

# APPROVED

MAY 05 2022

## BOARD OF RECREATION AND PARK COMMISSIONERS

**BOARD REPORT**

NO. 22-110

DATE May 5, 2022

C.D. 15

### BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT (W.O. #E170515F) PROJECT – APPROVAL OF FINAL PLANS - CATEGORICAL EXEMPTION FROM THE PROVISIONS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PURSUANT TO ARTICLE III, SECTION 1, CLASS 11(2) [CONSTRUCTION OF PARKING LOTS UNDER 110 SPACES WHERE NO DECKING OR UNDERGROUNDING IS INVOLVED] OF CITY CEQA GUIDELINES AND ARTICLE 19, SECTION 15311(b) OF CALIFORNIA CEQA GUIDELINES

AP Diaz	_____	M. Rudnick	_____
H. Fujita	_____	<i>FuE</i> C. Santo Domingo	_____ <i>DF</i>
J. Kim	_____	N. Williams	_____

*M. Stuee*  
 \_\_\_\_\_  
 General Manager

Approved   X                        Disapproved \_\_\_\_\_                      Withdrawn \_\_\_\_\_

### RECOMMENDATIONS

1. Approve the final plans and specifications, substantially in the form on file in the Board of Recreation and Park Commissioners' (Board) Office and as attached to this Report as Attachment 2, for the Drum Barracks Civil War Museum Parking Lot Development (W.O. #E170515F) Project (Project);
2. Approve the Project to be bid and constructed through the Department of Recreation and Parks (RAP) As-Needed Pre-Qualified General Contractors for Park Facilities Construction – Retrofit, Maintenance, and/or Repairs (PQGC); and,
3. Determine that the Project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Article III, Section 1, Class 11(2) [Construction of parking lots under 110 spaces where no decking or undergrounding is involved] of City CEQA Guidelines and Article 19, Section 15311(b) of California CEQA Guidelines and direct RAP Staff to file a Notice of Exemption (NOE) with the Los Angeles County Clerk;
4. Authorize RAP's Chief Accounting Employee to prepare a check to the Los Angeles County Clerk in the amount of \$75.00 for the purpose of filing an NOE; and,
5. Authorize RAP's Chief Accounting Employee or Designee to make technical corrections as necessary to carry out the intent of this Report.

BOARD REPORT

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SUMMARY

On May 16, 2012, the Board approved Report No. 12-147 which provided RAP authorization for the acquisition of one parcel of property measuring 0.09 acre, or approximately 4,900 square feet, for the expansion of the Drum Barracks Civil War Museum (Museum) parking lot. The site had an existing residential dwelling structure of 708 square feet, and the street address of 1061 Cary Avenue, Wilmington, California 90744.

On June 30, 2014 the demolition of the existing residential dwelling structure of 708 square feet was completed. The acquisition of the property was funded by Proposition K LA for Kids Funds.

The proposed Project scope includes the installation of a turf parking area, with fencing, lighting, and irrigation improvements.

On March 12, 2020, a community meeting was held at the Museum organized with RAP and the Council District 15 (CD15) staff to request input from the community, the Drum Barracks Civil War Museum Board, and residents in the area. The community and Council District are supportive of the Project.

After review by RAP and the Department of Public Works, Bureau of Engineering (BOE) staff, it was determined that the construction work can be completed by RAP's PQGC, and that BOE's Construction Management Division will provide construction management services.

The City Engineer's estimate of the Project's construction cost is One Hundred and Fifty Thousand, Nine Hundred Dollars (\$150,900). The budgeted amount for construction contingency is Twenty Thousand, Nine Hundred Dollars (\$20,900), which is included in the estimated Project's construction cost.

Funds are currently available from the following funds and accounts:

<u>FUNDING SOURCE</u>	<u>FUND/DEPT./ACCT. NO.</u>
Sites & Facilities	209/88/88SMFT

TREES AND SHADE

There are no trees within the Project boundary; no trees are being removed or added.

Existing trees located adjacent to and outside the project boundary will be protected during construction and their canopy will be preserved.

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### ENVIRONMENTAL IMPACT

The proposed Project consists of the construction of a parking lot under 110 spaces where no decking or undergrounding is involved.

According to the parcel profile report retrieved on April 6, 2022 the site located in the methane zone, but the project is not going to place people at risk of being victims of methane seepage. The area is not in a coastal zone or in a liquefaction zone, so there is no reasonable possibility that the project may impact on an environmental resource of hazardous or critical concern or have a significant effect due to unusual circumstances. No other known projects would involve cumulatively significant impacts, and no future projects would result from the proposed project. As of April 6, 2022 the State Department of Toxic Substances Control (DTSC) (Envirostor at [www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov)) has not listed the Project site or any contaminated sites near the Project area (within 1000 feet). The State Water Resources Control Board (SRCB) (<https://geotracker.waterboards.ca.gov/>) has listed the following closed cases within 1000 feet of the project site:

- RB Case #: 0655V2, closed on 9/28/1999;
- RB Case #: 0655M5, closed on 9/29/2000;
- RB Case #: 0655I7, closed on 4/24/2000;
- RB Case #: 0655J3, closed on 5/31/2000;
- RB Case #: 0655S3, closed on 5/13/1999;
- RB Case #: 0655J4, closed on 8/24/2000;
- RB Case #: 0655S2, closed on 5/8/1999;
- RB Case #: 0655S4, closed on 9/23/2000;
- RB Case #: 0655S5, closed on 9/29/2000.

Approximately 900 feet southwest of the project site, SWRCB lists case #0154 an open case where the potential contaminants of concern are volatile organic compounds. The site has been listed as Open - Inactive in January 29, 2015 because no regulatory oversight activities are being conducted by the Los Angeles Regional Water Quality Control Board. Due to the contaminated sites regulatory status and distance from the project site, it is not anticipated to become an environmental concern for the project.

According to the Caltrans Scenic Highway Map there is no scenic highway located within the vicinity of the project or within the project site. Furthermore, the project is located in proximity of the Drum Barracks, the last remaining original American Civil War era military facility in the Los Angeles area. The building is listed in the National Register of Historic Places (NHRP ID# 71000161), in the California Register of Historic Places (ID# 169) and as a City of Los Angeles Historic Cultural Monument (HCM #21). However, the nature of the project is such that it will not cause a substantial adverse change in the significance of a historical resource.

## BOARD REPORT

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Based on this information, RAP staff recommends that the Board determines that the Project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Article III, Section 1, Class 11(2) of City CEQA Guidelines and Article 19, Section 15311(b) of California CEQA Guidelines. Staff will file a Notice of Exemption with the Los Angeles County Clerk upon Board's approval.

### FISCAL IMPACT

The proposed construction is fully funded by Sites and Facility funds. There will be no fiscal impact to RAP's General Fund associated with the Project.

### STRATEGIC PLAN INITIATIVES AND GOALS

Approval of this Board Report advances RAP's Strategic Plan by supporting:

Goal No. 1: Provide Safe and Accessible Parks  
Outcome No. 2: All parks are safe and welcoming

Result: Parking and lighting improvements provide more accessibility to park facilities.

This Report was prepared by Ray Araujo, Project Manager, Architectural Division, BOE; reviewed by Steven Fierce, Principal Architect, BOE; Deborah Weintraub, Chief Deputy City Engineer, BOE; and Darryl Ford, Superintendent, Planning, Construction and Maintenance Branch Department of Recreation and Parks.

### LIST OF ATTACHMENT(S)

Attachment No. 1 – CEQA Notice of Exemption  
Attachment No. 2 – Drum Barracks Civil War Museum Parking Lot Development Final Plans

CITY OF LOS ANGELES  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 1149 S. BROADWAY, 7<sup>th</sup> FLOOR  
 LOS ANGELES, CALIFORNIA 90015  
 CALIFORNIA ENVIRONMENTAL QUALITY ACT  
**NOTICE OF EXEMPTION**  
 (Articles II and III – City CEQA Guidelines)

Submission of this form is optional. The form shall be filed with the County Clerk, 12400 E. Imperial Highway, Norwalk, California, 90650, pursuant to Public Resources Code Section 21152(b). Pursuant to Public Resources Code Section 21167(d), the filing of this notice starts a 35-day statute of limitations on court challenges to the approval of the project.

<b>LEAD CITY AGENCY AND ADDRESS:</b> City of Los Angeles c/o Bureau of Engineering 1149 S. Broadway, MS 939 Los Angeles, CA 90015	<b>COUNCIL DISTRICT</b> 15
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<b>PROJECT TITLE:</b> Wilmington Drum Barracks Civil War Museum Parking Lot Development Project  W.O. E170515D	<b>LOG REFERENCE</b>
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**PROJECT LOCATION:** Cary Avenue N. (1061 and 1065), Wilmington, CA 90744 (see *Figure 1: Project Location* and *Figure 2: Project Vicinity Map*). APN: 7423021903  
T.G. Page 794 Grid F6

**DESCRIPTION OF NATURE, PURPOSE, AND BENEFICIARIES OF PROJECT:** The project would construct a small, turf parking lot on a vacant City of Los Angeles (City) owned property to provide parking and an area for programming for the adjacent State of California-owned and City Department of Recreation and Parks (RAP)-operated Wilmington Drum Barracks Civil War Museum. The construction and operation would benefit the staff and guests of the institutional, historic facility.

<b>CONTACT PERSON</b> Lauren Rhodes	<b>TELEPHONE NUMBER</b> 213-485-5733
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<b>EXEMPT STATUS: (Check One)</b>	CITY CEQA <u>GUIDELINES</u> Art. II, Sec. 2.b Art. II, Sec. 2.a(1) Art. II, Sec. 2.a(2) Art. II, Sec. 1 Art. III, Sec. 1 Class 11 (2) Art. _____	STATE CEQA <u>GUIDELINES</u> Sec. 15268 Sec. 15269(a) Sec. 15269(b)(c) Sec. 15061(b)(3) Sec. 15311 (b) Sec. _____
<input type="checkbox"/> MINISTERIAL <input type="checkbox"/> DECLARED EMERGENCY <input type="checkbox"/> EMERGENCY PROJECT <input type="checkbox"/> GENERAL EXEMPTION <input checked="" type="checkbox"/> CATEGORICAL EXEMPTION* <input type="checkbox"/> STATUTORY*		

\* See Public Resources Code Sec. 21080 and set forth state and city guidelines provisions.

**JUSTIFICATION FOR PROJECT EXEMPTION:** This Project is exempt from CEQA pursuant to State CEQA Guidelines Article 19, Section 15311, Class 11 (b). Additionally, the Project is exempt pursuant to *Los Angeles CEQA Guidelines* Article III, Section 1, Class 11 (2). The Project involves the construction of a parking lot under 110 spaces where no decking or undergrounding is involved accessory to an existing intuitional facility. *None of the limitations set forth in State CEQA Guidelines 15300.2 apply (see attached narrative).*

**IF FILED BY APPLICANT, ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING**

SIGNATURE:  <div style="text-align: right;">for Maria Martin</div>	TITLE: Environmental Affairs Officer Environmental Management Group	DATE:  2/10/2021
RECEIPT NO.	REC'D BY	DATE

## CATEGORICAL EXEMPTION NARRATIVE

### I. PROJECT DESCRIPTION, CONTINUED

The project would installation of turf parking lot with fencing, lighting, and irrigation improvements. The turf parking lot would have a capacity for eight (8) vehicle spaces. Construction would include installation of concrete driveway, concrete sidewalk, turf grid with “Invisimarker parking delineators”, wood fence, light fixtures with concrete bases and concrete headers, redwood header, 12-inch and 18-inch concrete headers. Construction methodology involves minor grading, concrete work, paving, landscaping and electrical work. Shallow ground excavation is anticipated for this project. No trees or vegetation are anticipated to be removed as part of the project. There are two trees adjacent to the project site and those would be protected in place during construction.

The repair is in the City-owned vacant property adjacent to the State-owned and City-operated Drum Barracks Civil War Museum. The Drum Barracks Civil War Museum is listed as a historic resource in the National Register of Historic Places, the California Register of Historic Resources, and as Los Angeles Historic Cultural Monument (HCM) Number 21. The project site is in a methane buffer zone. See Section III. 3. *Significant Effects* for more information. The repair may be located near a driveway; however, the Contractor will facilitate the ingress and egress from the driveway. The project may slightly increase vehicular trips or traffic congestion if the Contractor needs to temporarily close or partially close the alley north of the project site. However, if alley closure is needed, it is anticipated to be for a short duration and all temporary traffic control will be done in accordance with the latest version of the Work Area Traffic Control Handbook (WATCH manual). Construction is expected to last approximately six (6) months.

Unless otherwise stated, the proposed Project will be designed, constructed and operated following all applicable laws, regulations, ordinances and formally adopted City standards including but not limited to:

- Los Angeles Municipal Code
- Bureau of Engineering Standard Plans
- Standard Specifications for Public Works Construction
- Work Area Traffic Control Handbook
- Additions and Amendments to the Standard Specifications for Public Works Construction

### II. PROJECT HISTORY

The Drum Barracks Civil War Museum is housed in the last remaining original wooden building of the 22 structures built as a military post during the Civil War in the Los Angeles area. Drum Barracks, named after Lieutenant Colonel Richard Coulter Drum, Adjutant General of the Department of the Pacific in San Francisco, served as the Union Army headquarters for Southern California and the Arizona Territory from 1861-1871.

A Notice of Exemption (NOE) was completed and filed with the County Clerk on June 12, 2010 for the property acquisition for future development of the project site as a parking lot. The project site was acquired by the City of Los Angeles in 2010. The house which was on the property was demolished shortly after. The original NOE listed some inaccuracies and the Bureau of Engineering project manager has requested an updated NOE.

### III. ENVIRONMENTAL REVIEW

#### Basis for Categorical Exemption

The proposed Project is exempt from CEQA pursuant to State CEQA Guidelines Article 19, Section 15311, Class 11 (b) *Accessory Structures* for construction of minor structures accessory to existing

institutional facilities, including a small parking lot.

Additionally, this Project is exempt from CEQA pursuant to the *Los Angeles CEQA Guidelines* Article III, Section 1, Class 11 (2) *Accessory Structures* because the project involves the construction of a parking lot under 110 spaces where no decking or undergrounding is involved accessory to an existing institutional facility.

### **Consideration of Potential Exceptions to use of a Categorical Exemption**

The State CEQA Guidelines (CCR Sec 15300.2) limit the use of categorical exemptions in the following circumstances:

**1. Location.** Exemption Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may be significant in a particularly sensitive environment. Therefore, these classes are considered to apply all instances except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

This Project is exempt from CEQA pursuant to State CEQA Guidelines Article 19, Section 15311, Class 11 (b) *Accessory Structures*. The project site is in a residential neighborhood which has been developed with streets, sidewalk, buildings for residential and commercial uses, and public utilities. The project site is not considered to be within a particularly sensitive environmental where the project may impact on environmental resources of hazardous or critical concern where designated, mapped and officially adopted pursuant to law by federal, state or local agencies. Therefore, this exception does not apply.

**2. Cumulative Impact.** This exception applies when, although a particular project may not have a significant impact, the cumulative impact of successive projects of the same type in the same place, over time is significant.

As a parking lot, it is anticipated that the need for repair and maintenance may occur in the future; however, it is not anticipated that successive projects of the same type in the same place would occur at this project site. While other similar projects are occurring elsewhere in the City, they have been determined to be happening in different neighborhood locations and at different times. Thus, this project is not expected to result in any cumulative impacts and this exception does not apply.

**3. Significant Effect.** This exception applies when, although the project may otherwise be exempt, there is a reasonable possibility that the project will have a significant effect due to unusual circumstances.

### **Historic Resources**

The project site is directly north of the Drum Barracks Civil War Museum (Museum). The Museum is listed as on the National Register of Historic Places, the California Register of Historic Resources, and as Los Angeles Historic Cultural Monument (HCM) Number 21. The property meets the criteria for HCM designation because it reflects the "broad cultural, economic, or social history of the nation, state, or community." It also meets Criteria A for National Register designation because it is "associated with events that have made a significant contribution to the broad patterns of our history." It is the sole surviving structure of a million-dollar government headquarters for California, Arizona, and New Mexico during the Civil War. Named in honor of General Richard Coulter Drum, it also served as a base for operations against the Indians during the American Indian Wars, as well as its Civil War function.

