	Size
Main Electronic Equipment Room	Parking Garage – Block 3	1	360 sq. ft. minimum
Satellite Electronic Equipment Room	Park Facilities Room – Block 1	1	80 sq. ft. minimum
Satellite Electronic Equipment Room	Café – Block 4	1	80 sq. ft. minimum

A. Main Electronic Equipment Room

The Main Electronic Equipment Room will serve as the "head-end" for the entire Civic Park and will house the technology systems main equipment, including: control and monitoring equipment, audio and video processing, video servers, data networking, and sound reinforcement systems. Additionally, space within the Main Electronic Equipment Room may be required for the storage of spare and replacement parts, portable media equipment and technical test equipment needed in the ongoing support of the electronic systems. Approximately 8 electronic equipment rack cabinets will house the audio and video sources, data processing and server equipment, and audio amplification for the property.

Architectural development of the Main Electronic Equipment Room shall provide for the following:

1. Ceiling: General area ceiling height should be a minimum of 8'-0". Floor to ceiling clearances shall provide a minimum of 7'-6' to any overhead obstruction (e.g., structure, light fixtures, etc.). Finished ceilings are not required.
2. Lighting: Basic fluorescent strip fixtures providing an even distribution of light throughout the room at a minimum level of 60 footcandles as measured at 36" above the floor. Coordinate lighting fixture layout with equipment racks and overhead cable distribution infrastructure to ensure optimum effectiveness. Emergency lighting systems which operate on trickle-charge storage batteries are desirable as a safety precaution in the event of an inadvertent power outage.
3. Finishes: Exposed wall and overhead surfaces shall be painted. Floors shall be smooth, level and finished with anti-static vinyl tile.
4. Electrical Power and Heat Load Tables

Main Electronic Equipment Room:		
	Number of Racks	8
	Power (Watts)	16,000
	Technical Power (20A Circuits)	12
	Heat Load (BTU/HR)	45,000
	Additional Notes: Dedicated Electrical Panel servicing this equipment room is required	

B. Satellite Equipment Rooms

1. The Satellite Electronic Equipment Rooms will be smaller in size, contain less electronic equipment, and primarily support the audio and video data networking applications and pathways to and from the Civic Park Technology elements and Media Hydrants. Additionally, the Satellite Electronic Equipment Room may support audio amplification to Civic Park areas requiring sound reinforcement. Two electronic equipment racks will house audio and video processing and patch bay equipment, data network switches, and possibly some audio amplification equipment.
2. Architectural development and finishes shall be as described above to the Main Electronic Equipment Room.
3. Electrical Power and Heat Load Tables

Satellite Electronic Equipment Rooms:		
	Number of Racks	1-3
	Power (Watts)	1,500 – 5,000
	Technical Power (20A Circuits)	3 – Block 1 6 – Block 4
	Heat Load (BTU/HR) Block 1	5,000 - 10,000
	Heat Load (BTU/HR) Block 4	15,000 - 20,000
	Conduit Connections to Main Equipment Room	Four 2" Conduits
	Additional Notes: Dedicated Electrical Panel servicing each equipment room is required	

V. TECHNICAL SUPPORT FACILITIES (REF. NOTE 5)

A. Storage

A secure storage facility is required adjacent to the Main Electronic Equipment Room. A storage room or closet will typically accommodate the storage of audio and video equipment including spare parts, portable AV equipment (mixing board, microphone, and stands, etc.), and rolling carts. Approximately 50 sq ft. is required for storage. The storage room or closet should provide at least two convenience electrical outlets.

B. Support Personnel Work Area

Support personnel will require dedicated workspace accommodations in proximity to the Main Electronic Equipment Room. The Work Area shall be a separate acoustically isolated facility with direct access to the other technical areas described in this section. It is recommended that two (2) part-time technical staff positions will need to be accommodated. Architectural development of this area shall be in line with typical technical support workspace standards.

C. Technician Service Area

Technical support personnel will require space to perform routine maintenance and repair operations on electronic equipment. A work/test bench and at least two 20amp electrical circuits on Convenience power are required to support the testing of equipment. This area could be within the Support Personnel Work Area, or a separate room.

VI. KIOSKS (REF. NOTE 12)

1. Kiosks located throughout the Park integrate information and advertising media at a pedestrian scale. While the form factor of the kiosks is still being developed, each kiosk will require structure that supports image display.
2. Each Kiosk requires conduits for electrical power and signal cable connectivity. It is anticipated that there will be a total of 5-8 kiosks. Conduit required to each Kiosk will consist of:
    a) Two 1.5" conduits, and
    b) Two 20 amp circuits
3. Electrical Power and Heat Load Tables

Kiosk:		
	Number of Racks	0
	Power (Watts)	TBD
	Technical Power (20A Circuits)	2
	Heat Load (BTU)	TBD

VII. OTHER TECHNOLOGY DEVICES

The following devices require conduits from each location to the Main Electronic Equipment Room;

1. Specialty &Venue/Event Lighting Systems (Ref. Note 13)
    a) Two 1.5" conduits for Data/Fiber signals
    b) Two 20 amp Power circuits
    c) Additional Event Lighting described in Lighting design
2. Telecommunication Services and Systems (ATM) Locations (Ref. Note 15)

a) Two 1.5" conduits for Data/Fiber signals

b) Two 20 amp Power circuits

3. Satellite Broadcast Systems (Ref. Note 16)

a) Two 1.5" conduits for Audio/Video and Data/Fiber signals

b) One 1.5" Conduit as Spare

c) Two 20 amp Technical Power circuits

4. Digital Signage Systems (Ref. Note 17)

a) Two 1.5" conduits for Audio/Video and Data/Fiber signals

b) One 1.5" Conduit as Spare

c) Two 20 amp Technical Power circuits

d) Additional Power Requirements To Be Determined (not in current plan)