The project site is not within the historic properties boundaries. The project construction would serve as an additional parking lot for staff and guests of the Museum. The project includes surface feature designs to match the visual/aesthetic quality of the Museum including the installation of historical style lighting poles with globe shaped, frosted glass fixture and wooden fencing like that which exists at the

Museum. This project involves minor construction of a small parking lot and it is not uncommon to find the need to develop land to upgrade access to an existing historic, institutional facility. As such, this is not an unusual circumstance and, given the project design and construction methodology, there is not reasonable possibly that the project will have a significant effect due to unusual circumstances.

**Methane Buffer Zone**

The reaches within the Venice area are designated by the Zoning Information and Map Access System (ZIMAS) as methane zones. Throughout the Los Angeles Basin, areas more prone to high methane gas concentrations include former and active oil fields, landfills, and where sub-surface naturally occurring petroleum deposits are present. The Los Angeles Department of Building Safety (LADBS) identified portions of the City designated as a methane zone or methane buffer zones including: central belt from Cheviot Hills extending east to Boyle Heights, southern district of Wilmington Heights to pocket areas bordering Aliso Canyon. The proposed project consists minor construction is a small parking lot. Work is occurring within open spaces and no work in confined spaces is anticipated. It is not uncommon to develop land within these areas and as such this is not an unusual circumstance. Given the project design and construction methodology, there is no reasonable possibility that the project will have a significant effect due to unusual circumstances.

**Hazards and Hazardous Waste**

As of February 3, 2021, the State Department of Toxic Substances Control (DTSC) (Envirostor database at [www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov)) has not listed any contaminated sites within the project area or near (within 1000 feet) the project.

Additionally, as of February 3, 2021, the California Regional Water Quality Control Board (RWQCB) (Geotracker database at <https://geotracker.waterboards.ca.gov/>) has listed ten (10) contaminated sites near (within 1000 feet) the project site. See Table 1. There are no contaminated sites within the project site.

Site Name	Address	Geotracker ID	Site Type	Status
Port Access Project (Unit 2-5)	1100 Henry Ford Avenue	SLT4L1541773	Cleanup Program Site	Open - Inactive
Wilmington Town Lot #191	1137 Banning Boulevard	SLT43504502	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #195	1143-1145 Lecouvreur Avenue	SLT43573571	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #197.1&2	1160 Lecouvreur Avenue	SLT43470468	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #238	1044 Broad Avenue	SLT43475473	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #246	1008-1012 Lakme Avenue	SLT43546544	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #249	1023-1027 N. Banning Boulevard	SLT43547545	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #254	1006-1010 Banning Boulevard	SLT43548546	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #255	1017 Lecouvreur Avenue	SLT43549547	Cleanup Program Site	Completed - Case Closed
Wilmington Town Lot #258	1049 Eubank Avenue	SLT43476474	Cleanup Program Site	Completed - Case Closed

The Port Access Project (Unit 2-5) is listed as Clean Up Program Site at 1100 Henry Ford Avenue, approximately 900 feet southwest of the project site and the potential contaminants of concern are volatile organic compounds. The site has been listed as *Open - Inactive* in January 29, 2015 because

no regulatory oversight activities are being conducted by the Los Angeles RWQCB. Due to the contaminated sites regulatory status and distance from the project site, it is not anticipated to become an environmental concern for the project. The remaining nine contaminated sites listed in the Table 1 have regulatory statuses set as *Complete – Case Closed* and they are not anticipated to become an environmental concern for the project.

Los Angeles is a vast, urban area and it is not uncommon to find contaminated sites with past or present releases, that have completed or are undergoing assessment and/or remediation throughout the region. Thus, it is not uncommon to develop property in these areas, as such, this is not an unusual circumstance. The proposed project consists of the minor construction of a small parking lot and there is no reasonable possibility that the project will have significant effect due to unusual circumstances.

**4. Scenic Highway.** A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway.

The locations of excavation were referenced against the database of scenic highways at (<https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>) and no scenic highway is located within the vicinity of the Project or within the Project site.

Since the proposed Project is not within a state designated scenic highway or within sight of any state designated scenic highway, this exception has no application.

**5. Hazardous Waste Site.** This exception applies when a project is located on a site listed as a hazardous waste site under Government Code Section 65962.5

As of February 3, 2021, the State Department of Toxic Substances Control (DTSC) (Envirostor database at [www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov)) and the California Regional Water Quality Control Board (RWQCB) (Geotracker database at <https://geotracker.waterboards.ca.gov/>) have not listed the project site, as such, this exception does not apply.

**6. Historical Resources.** This exception applies when a project may cause a substantial adverse change in the significance of a historical resource.

As stated above, the project site is direct north of the Drum Barracks Civil War Museum, which is federally, state, and locally registered as a historic site. The project site is not part of the Museum's historic property. However, the new parking lot would serve as additional parking for access to the Museum. Excavation of the ground is anticipated the installation of the lighting and minor grading, approximately up to 7 feet below ground surface. The project involve minor construction is a small parking lot and the project is not anticipated to result in a substantial adverse change in the significant of the historical resource.

In the event that unanticipated historical artifacts were encountered, City Engineer Standard Specifications, Section 6-3.2, (Greenbook, 2012) states: "If discovery is made of items of archaeological or paleontological interest, the Contractor shall immediately cease excavation in the area of discovery and shall not continue until ordered by the Engineer." Therefore, during activities in which there will be ground disturbances (i.e., digging, drilling, etc.) if any evidence of archaeological, cultural, or paleontological resources are found, all work within the vicinity of the find shall stop until a qualified archaeologist can assess the finds and make recommendations. No excavation of any finds should be attempted by Project personnel unless directed by a qualified archaeologist. Construction activities may continue in other areas. If the discovery proves significant under CEQA (Section 15064.5f; Public Resources Code or PRC 21082), additional work such as testing, or data recovery may be warranted.

The discovery of human remains is always a possibility during ground disturbances; State of California

Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The Los Angeles County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendent (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

As indicated above, the project is not anticipated to result in a substantial adverse change in the significance of a historical resource. Therefore, no substantial adverse impact to cultural resources is anticipated, and as such this exception does not apply.

#### **IV. REFERENCES**

California Coastal Act of 1979.

California Department of Conservation, Division of Mines and Geology. Official Map of Seismic Hazards. Retrieved February 3, 2021, from <https://maps.conservation.ca.gov/cgs/informationwarehouse/>

California Department of Conservation, Division of Mines and Geology. Seismic Hazard Zones for The Venice 7.5-Minute Quadrangle, Los Angeles County, California. (1999). Retrieved February 3, 2021, from <https://gmw.conservation.ca.gov/SHP/EZRIM/Maps/VENICE.pdf>

California Regional Water Quality Control Board. *Geotracker*. Retrieved February 3, 2021, from <https://geotracker.waterboards.ca.gov>.

City of Los Angeles Department of City Planning Parcel Profile Report. 566 E. SAN JUAN AVE. Retrieved on February 3, 2021, from NavigateLA <http://boemaps.eng.ci.la.ca.us/navigatela/>

City of Los Angeles Department of Public Works Bureau of Engineering. *NavigateLA*. Retrieved on February 3, 2021, from <http://boemaps.eng.ci.la.ca.us/navigatela/>

City of Los Angeles Environmental Quality Act Guidelines.

Health and Safety Code Section 7050.5

Los Angeles Municipal Code.

Public Resources Code Section 21082

Public Resources Code Section 5097.98

*Standard Specifications for Public Works Construction*. Greenbook, 2012 edition.

State CEQA Guidelines.

State Department of Toxic Substances Control. *Envirostor*. Retrieved February 3, 2021, from [www.envirostor.dtsc.ca.gov](http://www.envirostor.dtsc.ca.gov)

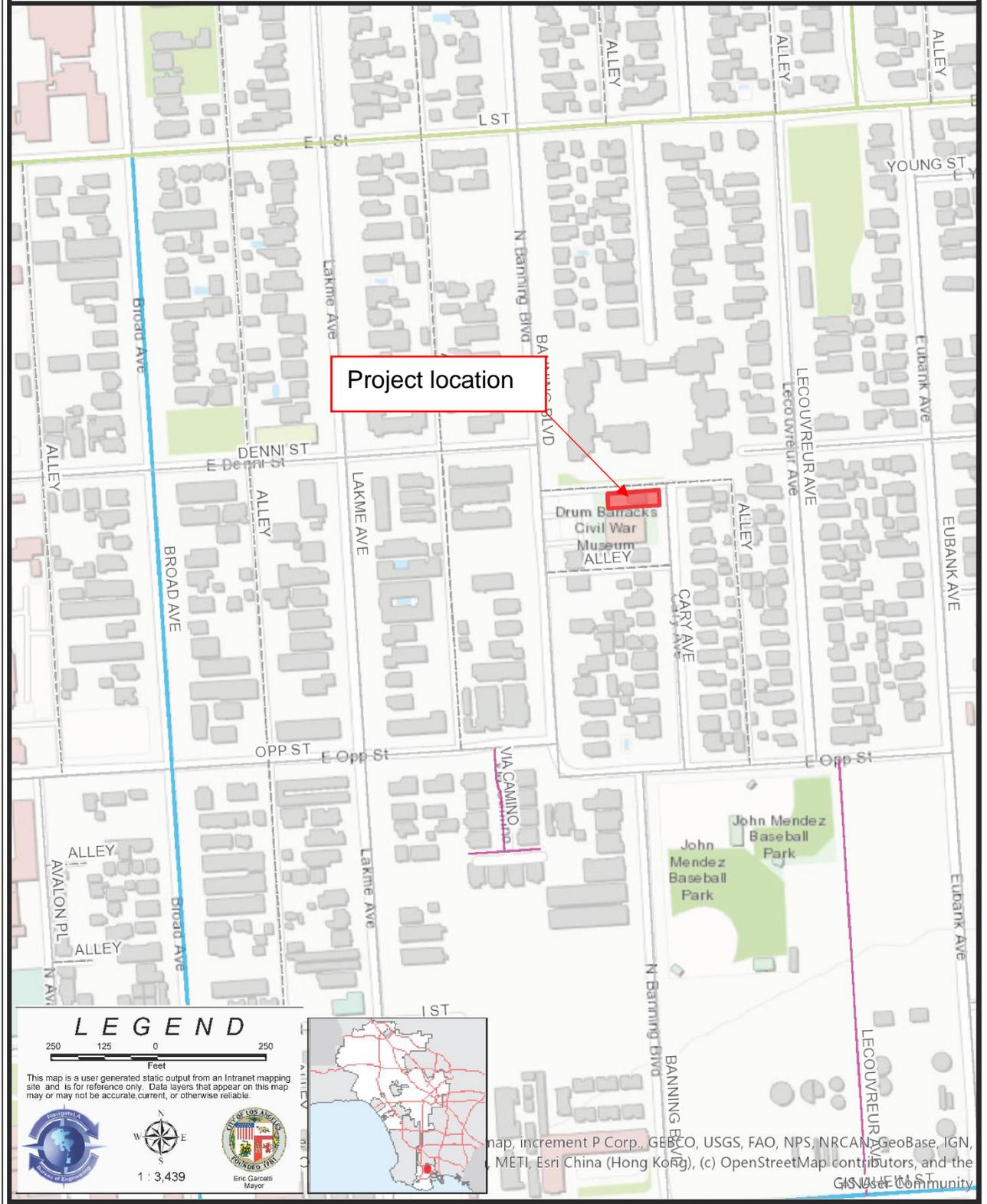
State Department of Transportation. *California Scenic Highway Mapping System*. Retrieved on February 3, 2021 from <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/>

### Figure 1: Project Location

#### Wilmington Drum Barracks Civil War Museum Parking Lot Development Project

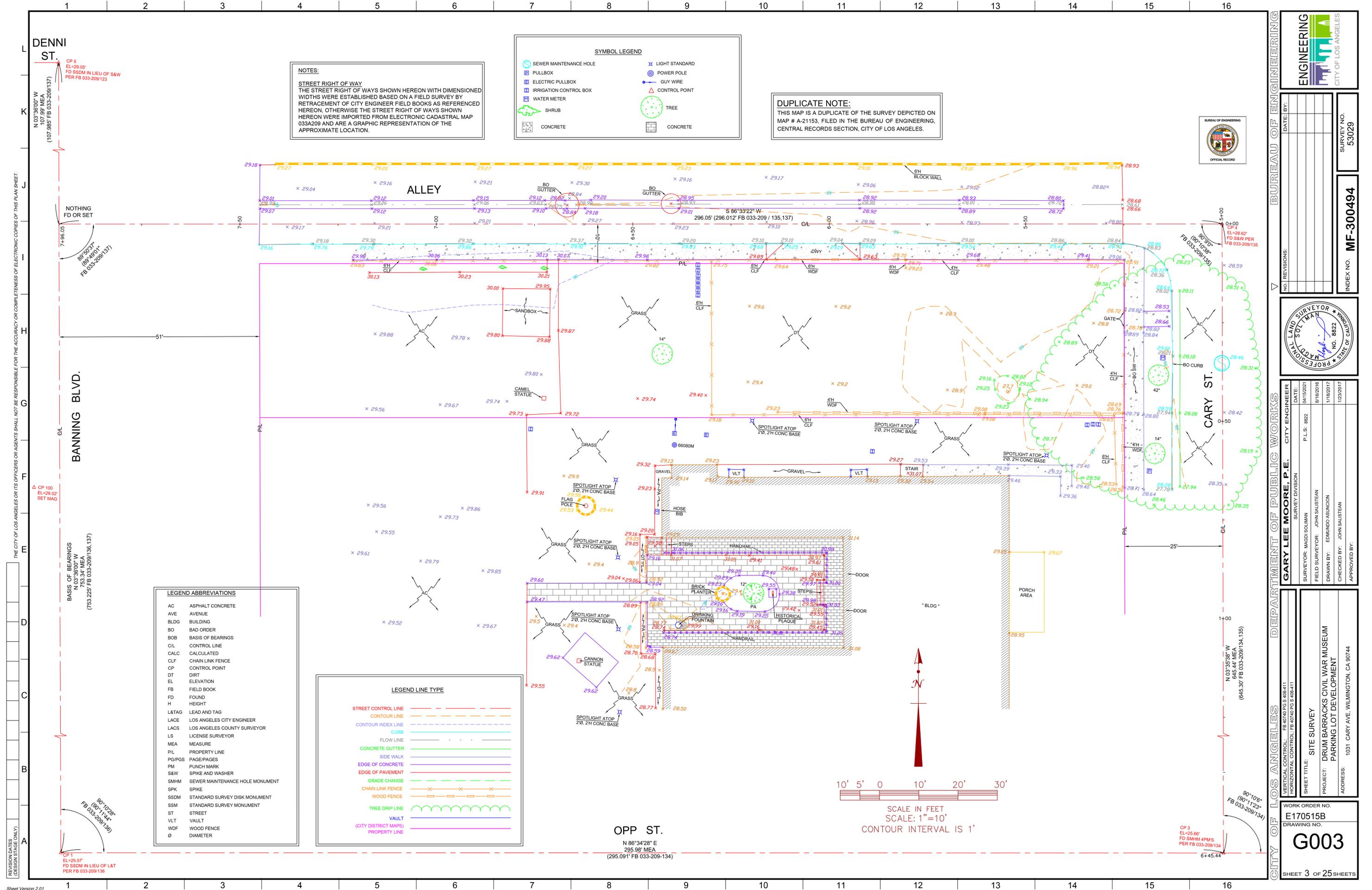


**Figure 2: Project Vicinity**  
**Wilmington Drum Barracks Civil War Museum Parking Lot Development Project**









**NOTES:**  
 STREET RIGHT OF WAY  
 THE STREET RIGHT OF WAYS SHOWN HEREON WITH DIMENSIONED WIDTHS WERE ESTABLISHED BASED ON A FIELD SURVEY BY RETRACEMENT OF CITY ENGINEER FIELD BOOKS AS REFERENCED HEREON. OTHERWISE THE STREET RIGHT OF WAYS SHOWN HEREON WERE IMPORTED FROM ELECTRONIC CADASTRAL MAP 033A209 AND ARE A GRAPHIC REPRESENTATION OF THE APPROXIMATE LOCATION.

**SYMBOL LEGEND**

	SEWER MAINTENANCE HOLE		LIGHT STANDARD
	PULLBOX		POWER POLE
	ELECTRIC PULLBOX		GUY WIRE
	IRRIGATION CONTROL BOX		CONTROL POINT
	WATER METER		TREE
	SHRUB		CONCRETE
	CONCRETE		CONCRETE

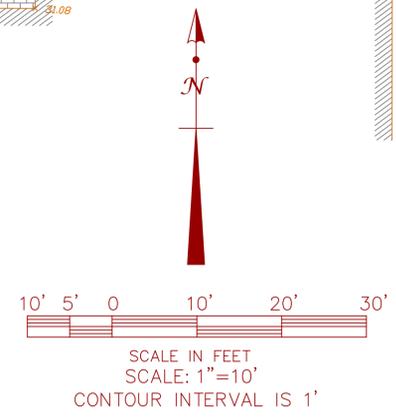
**DUPLICATE NOTE:**  
 THIS MAP IS A DUPLICATE OF THE SURVEY DEPICTED ON MAP # A-21153, FILED IN THE BUREAU OF ENGINEERING, CENTRAL RECORDS SECTION, CITY OF LOS ANGELES.

**LEGEND ABBREVIATIONS**

AC	ASPHALT CONCRETE
AVE	AVENUE
BLDG	BUILDING
BO	BAD ORDER
BOB	BASIS OF BEARINGS
C/L	CONTROL LINE
CALC	CALCULATED
CLF	CHAIN LINK FENCE
CP	CONTROL POINT
DT	DIRT
EL	ELEVATION
FB	FIELD BOOK
FD	FOUND
H	HEIGHT
L&TAG	LEAD AND TAG
LACE	LOS ANGELES CITY ENGINEER
LACS	LOS ANGELES COUNTY SURVEYOR
LS	LICENSE SURVEYOR
MEA	MEASURE
P/L	PROPERTY LINE
POIPGS	PAGE/PAGES
PM	PUNCH MARK
S&W	SPIKE AND WASHER
SMHM	SEWER MAINTENANCE HOLE MONUMENT
SPK	SPIKE
SSDM	STANDARD SURVEY DISK MONUMENT
SSM	STANDARD SURVEY MONUMENT
ST	STREET
VL	VAULT
WDF	WOOD FENCE
Ø	DIAMETER

**LEGEND LINE TYPE**

	STREET CONTROL LINE
	CONTOUR LINE
	CONTOUR INDEX LINE
	CURB
	FLOW LINE
	CONCRETE GUTTER
	SIDE WALK
	EDGE OF CONCRETE
	EDGE OF PAVEMENT
	GRADE CHANGE
	CHAIN LINK FENCE
	WOOD FENCE
	TREE DRIP LINE
	VAULT
	(CITY DISTRICT MAPS)
	PROPERTY LINE



THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

**ENGINEERING**  
 CITY OF LOS ANGELES

**BUREAU OF ENGINEERING**

**DEPARTMENT OF PUBLIC WORKS**

**GARY LEE MOORE, P.E.** CITY ENGINEER

**PROFESSIONAL LAND SURVEYOR**  
 STATE OF CALIFORNIA  
 NO. 8822

**NO. REVISIONS:**

DATE:	04/15/2021
SURVEYOR:	MAGDI SOLIMAN
P.L.S.:	8822
FIELD SURVEYOR:	JOHN SALUSTEAN
DRAWN BY:	EDMONDO ABUNICION
CHECKED BY:	JOHN SALUSTEAN
APPROVED BY:	

**WORK ORDER NO.**  
 E170515B

**DRAWING NO.**  
 G003

**SHEET 3 OF 25 SHEETS**

**PROJECT:** DRUM BARRACKS CIVIL WAR MUSEUM  
 PARKING LOT DEVELOPMENT

**ADDRESS:** 1031 CARY AVE, WILMINGTON, CA 90744

**INDEX NO.** MF-300494

**SURVEY NO.** 53029

LANDSCAPE CONSTRUCTION NOTES

DRUM BARRACKS PARKING LOT DEVELOPMENT
Project #E170515D

Table of Contents

Table with 3 columns: Section, Section title, and L001-L009.

1. GENERAL

- A. The latest edition and supplements of the Standard Specifications For Public Works Construction, hereinafter referred to as (SSPWC) adopted by the Board Of Public Works and the City of Los Angeles including the City of Los Angeles Department Of Public Works SSPWC additions and amendments (Brown Book) shall be made a part of these plans.
1. Website: http://eng2.lacounty.gov/brownbook/frame.cfm
B. Where conflicts occur between these Landscape Construction Notes and the SSPWC these LANDSCAPE CONSTRUCTION NOTES shall take precedence.
1. Subsections included within these Landscape Construction Notes modify or add to the corresponding subsection (by number) of the SSPWC, latest edition with current yearly supplements; where options for materials and/or methods appear in the SSPWC, the option listed herein shall be used.
C. Contract work area shall be as defined on the title sheet, or as indicated on the plans by means of a contract limit of work line.
D. Permits and licenses: CONTRACTOR shall procure all required CITY, county and state permits and licenses, including municipal business license and pay all charges and fees for the same. Required permits include but are not limited to:
a. Demolition permit: Contractor shall obtain a demolition permit for formerly demolished residence on the site and pay for all permit fees.
b. Non-building Use of Land permit: Contractor shall obtain a non-building use of land permit and pay for all permit fees.
c. Grading permit: Contractor shall obtain a grading permit and pay for all permit fees.
d. A-permit: Contractor shall obtain an A-permit and pay and pay for all permit fees.
e. Street Use Permit (if required) from the Bureau of Street Services.
E. The project site shall be maintained in conformance with Section 7-8: Project Site Maintenance of the SSPWC and the requirements of the Project Manual.

1.1 PLANS AND SPECIFICATIONS

- A. The CONTRACTOR shall be responsible for issuing a complete set of plans and specifications to all Sub-Contractors.
B. CONTRACTOR shall maintain a current set of plans reflecting all issued plan clarifications, RFI's and change orders at all times.
C. GEOTECHNICAL INFORMATION: The Geotechnical reports dated March 6, 2017, and October 22, 2020, and LADBS Soils Report Approval Letter dated December 10, 2020 shall be a part of the Project Manual. CONTRACTOR shall comply with all soils report recommendations provided by the GEOTECHNICAL ENGINEER.
a. Easton Forcier from the City's Bureau of Engineering, Geotechnical Engineering Division (GED) is the Geotechnical Engineer of Record for the Project. He can be contacted at (213) 847-0476 or (949) 500-0532.

1.2 SCHEDULE OF WORK

- A. The CONTRACTOR The Contractor shall submit a Schedule of Work for approval to the Project Manager prior to the commencement of work.
B. The PROJECT MANAGER, CONSTRUCTION MANAGER, ENGINEER, CONTRACTOR and Department Of Recreation & Parks (RAP) maintenance personnel shall coordinate the CONTRACTOR's schedule of work with ongoing RAP maintenance of the facility outside the work area and the CONTRACTOR's maintenance of the area within the work area, as defined in the maintenance portion of the LANDSCAPE PLANTING section.

1.3 MEETINGS

- A. Job Start Meeting: The CONTRACTOR shall schedule a job start meeting with the PROJECT MANAGER after receipt of the notice to proceed. This meeting shall include the following participants: CONTRACTOR, PROJECT MANAGER, CONSTRUCTION MANAGER, Bureau of Contract Administration (BCA) Inspector, LANDSCAPE ARCHITECT, and RAP site maintenance personnel, to review the content of the plans and discuss the coordination of the project with RAP operations at the project site. The pre-construction meeting can be held at the same time as the job start meeting at the CONTRACTOR's discretion.

- B. Weekly Meetings: The CONTRACTOR shall be available in person for regularly scheduled weekly meetings for the duration of the project unless otherwise cancelled/modified by the PROJECT MANAGER/CONSTRUCTION MANAGER. Meeting attendance shall be included as part of the base bid.

1.4 FIELD OFFICE FACILITIES

- A. Contractor shall include the following in the base bid (some or all may be deducted by BCA Inspector):
2. Field Office: this office shall have a minimum floor space of 16 m² (175 ft²), at least one door, and window area of not less than 2 m² (22 ft²). All doors and windows shall be provided with screens.
3. Furniture shall be provided as follows: one (1) plan table, one (1) standard 1.5 m (5 feet) long double-pedestal desk with a drawer suitable for holding files, two (2) chairs, one (1) drafting stool, and one (1) plan rack.
4. Electric power shall be provided to include a minimum of four (4) duplex convenience outlets. The office shall be illuminated at the tables and desk. An outdoor lighting fixture with a 300-watt bulb shall be installed.
5. Heating and air conditioning of sufficient capacity shall be provided at no expense to the CITY. The CONTRACTOR shall provide drinking water within the office and integral sanitary facilities directly adjoining. Sanitary facilities shall include a toilet and wash basin with hot and cold running water.

1.5 QUALITY ASSURANCE

- A. Labor: use adequate number of skilled laborers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
B. Codes and regulations: conform to the applicable Los Angeles City Building Code and Amendments, the SSPWC latest edition, Los Angeles City Bureau of Engineering Brown Book, latest edition and provisions hereinafter specified in the Project Manual, and all other applicable codes and regulations.
C. Permits: CONTRACTOR shall submit inspection/acceptance certificates required by the governing authorities and pay for all the required permits, plan check, inspections, and fees unless otherwise noted. CONTRACTOR shall arrange for and make required inspections and tests.
D. Inspections: all work and materials are subject to inspection and approval by the BCA inspector, PROJECT MANAGER or project ENGINEER. Any work done without required inspection will be subject to rejection per Section 2-11 of the SSPWC.
1. The CONTRACTOR shall notify the BCA Inspector and PROJECT MANAGER three (3) days prior to requested date of inspection. See each section herein for required inspections for each type of work.
2. Pre-final inspection: Pre-final inspection shall be in accordance with Article 46 of the GENERAL CONDITIONS.
3. Contract final inspection: contract final inspection shall be in accordance with the GENERAL CONDITIONS
4. In-plant inspection: CONTRACTOR shall be responsible for scheduling all required in-plant inspections with the bureau of contract administration. In-plant inspection requirements shall be determined by BCA materials control unit, and shall include, but not limited to, the following items:
a. Galvanizing of fabricated steel items
b. Galvanizing of chain link fabric and hardware
c. Portland cement concrete & base
d. Asphalt concrete and base

1.6 USE OF ELECTRONIC DOCUMENT CONTROL SYSTEM

- A. The CONTRACTOR shall use a web based document control system to submit and receive all construction related documentation on this project. The system used is "e2020" and costs associated for the use of the software have been paid for by the City. The website address to be used will be provided by the CONSTRUCTION MANAGER after award of the contract. The CITY will provide training to the CONTRACTOR on the use of the system. The information to be generated, transmitted and tracked by the e2020 document control system shall include, but not be limited to the following:
1. Correspondence (including Engineer's Communication).
2. Plan Clarifications.
3. Request for Information (RFI's).
4. Shop Drawings.
5. Change Orders.
6. Allowance Orders.
7. Progress Photos.
8. Project Schedules.
9. Meeting Minutes.
10. Permits.
11. Partnering (Issue Resolution Ladder, Charter).
B. When large drawings or product samples are required to be submitted that cannot be submitted through e2020, the CONTRACTOR shall:
1. Upload a transmittal sheet for the submittal in e2020.
2. Submit ten (10) full-size hard copies.
3. Submit one half-sized hard copy (not exceeding 11x17 inches).
4. Transmit electronic files to the ENGINEER in Adobe Acrobat (.PDF) format.
C. The CONTRACTOR shall be responsible for the installation of its own computer system, scanner, and the procurement of an Internet Service Provider (ISP) with a high speed broadband internet connection for its own and the ENGINEER/INSPECTOR site offices to access the document control system.
D. At the request of the ENGINEER, the CONTRACTOR must provide a hard copy of approved submittals to the INSPECTOR, at no additional cost to the CITY.

1.7 MATERIALS SUBMITTAL

- A. Furnish a schedule and list of required submittals to the PROJECT MANAGER, in accordance to SCHEDULE OF WORK of these Landscape Construction Notes, including required submittals by Subcontractors.
B. Wherever called for in these specifications or on the plans, or where required by the PROJECT MANAGER, furnish to the PROJECT MANAGER for review 10 copies of each submittal. The term "submittal" as used herein shall be understood to include detail design calculations, design drawings, Shop Drawings, Working Drawings fabrication and installation drawings, erection drawings, lists, graphs, operating instructions, catalog sheets, data sheets, samples, and similar items. Unless otherwise required, Submit said submittals to the PROJECT MANAGER at a time sufficiently early (see paragraph F. below) to allow review of same by the PROJECT MANAGER and to accommodate the rate of construction progress required under the Contract without delaying the Contract Work and with due regard for the possibility of resubmittals. Submittals shall be in English.
C. Design or Shop Drawings or other submittal shall be accompanied by the standard "CONTRACTOR'S SUBMITTAL TRANSMITTAL" form. A submittal not accompanied by such a form, or where all applicable items on the form are not completed, or are incorrectly completed, may be returned, at the PROJECT MANAGER'S discretion, for resubmittal.
D. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates a review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the PROJECT MANAGER.
E. Shop Drawings shall show in detail the size, sections, and dimensions of all the member(s); the arrangement and construction of all connections and joints; all holes, straps, and other fittings required for attaching Work; and other pertinent details. When required, PROJECT ENGINEERING computations shall be submitted. Be responsible for delivering reviewed copies of Shop Drawings to all others whose Work is dependent thereon. Maintain at the site of the Project, a complete file of approved Shop Drawings and manufacturers' data for this Project, at all times.
F. Except as may otherwise be provided herein, the PROJECT MANAGER will make a reasonable attempt to return prints of each submittal to the CONTRACTOR, with its comments noted thereon, within 30 calendar days following their receipt by the PROJECT MANAGER. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the PROJECT MANAGER by the second submission of a submittal item. The CITY reserves the right to withhold moneys due the CONTRACTOR to cover additional costs of the PROJECT MANAGER's review beyond the third submittal. Submittal will be returned to the CONTRACTOR with one of three (3) markings:
1. If a submittal is returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN/ PROCEED," formal revision and resubmission of said submittal will not be required.
2. If a submittal is returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED/PROCEED CONDITIONALLY," formal revision and resubmission of said submittal will not be required.
3. If a submittal is returned to the CONTRACTOR marked "REJECTED-RESUBMIT/DO NOT PROCEED," revise said submittal and resubmit TEN (10) copies of said revised submittal to the PROJECT MANAGER.
G. Work for which Shop Drawings are required shall be performed in accordance with the reviewed and approved copies. Fabrication of an item shall not commence before the PROJECT MANAGER has reviewed the pertinent submittal and returned the copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN/PROCEED," or "MAKE CORRECTIONS NOTED/PROCEED CONDITIONALLY." Revisions indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis for claims for extra Work.
H. CONTRACTOR submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR prior to submission to the PROJECT MANAGER. Each submittal shall be dated, signed, and certified by the CONTRACTOR as being correct and in strict conformance with the Contract Documents. No consideration for review by the PROJECT MANAGER of any CONTRACTOR submittal will be made for any items that have not been so certified by the CONTRACTOR. Non-certified submittals will be returned to the CONTRACTOR without action taken by the PROJECT MANAGER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.

1.8 SUBSTITUTIONS AND "OR EQUAL" SUBMITTAL

- A. Make "Or Equal" submittals within thirty (30) calendar days after issuance of Notice-to-Proceed. A request or submittal received after the specified period will be considered as NOT EQUAL to that so specified and will be processed as a substitution described hereinafter.
B. Clearly identify manufacturers' data submitted to the PROJECT MANAGER for review and acceptance each proposed substitute with the corresponding Contract Drawing detail and Specification section. If the PROJECT MANAGER decides to accept for use in the Project a material, process or article which is not the equal of that specified, make substitution in the manner described in CHANGES AND EXTRA WORK of the General Conditions, with a credit to the CITY for the difference in value.
C. The PROJECT MANAGER will determine whether the material offered is equivalent to that specified. Any revision to structures, piping, mechanical, electrical, instrumentation, or any other Work made necessary by such substitution must be approved by the PROJECT MANAGER, and the entire cost both direct and indirect of these revisions shall be borne by the CONTRACTOR.
D. Materials, processes, or articles may be requested as a substitution by the CONTRACTOR, in lieu of that specified, under the following conditions:
1. Submit in writing and in the manner described in SUBMITTAL of these Landscape Construction Notes.