5. Event Video Image Display Locations (Ref. Note 18)

a) Two 1.5" conduits for Audio/Video and Data/Fiber signals

b) One 1.5" Conduit as Spare

c) Two 20 amp Technical Power circuits

d) Additional Power Requirements To Be Determined (not in current plan)

VIII. TECHNOLOGY LIGHTPOLE AND WALLMOUNT INTEGRATION

A. Media Hydrants (Ref. Note 4)

1. The Media Hydrants are audio, video, and data signal interfaces that will be used to enable temporary connections to the Main and Satellite Electronic Equipment Rooms and the various resources of the Civic Park. Media Hydrants will typically be mounted either within the Lightpoles or wall mounted in concrete in a weatherproof, lockable enclosure.

2. Each Media Hydrant will require signal distribution pathways via conduits fed from the nearest electronic equipment room. The conduit required to each Media Hydrant will consist of:

a) Two 1.5" conduits for Audio/Video and Data/Fiber signals

b) One 1.5" Conduit as Spare for Future Connections

c) Two 20 amp Technical Power circuits

3. It is anticipated that there will be 40 to 50 Media Hydrants throughout the property. The exact location and method of integration of each Media Hydrant will be determined by the design team.

4. Media Hydrant connections will be mounted in a secure, weatherproof enclosure.

5. Electrical Power and Heat Load Tables

Media Hydrant:		
	Typical Size - Lightpoles	3-6 Gang
	Typical Size – Wall mounted in Concrete	15"Hx 15"W x 8" D
	Technical Power (20A Circuits)	2
	Heat Load (BTU)	NA

B. Park Sound System (Ref. Notes 7, 10, 11)

The park sound system is comprised of a Background Music System, Emergency Public Announcement, and Event Sound Reinforcement systems. Each loudspeaker cluster requires cabling conduit run to the Main Electronic Equipment Room or the nearest Satellite Electronic Equipment Room.

1. Each Loudspeaker requires conduit for electrical power and signal cable connectivity. Conduit required to each Loudspeaker will consist of:

    a) One 1" conduit

2. Electrical Power and Heat Load Tables

Sound System:		
	Background Music/Emergency Public Announcement Locations	60-70
	Event Sound Reinforcement (could also be wall mounted connections)	4-8
	Power (Watts)	Generated from Equipment Rooms
	Technical Power (20A Circuits)	0
	Heat Load (BTU)	0

C. Wireless Data Network (Ref. Notes 9, 14)

1. Each Wireless Access Point (WAP) requires conduit data signal cable connectivity at Lightpoles. Each WAP antenna will be mounted on a Lightpole and conduit required will consist of:

    a) One 1"conduit for Data Cabling for Wireless Access Points and Security Cameras (see below)

2. Electrical Power and Heat Load Tables

Wireless Data Network:		
	Wireless Access Point (WAP) Antennas on Lightpoles	8-12
	Power (Watts)	Generated from Equipment Rooms
	Technical Power (20A Circuits)	0
	Heat Load (BTU)	0

D. Security (Ref. Note 8)

1. It is anticipated that there will be network standards based Security Cameras that will take advantage of the cabling and pathways that the Data Network provides to the Lightpoles. Exact Security camera locations are currently not developed, but for budget purposes, 65-75 cameras have been estimated for cost purposes.

    a) Shares conduit with data/cabling

2. Electrical Power and Heat Load Tables

Security:		
	Security Cameras on Lightpoles	65-75
	Power (Watts)	Generated from Equipment Rooms
	Technical Power (20A Circuits)	0
	Heat Load (BTU)	0

IX. ENVIRONMENTAL REQUIREMENTS

The following requirements are recommended for the Technology Systems and Infrastructure at the Grand Avenue Civic Park.

A. Mechanical Services (HAVC)

1. Electronic Equipment Rooms: To support the use of such technology equipment, electronic equipment rooms will require specialized mechanical (HVAC) and power. For instance, the rooms will need to be environmentally controlled (temperature range 50F to 80F, humidity 20% to 55%). These environmental conditions are required 24 hours a day, 7 days a week, and may require a separate HVAC system form the building systems to accommodate these requirements.

2. Support Facilities: The support facilities identified above will require typical office and storage space environmental conditions.

B. Fire Suppression

1. Main Electronic Equipment Room: Provide an FM-200 fire suppression system. A manual "hold-off" shall be installed adjacent to the main entrance to the data center. Locate a phone close by. A Fire Alarm Control Panel will be provided at main entrance to Equipment Room. Mount portable fire extinguishers (with appropriate ratings) in the Equipment Room as close to the entrance as possible. Coordinate the layout of fire protection systems with the equipment layout to avoid obstructing sprinklers, access to the alarm, or other protective measures.

2. Satellite Electronic Equipment Rooms & Support Facilities: The support facilities identified above will require typical local code acceptable office and storage space fire suppression systems.

C. Security / Access Control

1. Electronic Equipment Rooms: Access to the electronic equipment rooms should be controlled to allow entry only by authorized personnel. Access may be required at any time of the day or night and should not be restricted by other building activities or tenants. Entries should be tied to the facility security system to alert security monitoring of unauthorized entry.

2. Support Facilities: The support facilities identified above will require typical office and storage space security and access control.