- 2. Submit thirty (30) calendar days before starting the Work, as established by the PROJECT MANAGER, so as not to cause any delay in completion of the Project. No other request will be considered after expiration of the period specified, except that in exceptional cases where it is determined to be in the best interest of the CITY, as approved by the PROJECT MANAGER.
3. Agree to pay for all PROJECT ENGINEERING and design services, if required, to make changes and adjustments in material and Work of trades directly or indirectly affected by the substitute, to the satisfaction of the PROJECT MANAGER, at no cost to the CITY.
4. All requests for substitution shall be made through the CONTRACTOR. Submissions by the CONTRACTOR shall imply the CONTRACTOR's approval of such substitution.
5. No requests for substitutions will be considered during the bidding period.
6. Furnish adequate data with each request for approval of a substitute to enable the PROJECT MANAGER to evaluate the proposed substitution.

1.9 RECORD DRAWINGS (AS-BUILTS) SUBMITTALS

- A. Record Drawings are full size drawings (Plans) which are marked up during construction to delineate the actual in-place constructed conditions. Record Drawings shall be provided by the CONTRACTOR for this Project. Requirements for Record Drawings as specified elsewhere shall supplement the requirements specified herein.
B. Record Drawings shall include all changes in the plans including those issued as Change Orders, Plan Clarifications, Addenda, Notice to Bidders, responses to Requests for Information, Jobsite Memos, and any additional details needed for the construction of the Project but not shown on the plans. Substructures encountered while excavating that are left in place shall be located by survey, to the satisfaction of the PROJECT MANAGER, shown, and identified on the Record Drawings. Substructures, including but not limited to concrete structures, electrical conduit and duct banks, drains and sanitary sewer pipelines, process piping, water lines, etc, whose installed location differs from that shown on the original plans shall be precisely located by survey to the satisfaction of the PROJECT MANAGER and recorded on the as-built drawings before backfilling.
C. Mark Record Drawings with red or blue waterproof ink on one (1) set of full size prints to produce a record of the complete installation. Prepare additional drawings that may be required to indicate record conditions on 24" x 36" paper. Additions to Contract Drawings shall employ and use drafting standards, which are consistent with the drafting standards, used in the Contract Drawings.
D. Keep Record Drawings on the job and update during construction and make available for the PROJECT MANAGER'S inspection and copying at all times. The PROJECT MANAGER will review the Record Drawings before submittal of monthly payment requests. If in the opinion of the PROJECT MANAGER, the Record Drawings are not current, approval of the monthly payment may be withheld until the drawings are made current. Submit a signed certification with each monthly payment request stating that the Record Drawings are current and accurate as of the date of the payment request.
E. Where the plans are diagrammatic or lacking precise details, produce dimensioned full size sheets as the Record Drawings. For installations outside of structures, the locations shall be given by coordinates and elevations. Where substructures are encased in concrete, the outside dimensions of the encasement shall also be given.
F. In the case of those drawings which depict the detail requirements for equipment to be assembled and wired in the factory, the Record Drawings shall be updated by indicating those portions which are superseded by final Shop Drawings and by including appropriate reference information describing the Shop Drawings by manufacturer, drawing and revision numbers.
G. At the completion of the Work and after final inspection, copy the Record Drawing (as installed) data, using red ink, onto a new set of high quality prints provided by the CITY. Certify to the completeness and accuracy of the "as installed" information indicated on the prints with its signature. Then deliver as a submittal to the PROJECT MANAGER for review and approval both the field developed prints and the final signed prints as a condition precedent to the CITY'S release of any retained funds.

2.0 DEPARTMENT OF PUBLIC WORKS STANDARD PLANS

The following department of public works standard plans are to be included as a part of these plans:

Table with 2 columns: Number and Title. Includes S-251-1 Pipe Laying in Trenches, S-440-0 Sidewalks, S-440-3 Driveways.

SSPWC 2017 edition of the Greenbook Website: http://eng.lacounty.gov/techdocs

City of Los Angeles Department Of Public Works SSPWC additions and amendments (Brown Book) Website: http://eng2.lacounty.gov/brownbook/frame.cfm

2.1 LAYOUT OF WORK & GRADE SHEET APPROVAL

All spot elevations, grading contour lines, and grades shown on the plans for grading, pavement and drainage improvements shall be staked by a California licensed land surveyor provided by the CONTRACTOR at no additional cost to the CITY. Grade stakes shall be a minimum size of 1" x 2" and shall be driven a minimum of 12" into ground; each grade stake shall be protected by a flagged lath projecting 24" above ground; grade stakes disturbed by on-site activities shall be reset by the surveyor. If specified on the plan the CONTRACTOR shall have his surveyor provide grade sheets. The grade sheets shall be submitted to the CONSTRUCTION MANAGER for approval one week in advance of any grading operations.

2.2 PROTECTION OF PERSONS AND PROPERTY

- A. General: comply with provisions of Article 30 - Protection of Persons And Property And Restoration Of Existing Improvements in the GENERAL CONDITIONS.
B. Protections of persons and property: provide and install signs, barricades and other required devices or techniques at danger points in the job site to guard against accidents, etc.

Vertical sidebar containing logos for Engineering, Department of Public Works, Bureau of Engineering, and various project details like sheet number L001 and project title.

Vertical text on the left margin: THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

Project Status: BID SET PROJECT ISSUE DATE: 08/09/2021

Project information box including Work Order No. E170515D, Plan File No., Drawing No. L001, Sheet 4 of 25.

FILE PATH: Q:\IN-HOUSE-DESIGN\DRUM BARRACKS PARKING LOT\DESIGN\LANDSCAPE\WORKING DRAWINGS\XREF\_TTLB\_RAP.DWG SHEET ISSUE DATE: 08/09/2021 10:52 AM

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

C. Existing improvements: protect against damage resulting from CONTRACTOR'S operations. Repair or replace damaged items to the full satisfaction of the CITY at no additional cost to the CITY.

D. Existing utilities: utilities shown on the drawings are shown pursuant to a search of available records and are shown as a matter of information and not as a matter of fact. Conforming with other sections of the Project Manual, the CONTRACTOR shall locate existing underground utilities in areas of work.

2.3 ENVIRONMENTAL CONTROL

A. Site sanitation and odor control: use means necessary to provide sanitary conditions at job site and prevent a nuisance to the public, to neighbors, and to other work being performed on or near the job site.

3. The CONTRACTOR Stormwater Pollution Prevention Plan (SWPPP): CONTRACTOR is responsible for the payment of the notice of intent (NOI) to the State of California Water Resources Control Board to comply with the California General Construction Activity Stormwater Permit (NPDES NO. CAS000002), and the prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) document, which is to be prepared by a qualified SWPPP developer (QSD).

2. BUY CLEAN CALIFORNIA ACT

PART 1 - GENERAL

1.1 SUMMARY

A. For projects that include eligible materials, CONTRACTOR shall provide current facility-specific Environmental Product Declarations (EPDs) of eligible materials and meet the State of California maximum limits for Global Warming Potential (GWP) as listed by the State's Department of General Services after project award.

1.2 SUBMITTALS

A. Submitted facility-specific Environmental Product Declarations (EPD) must be a current Type III as defined by the International Organization for Standardization (ISO) Standard 14025, and has been 3rd Party verified following applicable Product Category Rules (PCRs).

B. The EPDs shall be submitted with each eligible material submittal for the product(s) under the technical specification sections for approval by the ENGINEER.

C. Restrictions:

1. The CONTRACTOR shall not install any eligible materials or incorporate into the work in any way until the required facility-specific EPDs have been provided and approved, unless otherwise agreed upon by the ENGINEER.

D. Optional Eligible Materials: The following materials are being considered for addition to future Eligible Materials list by the City of Los Angeles.

- 1. Concrete (i.e. corresponding mix designs).

3. SITE CLEARING AND DEMOLITION

PART 1 - GENERAL

1.1 PERMITTING

E. Contractor shall obtain a demo permit before commencing work. RTI plans shall be provided by the City.

1.2 DESCRIPTION

A. Demolition shall include the removal and disposal of all constructed site features designated on the Contract Drawings for removal, including all below-ground components such as footings, etc.

PART 2 - PRODUCTS

2.1 MATERIALS

Provide materials not specifically described but required for completion of the work of this section as selected by the CONTRACTOR subject to the approval of the ENGINEER.

PART 3 - EXECUTION

3.1 SITE CONDITIONS

Examine the job site and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper site-clearing operations, as directed by the ENGINEER.

3.2 PROTECTION

Protect existing trees and shrubs indicated to remain in the Contract Drawings per tree protection requirements in sheets L100.

PART 1 - GENERAL

1.1 SUMMARY

A. General: 1. For drawing clarity, not all trees, shrubs, brush, grass, weeds, or exact amount of trash or debris are shown on the drawings.

B. Site clearing operations

- 1. Remove all surface vegetation indicated on the Contract Drawings for removal. Remove all roots, and stumps and other undesirable materials to a depth of at least (2) feet below existing ground surface.

3.4 REMOVAL AND DISPOSAL OF CLEARING AND GRUBBING DEBRIS

General: all undesirable materials removed during site clearing and demolition shall be disposed of off CITY'S property in a legal manner and to conform with the requirements in SSPWC (300-26).

3.5 STORAGE OF MATERIALS AT THE JOB-SITE

Storage of removed materials is not permitted beyond brief accumulation awaiting pick up by removal trucks. Delays in the removal of site-clearing materials from the job site shall be subject to the approval of the PROJECT MANAGER or the BCA inspector.

4. GENERAL EARTHWORK

PART ONE - GENERAL

1.1 SUMMARY

A. Provide and execute grading work as indicated on the Contract Drawings or in the Project Manual including but not limited to the following:

- 1. General excavating and trenching for various trades.
- 2. General exterior grading and cutting.
- 3. General excavating for site improvements.

1.2 QUALITY ASSURANCE

Codes and standards: perform excavation work in compliance with applicable ordinance of governing authorities having jurisdiction including, but not limited to, the:

- A. Testing and inspection services: the City's Bureau of Engineering, Geotechnical Engineering Division (GED) will provide soil testing and inspection during earthwork operations.
- B. GEOTECHNICAL ENGINEER: the City's Bureau of Engineering, Geotechnical Engineering Division (GED) is the Geotechnical Engineer of Record.
- C. Survey: the CONTRACTOR shall employ the services of a California Licensed Surveyor for the purposes of survey control, layout, grade and cross-sections required to control work.

1.3 SUBMITTALS

Conform to provisions of Section 1 of these Landscape Construction Notes.

1.4 PERMITS

- A. The CONTRACTOR shall perform all work in accordance with the permit requirements of the LADBS, including obtaining the Grading Permit; and if required, a hauling permit and bond, and making the required notification to the adjacent property owners; at no additional expense to the CITY.
- B. CONTRACTOR shall furnish the BCA Inspector with a duplicate copy of OSHA excavation permit when required, and all other required permits prior to the start of the excavation work.

1.5 JOB CONDITIONS

A. Required work coordination: the CONTRACTOR shall fully coordinate the work operations of this section with that of other trades involved and with the ENGINEER to assure proper sequence of work, limitations, methods and time of work so as to minimize or avoid interference with the existing utilities as well as performance of work by the other CONTRACTORS.

1.6 PROTECTIONS

- A. Protect existing trees and shrubs indicated to remain in the Contract Drawings per Tree Protection Requirements on sheet L100.
- B. Water: divert or pump out of all excavations until concrete and other items are placed therein, forms removed, and backfilling is completed. Comply with all applicable Codes and Regulations.

1.7 INSPECTION

The CONTRACTOR shall notify the BCA Inspector and CONSTRUCTION MANAGER three (3) days prior to requested date of inspection of the following for approval:

- 1. All excavations and trenches shall be inspected by the BCA Inspector, LADBS Inspector, and the GEOTECHNICAL ENGINEER before filling, backfilling and/or other subsequent work is placed therein.

- 2. Rough Grading: when forms have been set, they shall be reviewed by ENGINEER to verify alignment and grade. Offsets or vertical controls shall be verifiable in the field, or be provided in grade sheet form, and submitted to the CONSTRUCTION MANAGER for approval prior to the inspection.
- 3. Finish Grade Review: for all finish grades in planting areas following rolling in turf areas.

PART TWO - PRODUCTS

2.1 SOIL MATERIALS

A. Fill Materials and Backfill Placement: The existing onsite soil may be reused as compacted fill provided it is free of organic material, debris, and does not contain fragments greater than 3 inches in maximum dimension.

Fill material, including aggregate base, shall be placed in loose lifts not exceeding 8 inches in thickness, moisture-conditioned to within 3 percent above the optimum moisture content and mechanically compacted.

Fill placement and compaction shall be observed and tested by GEO and/or their representative. Compacted fill soils shall be kept moist, (at or slightly above the specified moisture content at the time of compaction) but not flooded, until covered with subsequent construction.

- 1. In landscape planting areas, the top 24" of any fill shall be "Class C" topsoil salvaged on site (800-1.1.2). See section TURF for additional information.

B. Base material: shall be "Crushed Aggregate Base", 3/4-inch maximum size aggregate, or "Crushed Miscellaneous Base", 1-1/2-inch maximum size aggregate, as specified in Contract Drawings and per Section 200-2 - Untreated Base Materials of SSPWC.

C. Trench backfill material:

- 1. Use clean earth materials previously removed from job site excavations, or use approved imported fill materials as above specified, free from clay, rock or gravel larger than 1-inches for utility trenches, subject to the SOIL ENGINEER'S approval prior to use.

D. Slurry backfill: slurry backfill shall be 60 E 0.7 (CLASS 100-E-100) and placed in accordance with Section 306-1.3.1 - Backfill And Densifications of SSPWC where required by the Contract Drawings.

PART THREE - EXECUTION

3.1 SURFACE CONDITIONS

Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until detrimental conditions are corrected.

3.2 GRADING

- A. All grades between contours and/or spot elevations shall be assumed to be straight grades. There shall be no localized depressions or humps, (801-2.1).
- B. The CONTRACTOR shall verify all grades and amounts of cut and fill before commencing work.
- C. Rough grade: leave cut and fill sufficiently high to require subsequent cutting by fine grading.
- D. Fine grade: to elevations indicated on Contract Drawings and as required to ensure proper drainage.

3.3 EXCAVATION

- 1. Excavation shall consist of the removal and disposal of materials necessary to establish required grade elevations and certified compacted fill for new construction pursuant to (300-2) of SSPWC and the approved soils report.
- 2. Excavated materials suitable for use as fill and/or backfill to be stockpiled where approved by the PROJECT MANAGER.
- 3. Non-approved and excess excavated materials shall be legally removed and disposed of from the job site at the CONTRACTOR'S expense.
- 4. Encountered existing underground utility piping or conduits: immediately stop the trench operations at the point of encounter and notify the PROJECT MANAGER of such condition and submit utility support drawings to the PROJECT MANAGER for approval.

- 1. For concrete curbs: to exact curb limit, without excessive removal of adjacent paving or subgrade for new paving, subject to the requirements of the approved soils report.
- 2. For site improvements such as concrete and/or asphalt pavements, concrete walkways, driveways aprons, concrete curb and gutter: excavate to exact limits of such work without excessive removal of existing subgrade, unless otherwise indicated in the approved soils report.

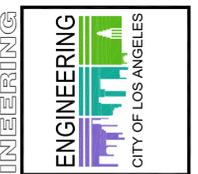


Table with columns: NO., REVISION DESCRIPTION, DATE, INDEX NO., RAP FACILITY NO. (243), MF-300494



Table with columns: ARCHITECTURAL DIVISION, LANDSCAPE ARCHITECT, DESIGNED BY, DRAWN BY, CHECKED BY, APPROVED BY, DATE, LIC. NO., PROJECT, ADDRESS

Table with columns: CLIENT, GENERAL MANAGER, SHEET TITLE, PROJECT, ADDRESS, WORK ORDER NO., PLAN FILE NO., DRAWING NO., SHEETS OF

Table with columns: PROJECT STATUS, PROJECT ISSUE DATE, SHEET NO. (5), SHEETS (25), PLOTTED DATE

DEPARTMENT OF PUBLIC WORKS CITY OF LOS ANGELES BUREAU OF ENGINEERING





- 3. Material may be either "pit run" or "crusher run." Avoid using clay based crusher run/pit run. Crusher run material will generally require coarse, well-draining sand conforming to AASHTO M6 or ASTM C 33 to be added to mixture (20 to 30 percent by volume) to ensure long-term porosity.
  - 4. Alternative materials such as crushed shell, limerock, or crushed lava may be used for base course use, provided they are mixed with sharp sand (20 to 30 percent) to ensure long-term porosity, and are brought to proper compaction. Without added sand, crushed shell and limerock set up like concrete and become impervious.
  - 5. Alternative size and/or composition of base course materials will have to be submitted to Invisible Structures, Inc. (Manufacturer) for approval.
- B. Sand Fill for Rings and Spaces Between Rings: Clean sharp sand (washed concrete sand). Choose one of the following:
- 1. Coarse, well-draining sand, such as washed concrete sand conforming to AASHTO M6 or ASTM C-33.
  - 2. United States Golf Association (USGA) greens, section - sand mix "The Root Zone Mixture."
- C. Turf Conditioner:
- 1. Hydrogrow a proprietary soil amendment manufactured by Invisible Structures, Inc. and provided with Grasspave2.
- D. Grass:
- 1. Sod: as noted per plan. Use 13 mm (0.5") thick (soil thickness) rolled sod from a reputable local grower. Species should be wear resistant, free from disease, and in excellent condition. Sod shall be grown in sand or sandy loam soils only. Sod grown in soils of clay, silt, or high organic materials such as peat, will not be accepted.

**PART 3 EXECUTION**

**3.1 PREPARATION**

- A. Subgrade Preparation:
- 1. Prepare subgrade as specified in geotechnical report. Verify subgrade in accordance with porous paving system manufacturer's instructions.
  - 2. Proper subgrade preparation will enable the Grasspave2 rolls/units to connect properly and remain level and stationary after installation.
  - 3. Excavate area allowing for unit thickness, the engineered base depth (where required), and 0.5 inch (1.25 cm) for depth of sod root zone or topsoil germination area (when applicable).
  - 4. Provide adequate drainage from excavated area if area has potential to collect water, when working with in-place soils that have poor permeability.
  - 5. Ensure in-place soil is relatively dry and free from standing water.
  - 6. Uniformly grade base.
  - 7. Level and clear base of large objects, such as rocks and pieces of wood.
- B. Base Preparation:
- 1. Install Base as specified in the geotechnical report. Verify engineered base (if required) is installed in accordance with porous paving system manufacturer's instructions.
  - 2. Coordinate base installation and preparation with irrigation lines specified in IRRIGATION Section.
  - 3. Place engineered base in lifts not to exceed 6 inches (150 mm), compacting each lift separately to as noted per the geotech report.
  - 4. Leave 1 inch (2.5 cm) of depth below final grade for porous paver unit and sand fill and 0.5 inch (1.25 cm) for depth of sod root zone or topsoil germination area (when applicable).

**3.2 MANUFACTURER'S FIELD REPRESENTATIVE**

- A. Contractor shall coordinate a phone/teleconference call with manufacturer's representative prior to installation. The time shall be indicated in the Contract Documents and included in the base bid price.

**3.3 HYDROGROW INSTALLATION**

- A. Spread all Hydrogrow mix provided (spreader rate = 4.53 kg per 100 m2 (10 lbs per 1076 ft2) evenly over the surface of the base course with a hand-held, or wheeled, rotary spreader.
- B. The Hydrogrow mix should be placed immediately before installing the Grasspave2.

**3.4 GRASSPAVE2 INSTALLATION**

- A. Install the Grasspave2 units by placing units with rings facing up, and using snap-fit connectors, pegs and holes, provided to maintain proper spacing and interlock the units. Units can be easily shaped with pruning shears or knife. Units placed on curves, slopes, and high traffic areas shall be anchored to the base course, using 40d common nails with fender washer, as required to secure units in place. Tops of rings shall be between 6 mm to 13 mm (0.25" to 0.5") below the surface of adjacent hard-surface pavements.
- B. Install sand in rings as they are laid in sections by "back-dumping" directly from a dump truck, or from buckets mounted on tractors, which then exit the site by driving over rings already filled with sand. The sand is then spread laterally from the pile using flat bottomed shovels and/or wide "asphalt rakes" to fill the rings. A stiff bristled broom should be used for final "finishing" of the sand. The sand must be "compacted" by using water from hose, irrigation heads, or rainfall; for sod installation, sand should be installed so that it is slightly over the top of the rings, with the finish grade no less than the top of rings and no more than 6 mm (0.25") above top of rings.

**3.5 INSTALLATION OF GRASS**

- A. Grass coverage on the sand-filled rings must be completed within one week. Sand must be re-installed and leveled and Grasspave2 checked for integrity if rings become exposed due to wind, rain, traffic, or other factors. Install thin sod directly over sand filled rings, filled no higher than the top of the rings. Sod shall be laid with closely fitted joints, and the ends of the strips shall be staggered forming a running bond pattern. Turf grid areas must be fertilized, watered and maintained as noted in the in the TURF Section.

**3.7 Protection**

- A. Sodded areas must be protected from any vehicular traffic for the duration of the Maintenance period outlined in the TURF section.

**3.8 FIELD QUALITY CONTROL**

- A. Remove and replace segments of Grasspave2 units where three or more adjacent rings are broken or damaged, reinstalling as specified, so no evidence of replacement is apparent.
- B. Perform cleaning during the installation of work and upon completion of the work. Remove all excess materials, debris, and equipment from site. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

**3.9 MAINTENANCE AND ESTABLISHMENT**

- A. The maintenance and establishment requirements for turf grid grass shall follow the same maintenance and establishment requirements for turf as outlined in the TURF section. Do not aerate.

**8. CHAIN LINK FENCING AND GATES**

**PART ONE - GENERAL**

**1.1 SUMMARY**

All permanent chain link fencing, gates and related hardware as indicated on the Contract Drawings, or as specified herein and as needed for complete and proper installation.

**1.2 QUALITY ASSURANCE**

Quality of All Materials and Accessories: As recommended by the manufacturer, subject to the acceptance by the ENGINEER. All materials and accessories shall conform with the requirements of the SSPWC and specified herein.

**1.3 SUBMITTALS**

- A. CONTRACTOR shall provide Shop drawings in sufficient detail to show layout of fence and gate, elevation details, fabrication, assembly, hardware, installation, anchorages and interface of work of this Section with work of adjacent trades.
- B. Manufacturer's certification of compliance for chain link fabric posts and rails.

**1.4 PRODUCT HANDLING**

- A. Protection: Protect fencing fabric, posts and gate assemblies before, during and after installation. Properly package and identify and note location of unassembled items (hardware, etc.) for protection against damage.
- B. Delivery: Deliver all items to be built into concrete or masonry work in time, so as not to delay construction and installation operations.
- C. Storage: Store all fencing and gate assemblies where approved by the PROJECT MANAGER until time for installation.

**PART TWO - PRODUCTS AND FABRICATION**

**2.1 MATERIALS**

- A. General: All materials for fencing, posts and gates and fasteners to be new and hot-dipped galvanized.
- B. Galvanizing: Comply with requirements of Section 210-3 - Galvanizing of SSPWC, except as modified herein.
- C. Fabric: As per ASTM A392 - Specification For Zinc Coated Steel Chain Link Fence Fabric and A817 - Specification For Metallic - Coat Steel Wire for Chain Link Fence Fabric, 2-inch mesh chain link of 9-gage steel wire (minimum 75,000 psi tensile strength) galvanized 1.2 oz/ft<sup>2</sup> zinc in single fabric width for entire height and with top and bottom selvages twisted and barbed.
- D. Fabric Tie: 11 gage galvanized steel used to fasten the fabric to posts, rails and gate frame.
- E. Posts: Class 1 Schedule 40 Standard weight pipe conforming to ASTM F-1083 - Specification for Pipe, Steel, Hot-Dipped Zinc - Coated (Galvanized) Welded, For Fence Structures. Malleable iron moisture-proof cap.
- F. Tension Wire: for fabric of 9-gage and heavier use 6-gage galvanized coiled spring steel wire.
- G. Galvanizing Repair Material: Galvanized surfaces which have been damaged in transport or during installation shall be re-coated using the metalizing process or zinc oxide, zinc dust paint per Section 210-3.5 of the SSPWC.
- H. Galvanized Steel Brace Bands, Tension Bands or Bars and Tension Rods: Brace bands shall be galvanized, minimum of 3/16 inch x 3/4-inch wide; tension bands or bars shall be 3/16 inch x 3/4-inch wide and tension rods shall be 3/8 inch diameter galvanized steel rod with galvanized turnbuckles or other suitable tightener or tightening devices.

**9. PAINTING**

**PART ONE - GENERAL**

**1.1 SUMMARY**

- A. Furnish all tools, equipment, materials, supplies and perform all labor required to paint the work indicated or noted on the Contract Drawings and hereinafter specified.

- B. "Paint" as herein specified, means coating systems, materials including primers, emulsions, epoxies, enamels, sealers, fillers and other liquid materials which, when spread in a thin layer, solidifies into a film that obscures the surface on which it is applied. These materials can be used for surface preparation and as prime, intermediate or finish coats. The painting application shall also include all necessary operations including proper surface cleaning and preparation, protection of non-painted surfaces, and proper clean-up during and after painting. Other painting work may be included or specified in other parts of the Specifications or Contract Documents.

**1.2 QUALITY ASSURANCE**

- A. Paint Applicator: Use adequate number of skilled employees who are thoroughly trained and experienced in the necessary crafts and completely familiar with the specified work, all applicable codes, regulation and safety requirements and methods needed for proper execution of work of this Section.
- B. References, Standards, Codes and Regulations:
- 1. Work, equipment and materials must conform to following, but not necessarily limited to, References, Standards, Federal, State and local laws and regulations including the Los Angeles City Building Code and applicable Amendments. Current manufacturer's materials safety data sheets for all materials must be on the jobsite at all times.
  - 2. Where those requirements conflict with this Section, comply with the more stringent provision.
    - a. All material formulation and their application shall comply with the current applicable regulations of the State of California Department of Public Health, California Air Resources Board (CARB), Southern Calif Air Quality Management District (SCAQMD), and the Environmental Protection Agency (EPA) for the airborne or solvent emissions and industrial waste disposal. All paint containers to be properly labeled. Provide the City Engineer with "Certificate of Compliance" if requested.
    - b. Comply with requirements of OSHA, Safety and Health Standards for Construction (29CFR1926) requirements specified in this Section and elsewhere in the Project Manual. Protect all workers of other trades, occupants, or passersby from any airborne or solvent emission.
    - c. Regulatory changes may affect the formulation, availability, or use of specified coatings. Confirm availability of the specified paint materials and other coatings to be used or available under the emission averaging provision or other exemption rules prior to job going out to bid and before start of painting work.
    - d. Los Angeles Department of Building and Safety (LADBS) Research Report.
    - e. Standard Specifications for Public Works Construction (SSPWC).
    - f. American Society of Testing and Materials (ASTM).

**1.3 SUBMITTALS**

- A. General: Comply with applicable provisions Section 1 of these Landscape Construction Notes. CONTRACTOR shall coordinate with other trades and obtain information required for the Submittal. City Engineer will return and will not review any submittal requiring coordination with other submittals until such other submittals or required information are received by the City Engineer.
- B. Product Data and Shop Drawings:

- 1. Submit manufacturer's printed product data and material specifications needed to prove compliance with the specified requirements. CONTRACTOR must identify on a separate submittal of all material manufactured outside the State of California.
- 2. Submit materials list of all items proposed to be provided under this Section including all cleaning agents and materials for surface preparation; Paint Finish and Color Schedules including respective locations and thicknesses, application rates and amounts of required stock material. All items must be provided with catalog names and numbers of the paint types. Paint Finish Schedules shall also identify works to be factory-primed and to be re-primed in the field. Identify materials that are available under the emission averaging provisions or other exemption rules, and also materials to be applied in the manufacturing plant by using an air pollution control system to reduce the VOC emissions. Provide painting locations, which will receive waterproofing sealer treatment, anti-graffiti and other protective coatings.
- 3. Submit Manufacturer's recommended methods of surface testing (including the alkalinity test), surface preparation and cleaning for painting works to be provided under this Section and their prospective locations.
- 4. Submit list of equipment, operation procedures and pressures proposed to be used under this Section. Coordinate and submit all protection plans or safety controls against any airborne emission or exposure during the demolition, surface preparation and painting works.
- 5. Submit methods of testing of total film thickness.
- 6. Submit manufacturer and Coating Inspector prepared certifications of substrate materials as suitable to receive sealers or primers and paints.

**C. Samples:**

- 1. Color Samples: Required for each type of paint material and color, four 8 1/2-inch x 11-inch swatches, to be submitted to the City Engineer or the Consultant for approval not less than 30 days prior to start of painting.
- 2. Provide paint samples on actual surfaces or on mock-up panels at the job site; and by methods comparable with the work requirements representing true quality of the proposed work, to be prepared by the Contractor during work process, as requested by the City Engineer or the Consultant.
- 3. Revise and resubmit each sample as requested by the City Engineer or the Consultant until approval is achieved. Approved samples will become standards of color and finish for accepting or rejecting the work of this Section.
- 4. Actual painting or other finish coating shall not commence until samples and mock-ups are approved and are on file at the jobsite.

**1.4 PRODUCT HANDLING**

- A. Delivery: Deliver materials to the jobsite in factory sealed and properly labeled containers bearing manufacturer's name, type of paint and instructions for mixing and/or reducing.
- B. Storage: Store paint materials in suitable dry, clean and well-ventilated locations. Precautions shall be taken for the prevention of fire. Do not store outdoors or deliver paint material to site more than 15 days before the painting work.
- C. Inspection: Required for approval before containers are opened. Non-approved materials shall be removed from the jobsite.
- D. Protection: Required of all paint materials from exposure to weather or from damage as caused by other construction operations. Protect all surfaces not to be painted. Mask-off where necessary and the over spray is prohibited.

**1.5 JOB CONDITIONS**

- A. Do not apply paint material when surface temperatures and the surrounding air temperatures are below 50 degrees F. Do not apply paint material on damp or wet surfaces, unless otherwise permitted by the manufacturer's printed instructions as approved by the City Engineer.
- B. Perform no painting when the relative humidity is above 85 percent or when the dew point is less than 5 degrees F variance between the air/surface temperature.
- C. Do not apply primer or sealer or paint material unless moisture contents are below the following limits. Any to be painted or stained wood items with moisture contents exceeding the limits indicated below at the time of delivery to the job site shall be rejected and immediately removed from the job site:
- Wood: 12 percent
- Contractor shall measure moisture content of surfaces using a probe type electronic moisture meter approved by the City Engineer.
- D. Do not apply materials during fog, rain or mist or when inclement weather is expected within a period of 24 hours, or the dry time specified by the manufacturer following a rainfall.

**1.6 EXTRA STOCK (MAINTENANCE MATERIALS)**

- A. Required:
- 1. Provide one full quart of sealed and properly labeled container of each paint color and type of paint used in the project for maintenance use.
  - 2. The stock material shall have at least one-year shelf life at the time of the delivery.
- B. Delivery: Upon completion of work of this Section, deliver the required paint maintenance materials and store on the jobsite or at an offsite location at no additional cost to the City where directed by the City Engineer as a condition precedent to the City's acceptance of the work of this Section.

**1.7 SAFETY REQUIREMENTS**

- A. Comply with all safety and health requirements of the "Federal Labor Standards" and in applicable Section in the GENERAL CONDITIONS of Project Manual. It is the responsibility of the CONTRACTOR to establish appropriate safety and health practices.
- B. All persons engaged in sanding, scraping or removing old paint; spraying operations or handling flammable or toxic materials shall wear protective apparel including eye and face protection devices, air purifying halfmasks or mouth piece respirators with appropriate filter. Old sealers or paint coatings may contain lead, zinc or other contaminants. Paints, stains, wood preservative finishes and related materials may be considered as hazardous and shall be handled and disposed of in accordance with code requirements.

**1.8 GUARANTEE**

- A. CONTRACTOR shall furnish the City with written guarantee, during the submittal process and at completion of the work, which guarantees for a period of 1 year from the date of acceptance of the project against any defect, peeling, chipping or crack and that CONTRACTOR will without additional cost to the City, promptly make any changes required as a result of defect or ordinary wear and tear.

**PART TWO - PRODUCTS**

**2.1 MATERIALS**

- A. General: All painting products shall be as specified or approved equal. Only the approved products shall be used in this project.
- 1. Paint pigments shall be fully ground, maintaining soft paste consistency, capable of being readily and uniformly dispersed to complete homogeneous mixture. Paints shall have good flowing and brushing properties and be capable of drying or curing free of streaks and sags. Provide paints with the colors specified on Contract Documents.
  - 2. All paint products shall be in compliance with the Volatile Organic Compound (VOC) limits specified in the rules and regulations of the local governing agencies including the South Coast Air Quality Management District (SCAQMD).
  - 3. All field applied paint products shall meet or not to exceed the applicable VOC Limits of SCAQMD's Rule 1113 - ARCHITECTURAL COATINGS of the Regulation No. XI - SOURCE SPECIFIC STANDARDS, latest edition.
- B. Manufacturers:
- 1. Paint systems, catalog names, and product numbers listed below are based on products of Dunn-Edwards Corporation. This shall be considered the standard of quality against which the Project Manager will judge equivalency. CONTRACTOR's material submittal for proposed alternates must include complete material specifications from manufacturer. Paint systems described below are for specific surfaces as indicated. In addition to the information provided herein, paint materials shall also be governed by the requirements set forth in section 210-1 of the SSPWC.



**ENGINEERING**  
CITY OF LOS ANGELES

**BUREAU OF ENGINEERING**

NO. \_\_\_\_\_ DATE \_\_\_\_\_

REVISION DESCRIPTION \_\_\_\_\_

INDEX NO. \_\_\_\_\_ RAP FACILITY NO. **243**

**MF-300494**

**DEPARTMENT OF PUBLIC WORKS**

**GARY LEE MOORE, PE, ENV SP** CITY ENGINEER

LANDSCAPE ARCHITECT: GREG MOESER DATE: 04/01/21  
DESIGNED BY: GREG MOESER LIC. NO.: 6280  
DRAWN BY: GREG MOESER DATE: 04/01/21  
CHECKED BY: RICHARD FISHER, P.E. DATE: 04/01/21  
APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL DATE: 04/20/21

CLIENT: DEPARTMENT OF RECREATION & PARKS  
GENERAL MANAGER: MICHAEL A. SHULL

SHEET TITLE: LANDSCAPE CONSTRUCTION NOTES  
PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT  
ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

WORK ORDER NO. **E170515D**  
PLAN FILE NO. \_\_\_\_\_

DRAWING NO. **L005**  
SHEET **8** OF **25**

Project Status: **BID SET**  
PROJECT ISSUE DATE: **08/09/2021**

PLOTTED: 8/9/2021 11:54 AM

Wood, Smooth (Flat Finish)

Table with 5 columns: Painting Sequence, Finishing Schedule, Recoat And Drying Time, Coverage At Required Wet Film Thickness, Required Wet Film/Dry Film Thickness. Rows include 1st, 2nd, and 3rd coats of Acrylic paint.

Wood, Smooth (Semi-Gloss)

Table with 5 columns: Painting Sequence, Finishing Schedule, Recoat And Drying Time, Coverage At Required Wet Film Thickness, Required Wet Film/Dry Film Thickness. Rows include 1st, 2nd, and 3rd coats of Acrylic paint.

Non ferrous metals (Galvanized steel, Aluminum), Semi-Gloss

Table with 5 columns: Painting Sequence, Finishing Schedule, Recoat And Drying Time, Coverage At Required Wet Film Thickness, Required Wet Film/Dry Film Thickness. Rows include Pre-coat, 1st coat, 2nd coat, and 3rd coat for galvanized steel and aluminum.

\* Galva-etch is a water reducible acid pre-treatment for galvanized metals. Do not use on aluminum.

† Recoat time for Galv-Alum is 2 hours if material is sprayed, 16 hours if brushed or rolled. Second coat must be applied within 48 hours

C. Miscellaneous Materials: Provide cleaning agents, neutralizer and other materials as may be required for the cleaning and preparation of surfaces to be painted as recommended by the manufacturer and as approved by the City Engineer or the Consultant.

- 1. Thinner: As recommended by the Paint Manufacturer for tool cleaning. Do not use thinner to thin, mix or prepare paint materials.
2. Paste Wood Filler: Fed. Spec. TT-F-336
3. Cleaner, Degreaser, Neutralizer: Provide as part of Contract any types labeled as suitable and that will not cause any harm or damage to the substrate or texture or any adhesion problem.
4. Graffiti Remover: Use hot and high-pressure water or power wash with approved graffiti remover where required.

2.2 APPLICATION EQUIPMENT

- A. For application of the approved paint, use only such equipment as is recommended for application of the particular paint by the manufacturer and as approved by the City Engineer or the Consultant.
B. Prior to use of application equipment, verify that the proposed equipment is actually compatible with the material to be applied, and that integrity of the finish will not be jeopardized by use of the proposed equipment.
C. Spraying equipment for paint finish shall be airless spraying machine with water trap. Inspect spray tip each day for wear and replace worn tip.
D. Brushes shall have a good quality natural or synthetic bristle. Rollers shall have a good quality natural or synthetic cover. Brush and rollers shall conform with approved manufacturer's recommendation and Section 310-1.2 - APPLICATION OF SSPWC.

PART THREE - EXECUTION

3.1 GENERAL

- A. Refer also to section 310-1of the SSPWC.

3.2 STRIPPING OF PAINTS AND SEALERS FROM EXISTING SURFACES

- A. CONTRACTOR shall mask off all adjacent surfaces not to be painted and shall repair or replace damaged area with new work subject to the approval of the City Engineer at no added cost to the City.
B. For area specified to be repainted, remove all loose and peeling paints by approved method. Use an approved chemical type paint stripper. Sandblasting, rotary or disc sanders, torches and wire brushes are not permitted.
C. All paint stripping shall be done, handled and disposed of by certified Contractor in compliance with OSHA and applicable rules and regulations.

3.2 PROTECTION

- A. CONTRACTOR shall mask off all adjacent surfaces not to be painted and shall repair or replace damaged area with new work subject to the approval of the City Engineer at no added cost to the City.
B. Furnish sufficient drop cloths, shields and protective equipment to prevent spray or splatter from fouling surfaces not be painted.
C. "WET PAINT" signs, barricades, and such other devices as are required to protect newly finished surfaces shall be provided. CONTRACTOR shall be responsible for removal of signs protective materials, and temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.3 MATERIALS PREPARATION

- A. General:
1. Mix and prepare paint materials in strict accordance with procedures submitted and approved by the City Engineer. Mix paint materials in whole unit sizes and do not attempt to mix a partial unit of paint material.
2. When materials are not in use, store in tightly covered containers as supplied.
B. Stirring:
1. Stir materials with mechanical mixers or power agitator before application, producing a mixture of uniform density.
2. Do not stir into the material any film which may form on the surface; remove the film and, if necessary, strain the material before using.

3.4 SURFACE PREPARATION OF PAINT AND SEALER

- A. General:
1. Perform surface preparation and cleaning in strict accordance with the procedures approved by the City Engineer in accordance with 310-2. Any use of abrasive blasting, air blasting, water blasting, detergent washing, and scrubbing, acid etch or abrasion with power cleaning tools shall be submitted for approval of the City Engineer in advance. Remove all splashes, ridges, high spots and clean of all dirt, dust, debris, mill glaze, grease, rust, soil, oil, stain, efflorescence and other foreign materials in accordance with the requirements specified herein and elsewhere.
2. Patch nail holes, voids and cracks or other defects permissible under this Contract with appropriate repair compound. All repairs shall be sanded to feather edges and textures to match adjacent area. All surface smoothness and final textures must be obtained and all repaired areas shall be primed with appropriate primer before painting.
3. All defected areas of the previously painted surfaces that are specified to remain shall be repaired, resealed and repainted. All other painted surfaces shall be abraded and de-glossed to provide for adhesion of new coatings.
4. Clean and rinse each surface to be painted prior to applying surface treatment or paint as specified herein. All curing agents, bond breaker or form release agents must be removed, and the surface cleaned before any paint system is applied.
5. Remove oil, grease or stabilizers from all metal surfaces with clean cloths and approved cleaning solvent or detergent of low toxicity and flash point in excess of 200 degrees F, prior to start of mechanical cleaning and surface treatment.
6. Provide surface treatments where required. Spot prime repaired surfaces with the primers as specified herein.
7. All surfaces must be completely dry, dust free and protected from corrosion and oxidation before priming and painting. Do not exceed the lapse time recommended between the surface preparation and painting work.
8. Dissimilar Materials: Apply protective coatings as specified herein. The protective coatings shall be not be visible to the public view.
9. Schedule the cleaning and painting so that dust and other contaminants from the cleaning process will not fall onto wet newly painted surfaces.
10. CONTRACTOR shall be responsible for promptly repairing unsatisfactory work due to improper surface conditions.

B. Preparation of Wood Surfaces:

- 1. Clean all new, weathered or existing wood surfaces until free from dirt, oil, rust, glaze, bleed, mildew, splinters and other foreign substance. Care must be taken to select the proper cleaning method and cleaning tip so the wood will not be damaged.
2. All non-galvanized steel nails shall be countersink and filled with a patching compound. Smooth finish by using the proper sandpaper. Where so required, use varying degrees of coarseness of sandpaper to produce a uniformly smooth and unmarred wood surface.
3. Unless specifically approved by the City Engineer or the Consultant, do not proceed with painting of wood surfaces until the moisture content of the wood is less than the moisture content specified in [Article 1.5] of this Section as measured by a moisture meter approved by the City Engineer.
4. Fill open-grain wood with paste wood filler before application of varnish, lacquer or paint.

- 5. Fill pits, knots and cracks and other imperfections of wood surfaces, that are permissible under this Contract with spackle or other suitable filler. Apply filler with putty knife and sand smooth when set.

3.5 APPLICATION AND WORKMANSHIP OF PAINT SYSTEM

A. General:

- 1. Unless specified otherwise, all application shall be executed by first class trade painters in accordance with Section 310 - PAINTING of the SSPWC, and the provisions set forth in these specifications, and in accordance with the approved methods by using application equipment and techniques best suited for the substrate and type of material being applied.
2. Thoroughly back paint all surfaces of items that will be concealed or inaccessible after installation.
3. Use approved clean-up solvents for tool or equipment cleaning at prescribed intervals during the application process and at the end of the workday.
4. Paints shall not be applied when temperature is below 50 F or when environmental conditions are unfavorable to application or drying of paint materials.

B. Workmanship:

- 1. Each coat shall be even, with uniform color and texture.
2. Finish painted surfaces shall be free from sags, brush marks, dirt, cloudy or mottled surfaces, scratches, cracks or other blemishes and thin coating.
3. Mixing of paint materials: Thoroughly stir, strain and keep at a uniform consistency during application in accordance with manufacturer's directions. Do not mix together materials of different manufacturers.

C. Coats:

- 1. The number of coats and total film thickness specified herein are the minimum that shall be applied to produce the specified workmanship.
2. Apply additional coats when the undercoats or other conditions show through the finish coat, or if required to obtain complete and uniform coverage and approved results.
3. Each coat in full coverage shall be measured for the wet film thickness and obtain the required approvals of the BCA Inspector before each succeeding coat is applied.
4. Undercoats to be dry and hard before application of succeeding coat and to be tinted to approximate color of finish coat.
5. Suitably sand undercoats as necessary for proper finish.
6. Prime and succeeding coats for each finish shall be products of the same manufacturer unless otherwise specified, indicated or authorized by the City Engineer.
7. The total film thickness or application rate or coverage for each paint system shall be submitted for review during the submittal process. The applied total film thickness of each coat shall not be less than the minimum film thickness specified in the materials section of this specification or as recommended by the manufacturer, whichever is greater. If application rate or coverage is specified, each application shall not be greater than the rate or coverage specified herein or recommended by the manufacturer, whichever is lesser.
8. Excessively thick coats of paint will not be permitted.
9. All repaired areas of painted surfaces shall be sealed and painted with total film thickness to match adjacent area to ensure total surface smoothness. Any additional or new finish coat shall be in accordance with the total film thickness or application rate as specified hereinbefore.

D. Colors:

- 1. As selected by the City Engineer or as noted on the Contract Drawings.
2. Each coat shall provide a proper ground coat for the succeeding coat and not differ appreciably in tint from the preceding coat.
3. Finish coats shall match approved samples.
E. Touch-Up Painting: Shall be required as directed by the City Engineer for all areas or items scratched, marred or defaced in any manner by CONTRACTOR's operations, at no added cost to the City.
1. If shop or factory-applied finish on any equipment furnished by the CONTRACTOR is damaged in shipment or during construction operations, equipment shall be refinished by the CONTRACTOR to the satisfaction of the City Engineer or the Consultant, at no added cost to the City.
2. One can of touch-up paint shall be provided for each different color of factory-applied finish, which is to be the final finish surface of the product.

3.7 PROTECTION AND CLEAN-UP

- A. Following completion of painting in each space or area, reinstall the removed items or new works with care by using employees skilled in the necessary trades. Protect all surfaces from dust, damages or human contact prior to final acceptance. For surfaces requiring other succeeding coating or treatment, protect surfaces from dust, dirt or other contamination.
B. At End of Each Day's Work: Return materials and equipment to the storage area. Remove paint or oil-saturated cloths from the job-site daily or hang out flat and singly to dry.
C. Final Clean-Up: Repair all damage to adjacent surfaces or facilities resulting from the work to the satisfaction of the City Engineer at no additional cost to the City.

10. IRRIGATION SYSTEMS

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work Included:

- 1. All labor, materials, equipment, appliances, fixtures and tests necessary for complete new operating irrigation system as indicated on the Contract Drawings.

1.2 SUBMITTALS

- A. The CONTRACTOR shall make all required materials submittals in accordance with the Section 1 of these Landscape Construction Notes. For all materials not approved upon the first submittal, CONTRACTOR is responsible to promptly re-submit for approval, necessary data concerning a substitution for a disapproved item or piece of equipment.
B. The CONTRACTOR shall make substitution requests in accordance with the Section 1 of these Landscape Construction Notes.

C. Submit copies of the following:

- 1. Complete list of irrigation materials and miscellaneous hardware complete with descriptions and/or photographs and manufacturer's literature. Clearly mark or underline proposed items.

1.3 QUALITY ASSURANCE

- A. Codes and Regulations: CONTRACTOR shall obtain and pay for all required permits. Deliver all permits and submit certifications of compliance to the BCA Inspector and the PROJECT MANAGER.

1.4 GENERAL REQUIREMENTS

- A. Approvals by the Engineer: Before commencement of irrigation installation, CONTRACTOR shall obtain:
1. All approvals on required submittals hereinafter specified.
2. Approval of all re-submittals requested by the ENGINEER.
3. CONTRACTOR shall make a detailed staked layout on the work site of the proposed trenching locations for all mainline, control wire conduit, and valve manifolds for approval by ENGINEER prior to trenching.
4. CONTRACTOR shall make a detailed staked layout on the work site of the proposed head locations for approval by ENGINEER prior to lateral line trenching.

- 1. All approvals on required submittals hereinafter specified.

- 2. Approval of all re-submittals requested by the ENGINEER.

- 3. CONTRACTOR shall make a detailed staked layout on the work site of the proposed trenching locations for all mainline, control wire conduit, and valve manifolds for approval by ENGINEER prior to trenching.

- 4. CONTRACTOR shall make a detailed staked layout on the work site of the proposed head locations for approval by ENGINEER prior to lateral line trenching.

- B. Required Inspections: Notify the BCA Inspector at least 72 hours prior to time of required inspection.

- 1. IRRIGATION MAINLINE PRESSURE TEST: The pressure test shall take place under the direction of the BCA Inspector.
2. IRRIGATION COVERAGE TEST: After installation of heads and lateral lines etc., entire irrigation system shall be tested for coverage. CONTRACTOR shall notify the BCA Inspector, PROJECT MANAGER, ENGINEER and designated RAP regional maintenance staff three (3) days before the scheduled test.

- C. Existing Utilities and Plant Materials: Protect utilities and/or plant materials not designated for removal or modification in place against damage resulting from work of this Contract. Perform any removal and/or modifications only on approval or instruction from the ENGINEER or in accordance with applicable provisions noted or specified.

- 1. See sheet L100 for Tree Protection Requirements when trenching.

- D. Verification of Dimensions and Quantities: Verify site conditions, contract drawings, all dimensions and quantities prior to the bid. Furnish the quantities as necessary to do the specified work. Notify the Project Manager of any discrepancies between the Contract Drawings and the site conditions prior to beginning work. Do not work in areas where such discrepancies occur until further instruction by the ENGINEER.

- E. Record Drawings: Comply with provisions of Section 1 of these Landscape Construction Notes unless otherwise noted herein. CONTRACTOR shall accurately dimension the location and depths of all piping, valves, and control equipment as installed. Indicate with suitable colored ink on one set of prints of the Contract Drawings to produce a record of complete installations to be kept on the job and up to date at all times during construction. At the completion of the work and prior to Final Inspection, the CONTRACTOR shall copy his record "as installed" data, using red ink, onto a set of clean prints. The CONTRACTOR shall certify to the completeness and accuracy of the "as installed" information indicated on the prints with his signature and deliver the signed prints to the PROJECT MANAGER for review prior to the completion of the Plant Establishment Period.

- 1. Dimension from two permanent points of reference, building corners, sidewalk, or road intersections, the location of the following items:

- a. Connection to existing water lines.
b. Connection to existing electrical power.
c. Gate valves.
d. Routing of all pressure lines. Indicate dimensional location at 100' intervals.
e. Routing of control wiring.
f. Controller.
g. Other related equipment as included in Contract Drawings.
h. Sleeve locations.

- F. Guarantee: In accordance with provisions of the GENERAL CONDITIONS, CONTRACTOR shall guarantee the entire irrigation system against defects in materials and workmanship for a period of one year from the date of final acceptance of the Project.

Vertical sidebar containing: BUREAU OF ENGINEERING logo, PROJECT INFORMATION table, PROFESSIONAL SEAL, LICENSED LANDSCAPE ARCHITECT GARY LEE MOORE, PE, ENV SP, CITY ENGINEER, PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT, SHEET: L006 OF 25, and various permit and approval stamps.

Vertical text on the left margin: THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET. SHEET ISSUE DATE: 8/9/2021 10:52 AM FILE PATH: Q:\IN-HOUSE-DESIGN\DRUM BARRACKS PARKING LOT\DESIGN\LANDSCAPE\WORKING DRAWINGS\XREF\_TTLB\_RAP.DWG

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SHEET ISSUE DATE: 8/9/2021 10:52 AM

PROJECT STATUS: BID SET

PROJECT ISSUE DATE: 08/09/2021

PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT

ADDRESS: 1081 CARTER AVENUE, WILMINGTON, CA 90744

PROJECT TITLE: LANDSCAPE CONSTRUCTION NOTES SHEET 7

GENERAL MANAGER: MICHAEL A. SHULL

CLIENT: DEPARTMENT OF RECREATION & PARKS

ARCHITECTURAL DIVISION

LANDSCAPE ARCHITECT: GREG MOESER

DESIGNED BY: GREG MOESER

DRAWN BY: GREG MOESER

CHECKED BY: RICHARD FISHER, P.E.

APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL

LIC. NO.: 6280

DATE: 04/01/21

1. The entire irrigation system shall be warranted to be free from defects in materials and workmanship, and installed in accordance with the irrigation plans, specifications and the SSPWC. The CONTRACTOR shall be required to repair or replace any defects in material or workmanship which may develop within one (1) calendar year from the date of acceptance, excepting ordinary wear and tear and unusual abuse or neglect. Further, the CONTRACTOR shall be required to make any necessary repairs within 48 hours of notification at no cost to the CITY. If the CONTRACTOR or his agent fail to make such repairs within the stipulated time, the CITY shall make such repairs or have repairs made by a third party and bill the CONTRACTOR for all expenses that accrue from making such repairs.

2. The CITY reserves the right to make temporary repairs as necessary to keep the irrigation system equipment in operating condition. The exercise of this right by the CITY will not relieve the CONTRACTOR of his responsibilities under the terms of the guarantee.

3. CONTRACTOR shall repair any settlement of backfilled trenches which may occur during a one-year period after final acceptance by the PROJECT MANAGER, to the ENGINEER'S satisfaction, without expense to the CITY, including the complete restoration of all damaged planting, paving, or other improvements of any kind.

1.5 DELIVERY, STORAGE AND HANDLING

A. **Delivery:** Deliver products to the jobsite in their manufacturer's original containers, with labels intact and legible.

B. **Storage:** Store piping, materials, fitting, etc. at the jobsite where directed by the City Engineer until such time for installation.

C. **Handling:** Promptly remove damaged materials and unsuitable items from the jobsite and promptly replace with materials meeting the specified requirements, at no added cost to the City.

PART TWO - PRODUCTS

2.1 MATERIALS

A. **General:** Provide recently manufactured materials of the best grade of each respective kind.

B. **Pipe and Fittings:** The type of pipe material and fittings designated on the Contract Drawings, or as hereinafter specified shall be:

1. **Plastic Irrigation Pipe:** High impact rigid polyvinyl chloride PVC 1220 (Type I, Grade 2), conforming to ASTM D1785 - SPECIFICATION FOR POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPE, SCHEDULES 40 & 80 and CLASS 200. The minimum pressure rating to be not less than indicated therein for the schedule and size listed.

2. **All Pipes:** Shall be homogeneous throughout and free from cracks, holes, foreign materials, blisters, deleterious wrinkles, and dents.

3. Solvent-welded Schedule 40 PVC plastic pipe and fittings shall be used for pipe sizes up to and including 2 1/2 inch for installation of irrigation pressure lines and lateral lines.

4. Class 200 PVC gasketed pipe with ductile iron fittings and restraints shall be used for continuously pressurized pipe of sizes of 3-inch up to and including 6-inch diameter.

5. Schedule 80 PVC plastic pipe and threaded fittings shall be used only when threaded joints are specified, or otherwise permitted by the City Engineer.

6. All piping shall be permanently marked with the following: Manufacturer's name or trademark, size, schedule, and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (N.S.F.) approval.

C. **Valves:**

1. **General:** Provide valves of the type and capacity designated on the Contract Drawings and with the requirements specified herein. All valves shall be capable of continuous performance at a working pressure of 200 psi or less.

2. **Gate Valves and Mainline Isolation Valves:** in sizes 2.5-inch and smaller shall be bronze type, non-rising stem, solid wedge gate valve; Nibco T-113-LF or approved equal.

3. **Automatic Control Valves:** Electrically operated, cast brass or bronze normally closed globe valve, capable of with manual flow control adjustment and manual operation capability, readily disassembled for servicing, slow opening and closing, and self-flushing. Reclaimed water compatible. Rain Bird EFB-CP Series or approved equal.

4. **Quick-Coupling Valves:** shall be 1" type with two-piece red brass construction with a locking thermoplastic rubber cover. The CONTRACTOR shall provide one quick coupler key with hose swivel for each five quick couplers installed. Rain Bird model #44LRC or approved equal.

D. **Valve Boxes:**

1. Valve boxes shall be of Portland Cement concrete with a cast iron frame and hinged double toggle locking cover. The inside dimensions of the box shall be 10 1/2 inches by 17 1/4 inches, Model 363 1/2 HFL by Eisel Enterprises Inc., or approved equal. The cast iron cover shall be permanently embossed, "GV" for gate valve, "RCV" for remote control valves, "QC" for quick coupler valves, MV for Master Valves, or FM for Flow Meter. Paint is not acceptable. Contractor shall supply one (1) valve box cover key for each five (5) valve boxes installed. Provide a minimum of two (2) cover keys, (800-2.2.7). Boxes are to be installed per the applicable details.

E. **Irrigation Heads:**

1. **Pop-up Gear Driven Rotor Head:** The body of the rotor head shall be constructed of corrosion and UV-resistant, heavy-duty A.B.S. The rotor head body shall have a factory-installed drain check valve capable of checking up to 10 feet in elevation change. The full or part-circle rotor head shall be a single stream, water lubricated, gear drive type capable of both full circle and/or part circle operation in the same unit as noted on Contract Drawings. The rotor head shall have a screen attached to the drive housing to filter inlet water, protect the drive from clogging and simplify its removal for cleaning and flushing of the system. The rotor head body shall have a 1" (26/34) female (NPT or BSP) bottom inlet. The rotor head shall have a standard rubber cover which designates each adjustment opening from the top. Pop-up height as measured from the top of the cover to the centerline of the nozzle orifice shall be at least 5 inches. The rotor shall have a stainless-steel covered nozzle turret and riser stem.

2. **SA Swing Joint Assemblies:** The Swing Assemblies shall be used as a flexible swing joint assembly for 1/2" inlet sprinklers. The pipe shall be flexible black tubing constructed of linear low-density polyethylene material with a wall thickness of 0.090" and an inside diameter of 0.490". The fittings shall be constructed of UV-resistant, thermoplastic material. The Swing Assembly shall have an operating pressure rating of 80 psi at 110° F. As manufactured by Rain Bird Corporation or approved equal.

3. **TSJ (PRS) Swing Joint Assemblies:** The swing joints shall be used as a height adjustable connector between lateral lines and 3/4" or 1" sprinklers or quick coupler valves. The swing joint shall be molded from rigid PVC, Type 1, cell classification 12454-B, conforming to ASTM D1784, with a pressure rating of 315 psi at 73° F when tested in accordance with ASTM D3139, including 60 minutes at 790 psi, and short-term exposure of 1000 psi without leakage. All NPT threads, sockets, and spigots shall be Schedule 80 per ASTM D2464 and D2467. All components shall be factory preassembled, available with 3/4" or 1" inlet/outlet and in lengths of 12" and 18". All rotating joints shall be modified stub ACME threads. All rotating joints shall have two EPDM rubber O-rings for positive sealing and thread protection.

a. When specified, the pressure regulating system (PRS) shall consist of the outlet elbow of a Rain Bird Turf Swing Joint (TSJ). The TSJ-PRS shall allow pressure to increase uniformly within the rotor up to the preset regulation pressure before regulation occurs. Pressure regulation shall be provided to rotors with 3/4" and 1" inlets by means of a spring-loaded diaphragm attached to a flow tube. The regulator housing shall be constructed of high strength PVC. All metal components shall be made of stainless steel. The diaphragm shall be a fabric reinforced elastomer.

F. **Control Wire:**

1. Connection between the automatic controller(s) and the remote control valves shall be made with direct burial 14 gage, AWG-UF, 600 volt, copper wire. Wires shall be color coded as follows:

Table with 5 columns: CONTROLLER WIRE COLOR, CONTROLLER STATION, CONTROLLER STATIONS, CONTROLLER STATIONS, CONTROLLER STATIONS. Rows include RED, YELLOW, BLUE, GREEN, ORANGE, TAN, PURPLE, PINK, BROWN, GRAY.

Table with 2 columns: CONTROLLER, TAPE BUNDLE COLOR. Rows include A (RED), B (YELLOW), C (BLUE), D (GREEN), E (WHITE), F (BLACK).

G. **CONTROL WIRE CONNECTIONS:** provide per manufacturer's requirements and install per Contract Drawings and details in conduit per below.

Control wire connections shall be made with 3-M brand of DBY or DBR Direct Burial Splice kits, or approved equal. The splice kit shall consist of a one-piece malleable plastic bulb body with internal locking fingers, filled with re-enterable gel sealant and a Scotchlok Electrical Spring Connector. Materials shall be as follows:

Table with 3 columns: CONNECTOR, COLOR, NO. AND SIZE OF WIRE. Rows include 3M Model DBY (Yellow, Max. 4-12 gage UF wires), 3M Model DBR (Red, Max. 3-14 gage UF wires).

PART THREE - EXECUTION

3.1 **SURFACE CONDITIONS**

Examine the area of work and conditions under which work of this Section will be performed. Correct any conditions detrimental to timely and proper completion of the work prior to commencing installation of irrigation equipment.

3.2 **IRRIGATION SYSTEM INSTALLATION:**

A. **General:**

1. The Irrigation system layout shown on the Contract Drawings shall be considered as diagrammatic. The CONTRACTOR shall make adjustments where necessary to conform to actual field conditions unless otherwise noted or as directed by the ENGINEER at no additional cost to the CITY.

2. All piping shown on the Contract Drawings in paved areas but running parallel and adjacent to planted areas, is done for clarity only and is to be installed inside the planting area whenever possible.

B. **Trench Excavating and Backfilling:** Size trenches and other excavations to accommodate the irrigation system components, conduits, pipe bedding material and other required elements indicated on Contract Drawings. Provide a minimum of 8" of side clearance on outside of the piping or conduit to assure proper installation and access for inspections.

1. See TREE PROTECTION REQUIREMENTS on Sheet L100 for all trenching within the protected root zone of an existing tree.

2. Unless otherwise specified, the minimum depth of cover over pipelines and conduits shall be as follows:

- a. Control wire conduit: 30-inches (36-inches under roadways and parking lots).
b. Other Control Wiring: Depth of mainline, or a minimum of 24-inches cover if without any mainline.
c. Irrigation Mainline: 24-inches for piping 3" and smaller; 30-inches for piping 4" and larger.
d. Lateral sprinkler lines: 12-inches.

3. Make the bottom of trenches true to grade and free of protruding stones, roots or other matter which would prevent proper bedding of pipe or other facilities.

4. All trench backfill shall be performed in accordance with approved soils report. Pipe bedding shall be clean site soil, free of all rocks, debris, etc. over 1/2" diameter. Bed pipe in at least 4-inches of finely divided material to provide a firm, uniform bearing. Surround the pipe with additional finely divided material to at least 12-inches over the top of the pipe. Bedding shall be placed in 8-inch maximum lifts. Backfill shall be site soil placed above the bedding to finish grade. There shall be no rocks over 2" in greatest dimension or organic matter in the backfill. All bedding and backfill shall be properly moisture conditioned and compacted at each lift. All trenches shall have a minimum relative compaction of 90%. Compaction shall be tested by the CITY at locations to be determined by the GEOTECHNICAL ENGINEER.

5. Finished trenches shall be flush with adjacent finish grades. The CONTRACTOR shall be responsible for maintaining the trenches flush and smooth with adjacent surface grade until final acceptance of the project. After compaction has been approved, trenches in existing turf areas shall be re-planted per turf repair of the TURF section, unless otherwise noted.

C. **Irrigation Pipeline Installation - General:** Execute trench excavating and backfilling, including the depth of cover over the pipeline, in accordance with requirements above.

1. Pipe layout as shown on irrigation plan is diagrammatic. CONTRACTOR shall route piping in planted areas in the most expedient manner consistent with the requirements set forth herein, including avoidance of tree roots.

2. When two or more pipelines are installed in the same trench, separate the pipelines by a minimum horizontal clear distance of 12-inches. Install piping such that each pipe, valve, or other component may be serviced or replaced without disturbing the others.

3. During installation of pipe, fittings, valves, and other components, prevent soil or foreign matter from entering the system. Temporarily cap or plug all open ends at completion of installation operations.

4. All changes in pipe size shall be made with reducer fittings. No close nipples or bushings shall be used.

5. Where irrigation piping crosses a vehicular roadway or other paving, sleeve all pipe and conduit inside a Schedule 40 PVC sleeve of a minimum of two pipe sizes larger than the piping to pass through it under the paving at the depth of the mainline or 30 inches minimum. All sleeves shall extend a minimum of 3 feet beyond the edges of paving.

6. Pipe or irrigation components of dissimilar metals shall be separated by an approved "Dielectric" coupling.

D. **Solvent Welded Plastic Pipeline:**

1. Join plastic pipe with slip type solvent welded fittings, threaded fittings as specified. Install steel pipe first when plastic pipe is joined to steel pipe.

2. Cut pipe square, externally chamfer approximately 10-15 degrees, and remove all burrs and fins.

3. Prior to the application of the P.V.C. solvent cement, prepare all surfaces to be solvent welded with tetrahydrofuran primer tinted purple. Make solvent welded joints in accordance with ASTM D2855 - PRACTICE FOR MAKING - SOLVENT - CEMENTED JOINTS WITH POLY (VINYL CHLORIDE) (PVC) PIPE AND FITTINGS. Use a solvent approved by the pipe manufacturer.

4. Install plastic pipe in accordance with ASTM D2774 - PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING and the requirements herein. Exercise care in assembling a pipeline with solvent welded joints so that stress on previously made joints is avoided. Handling of the pipe following jointing, such as lowering the assembled pipeline into the trench, shall not occur prior to the set times specified by the manufacturer.

5. Apply solvent to pipe ends in such a manner that no material is deposited on the interior surface of the pipe or extruded into the interior of the pipe during jointing. Wipe off excess cement on the exterior of the joint immediately after assembly.

6. Make threaded pipe joints using Teflon tape or other approved jointing material. Do not use solvent with threaded joints. Protect pipe from tool damage during assembly. Use vises with padded jaws and strap wrenches for installation of fittings and nipples. Remove and replace any plastic pipe which has been nicked, scarred, or otherwise damaged.

7. Snake plastic pipe from side to side in the trench to allow 1-foot of expansion and contraction per 100 feet of straight run.

8. Do not expose the pipeline to water for 24 hours after the last solvent welded joint is made.

E. **Installation of Valves, Valve Boxes, and Special Equipment:**

1. General: Install all valves and other equipment in strict accordance with the details, and make readily accessible for manual operation, maintenance or replacement.

2. Install isolation or gate valves of the same size as the pipeline in which they are installed, unless otherwise indicated.

3. Install all valves below ground housed in a covered valve box with a securable lid that will permit access for field servicing. Boxes shall be set flush with existing grade, including sloped areas, and all soil within 12 inches of the perimeter of the box shall be compacted per the trench repair section of this specification. Boxes are to be positioned per details.

4. Set valve boxes per applicable details and set valves at sufficient depth to provide clearance between the cover and valve handle or key when the valve is in the fully open position. Do not cover valve with pea gravel.

5. No equipment shall be installed closer than 12 inches to any paved surface, unless separated from the paved surface by a wall, fence, curb, or similar barrier, or installed underground.

F. **Irrigation Head Installation and Adjustment:**

1. General: In accordance with the requirements of Subsection 3.2 of this Section, flush and pressure test all mains and flush lateral lines before installing irrigation heads.

2. **Irrigation Head Placement and Spacing:**

a. Irrigation plans are designed, as a minimum standard, for head-to-head coverage on all spray heads. Head locations shall be determined by referencing the irrigation plan and using the head spacing listed in the irrigation head legend. Accuracy of final installation shall be within plus or minus 12 inches for all rotary heads having a throw of 30 feet or greater; within plus or minus 4 inches for all head types with a throw of under 30 feet. Do not exceed the maximum irrigation head spacing shown on the Contract Drawings.

b. Prior to head installation, CONTRACTOR shall mark the proposed locations of all irrigation heads in the field for review and approval by the Engineer. CONTRACTOR shall make any adjustments to head locations requested by the Engineer at that time at no additional expense to the City. CONTRACTOR shall provide minimum 48 hours notice prior to the requested time of inspection.

G. **Head Installation:**

1. Do not exceed the maximum irrigation head spacing shown on the Contract Drawings.

2. Install all irrigation heads 3-inches clear of adjacent walks, curbs, paving, headers, and similar improvements. Adjust all heads to flush with the final finish grade - adjusting for depth of sod in turf areas if needed.

3. All soil within 12 inches of the perimeter of the head shall be compacted as indicated in applicable details.

4. All irrigation heads shall be installed on swing joint assemblies as shown on details.

H. **Irrigation Head Adjustment:**

1. When all irrigation heads are installed and the irrigation system is operating, adjust and balance each section or unit with all section control valves fully open to obtain uniform 100% head to head coverage.

2. Adjust irrigation heads having adjustable pin nozzles, screws or orifices to provide optimum distribution of water over the coverage pattern. Without additional cost to the City, CONTRACTOR shall substitute larger or smaller nozzles in irrigation heads and/or add or omit sprinkler heads as necessary to obtain uniform coverage to meet MWEL0 requirements. Any requested modification shall not alter the total GPM to a degree to require a major revision of pipe sizing.

3. At no time is the irrigation system to cause excessive overspray on adjacent paved areas or cause any erosion to the site.

4. **Low Head Drainage:** The CONTRACTOR shall install in-line drainage swing check valves where necessary to prevent low head drainage or as indicated on contract drawings.

I. **Automatic Control System Connection:**

1. General: Utilizing existing irrigation controller, shall include all wiring and connections.

A. Prior to the start of the functional testing, the CONTRACTOR shall perform the following tests on all irrigation system electrical conductors in the presence of the BCA Inspector.

B. The functional test for all the electric automatic irrigation system(s) shall consist of a minimum of fifteen (15) working days of operation during which time the controller shall complete at least three (3) complete cycles automatically for each station. The lengths and frequencies of the cycles will be determined by the City's representative. If unsatisfactory performance of the system develops, the condition shall be corrected, and the test repeated until fifteen (15) working days of continuous, satisfactory operation is obtained.

C. The functional test shall be satisfactorily completed prior to the start of the plant establishment period.

D. Repair to the irrigation system wiring shall be made within five (5) working days of a malfunction or damage to any portion of the system.

2. CONTRACTOR shall leave the control system in operating condition with an operational chart mounted within the controller cabinet upon completion of the work.

3.3 **FLUSHING AND TESTING**

After completion, and prior to the installation of any terminal fittings, thoroughly flush the entire pipeline system to remove dirt, scale, or other material. After flushing, conduct the following tests in the sequence listed below. Provide all equipment, materials, and labor necessary to perform the tests. Conduct all tests in the presence of the City Inspector.

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M L K J I H G F E D C B A

A. The irrigation system mainlines shall be pressure tested for 24 hours at 125 p.s.i. with all control valves in place and closed. During the test, the CONTRACTOR shall provide pressure gauges downstream from the backflow device and upstream from the farthest remote-control valve in the system. Air pressure testing of the irrigation system is acceptable if approved by the BCA inspector. Placement of control wires shall be verified before mainline trenches are backfilled after pressure test.

B. After installation, the irrigation lateral lines shall be thoroughly flushed in the presence of the BCA inspector. Each valve and lateral system shall be flushed commencing with the head closest to the valve and proceeding to the farthest head.

C. Irrigation Coverage Test: After installation of heads and lateral lines etc., entire irrigation system shall be tested for coverage. The BCA Inspector, Project Manager, CONTRACTOR and Recreation and Parks Regional maintenance staff shall be notified three (3) days before the scheduled test. Perform the coverage test for each zone after irrigation heads have been installed and demonstrated that each section or unit in the irrigation system is balanced to provide uniform and adequate coverage of the areas serviced. Correct deficiencies in the system in accordance with the requirements of Subsection 3.2(G)4.

D. Operational Test: Evaluate the performance of all components of the automatic control system for manual and automatic operation. During the maintenance period, and at least 15 days prior to final inspection, set the controller on automatic operation so that the system will operate satisfactorily during such period. Make all necessary repairs, replacements, and adjustments until all equipment, electrical work, controls, and instrumentation are functioning in accordance with the Contract Documents.

D. Tree Protection Requirements: See sheet L-100.

**1.6 DELIVERY, STORAGE AND HANDLING**

A. Delivery:

1. Delivery of plant material shall begin only when it is ready for plant installation and after the inspections are made and any required soil samples and tests have been reviewed by the PROJECT MANAGER. All materials furnished for the work shall be not less than the approved submittal. Upon delivery, CONTRACTOR shall tag one plant of each variety for identifying purposes.
2. Notify the ENGINEER of a scheduled delivery a minimum of 48 hours in advance so the plant materials may be inspected upon arrival at the jobsite. All plant material judged by the ENGINEER at the time of delivery as unacceptable shall be removed immediately from the jobsite by the CONTRACTOR.
3. Protect plants during delivery against desiccation of leaves.
4. Deliver fertilizer to the jobsite in the original and unopened containers bearing manufacturer's guarantee chemical analysis, name, trademark or trade name in conformance with Federal and Local law. In lieu of containers, fertilizer may be furnished in bulk and a certificate indicating the above information shall accompany each delivery.

B. Storage:

1. Keep fertilizer in dry storage away from contaminants. Loose fertilizers and soil amendments shall be kept covered with a tarp.
2. Store plants not installed on the day of arrival at the jobsite as follows:
  - a. Outside storage to be protected from wind.
  - b. Keep plants in containers in a moist condition until planted by watering with fine mist spray.



g. Maximum total permissible pollutant concentrations in amendment in parts per million on a dry weight basis:

Arsenic	20	Copper	150	Selenium	50
Cadmium	15	Lead	200	Silver	10
Chromium	300	Mercury	10	Vanadium	50
Cobalt	50	Molybdenum	60	Zinc	300
Nickel	100				

3. Water soil after spreading of fertilizer and/or soil conditioning materials and allow it to settle to provide a stable surface. After the soil has dried out to a workable condition, regrade, rake and smooth to the required grades and contours, eliminating any erosion scars. Finished surfaces shall be clean and suitable for planting.
4. Finish grading shall ensure proper drainage of site. Surface drainage shall be away from all building foundations at a minimum of 2% or in accordance grades shown on Contract Drawings.
5. Turf Areas: Finish grading of turf areas shall take place after the soil has dried out to a workable condition following the soil preparation operations. The soil shall be remodeled and smoothed to the required grades and contours, then rolled in two directions at right angles with a water ballast roller weighing 200 to 300 pounds maximum. Any resulting irregularities in the grade after the initial rolling shall be re-raked, cut or filled, then re-rolled until the grade is free from irregularities. No trucks, tractors or other heavy objects shall be taken over the areas at any time. The final finish grade shall be smooth, uniform, without abrupt changes in grade, within one-tenth of a foot of the grades shown on the plan. No turf areas shall exceed 5:1 slope. Final grade must be approved by the ENGINEER or BCA Inspector prior to seeding or sodding. (801-2.3).

**3.4 OPERATING MANUALS AND EQUIPMENT**

A. Furnish the City with 2 bound copies of operating and maintenance manuals for all irrigation system equipment such as valves, heads, etc.

B. Explain in detail all irrigation equipment operations, watering schedule and maintenance procedures to the City personnel as directed by the Project Manager before completion of the project.

C. Provide the City with a reduced legible copy of the "As-Installed" Irrigation Plan hermetically sealed in a plastic cover to be affixed inside the controller cover.

B. Storage:

1. Keep fertilizer in dry storage away from contaminants. Loose fertilizers and soil amendments shall be kept covered with a tarp.
2. Store plants not installed on the day of arrival at the jobsite as follows:
  - a. Outside storage to be protected from wind.
  - b. Keep plants in containers in a moist condition until planted by watering with fine mist spray.

**PART THREE - EXECUTION**

**3.1 GENERAL**

A. The Landscape work shall not be performed at any time when it may be subject to damage by climatic conditions.

B. In case of conflict between the plant schedule totals and total plant count of the contract documents, the CONTRACTOR shall provide the higher number of plants.

C. Delivery of material shall begin only when it is ready for the work and after the inspections are made and the required samples and tests have been reviewed by the ENGINEER. All materials furnished for the work shall be not less than the reviewed sample.

D. The CONTRACTOR shall abide by the Tree Preservation Guidelines Sheet L100 for all trees indicated to remain.

**3.2 SURFACE CONDITIONS**

Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until detrimental conditions are corrected.

**3.3 WEED ABATEMENT**

A. General: Unless specified otherwise, weed abatement shall apply to all planting areas. The abatement operation shall commence before planting but only after removals, grading, landscape construction, installation of irrigation system, soil preparation, and fine grading of planting areas have been completed.

B. All herbicides for weed control shall be applied with a photosensitive dye which will produce a contrasting color when sprayed upon the ground. The dye shall be applied in a manner so as not to leave any stain upon finished surfaces.

C. The following precautions shall be observed in handling and applying herbicides:

1. Before applying, the CONTRACTOR shall read and understand all instructions provided by the manufacturer.
2. Herbicide product shall not be used when winds are gusty or in excess of 8 miles per hour, or when any other conditions exist which would result in drift. DO NOT USE any combinations of pressure and nozzle type or adjustment that result in misting.
3. Do not apply during rain, or if rain is forecast within twelve hours. If rain occurs within a twelve-hour period after application, material must be reapplied after application area has sufficiently dried out.
4. CONTRACTOR shall observe extreme care not to allow spray to contact plant material designated to remain, or in adjacent areas. Use cardboard, plywood, or other appropriate material to shield plant materials outside of the treatment area from overspray.
5. Do not apply to bare ground.

**11. TURF**

**PART ONE - GENERAL**

**1.1 RELATED SECTIONS**

A. Turf Grid: For turf to be installed with a turf grid, refer to TURF GRID SYSTEM Section, unless otherwise noted.

**1.2 DESCRIPTION**

Work Included:

All labor, materials, equipment, and tools necessary to provide and execute: soil preparation and amendments; planting of new sod; all required testing and inspections; maintenance and establishment of new landscape plantings as indicated on the Contract Drawings, specified herein and as needed for complete and proper installation and maintenance.

**1.3 SUBMITTALS**

A. The CONTRACTOR shall make all required materials submittals in accordance with Section 1 of these Landscape Construction Notes.

B. The CONTRACTOR shall make substitution submittals in accordance with Section 1 of these Landscape Construction Notes.

C. Submit copies of the following:

1. Complete list of landscape plant materials soil amendments, fertilizers, herbicides, and miscellaneous hardware complete with descriptions and/or photographs and manufacturer's literature. Clearly mark or underline proposed items.

**1.4 QUALITY ASSURANCE**

Codes and Regulations: CONTRACTOR to obtain and pay for all required permits. Deliver all permits and submit certifications of compliance to the ENGINEER.

**1.5 GENERAL REQUIREMENTS**

A. Required Approvals by the ENGINEER: No work included in this Section shall be commenced until the following are completed and approved:

1. All work on irrigation system prior to turf installation.
2. All reviews on required submittals and re-submittals requested by the ENGINEER for materials included in this section.

B. Inspection: All work and materials are subject to inspection and approval by the Bureau of Contract Administration (BCA) Inspector and the PROJECT MANAGER. Any work done without proper inspection will be subject to rejection per Section 2-11 of the Standard Specifications for Public Works Construction. The CONTRACTOR shall notify the Bureau of Contract Administration (BCA) Inspector and PROJECT MANAGER three (3) days prior to requested inspection of the following for approvals:

1. For all finish grades in planting areas following all weed/pest control, soil fertilizing and conditioning, prior to landscape container planting, and after rolling in turf areas.
2. All completed landscape planting and irrigation work for approval to begin the plant maintenance and plant establishment period.

C. Existing Plant Materials: Protect all existing plant materials, not designated for removal or modification, in place against damage resulting from work of this Contract. Perform any removal and/or trimming only on approval or instructions from the ENGINEER or in accordance with applicable provisions noted or specified on the Contract Drawings. CONTRACTOR shall replace all damaged existing plant material with like type and size material. If an acceptable replacement is not available, CONTRACTOR shall pay damages to the CITY for the value of the damaged tree as assessed by the tree value formula in the ISA Guide for Establishing Value of Trees and Other Plants.

**PART TWO - PRODUCTS**

**2.1 MATERIALS**

A. Topsoil: The type and thickness of topsoil shall be as shown on the plans. If not shown, the topsoil shall be the existing class "C" on-site topsoil and amended as indicated.

B. Fertilizers and Conditioning Materials: Comply with the applicable requirements of the State Agricultural Code. All fertilizing materials shall be packaged, first grade, commercial quality products identified by source, type of material, weight and manufacturer's guaranteed analysis. Fertilizing material shall not contain toxic ingredients or fillers in quantities harmful to human, animal, or plant life.

- (1) Agricultural Gypsum: Hydrated calcium sulfate product containing 23 percent calcium and 18 percent sulfur with a guaranteed analysis of 84 percent calcium sulfate.
- (2) General Purpose Fertilizer: Shall be Gro-Power Plus fertilizer, having a minimum analysis of 5-3-1 (N-P-K) derived from ammonium phosphate, urea, sulfate of potash, compost and sulfides and oxides of iron, manganese and zinc, with 1.00% Alkyl Naphthalene Sodium Sulfonate soil penetrant as manufactured by Gro-Power Inc., 5065 Telephone Avenue, Chino, CA 91710 (909) 393-3744, or an approved equal. <https://www.gropower.com>
- (3) Non-Selective Herbicide: Shall be Finale™, by BASF, or an approved equal. All herbicides, when required, shall be specified and applied by a licensed Pest Control Advisor in a manner consistent with the manufacturer's product labelling. Prior to application, CONTRACTOR shall submit proposed herbicide and a diagram showing the area of application for approval to the PROJECT MANAGER.
- (4) Pre-Emergent Herbicide: Shall be Specticle G Pre Emergent Granular Herbicide, by Bayer Environmental Sciences, or an approved equal applied at the rate of 2.3 lb./1000 sf. All pre-emergent herbicides, when required, shall be specified and applied by a licensed Pest Control Advisor per the manufacturer's recommendations.
- (5) Granular Humic Acid Soil Conditioner: Shall be LIVE EARTH HUMATE SOIL CONDITIONER [PLUS GYPSUM] or Tri-C Humate [Tri-C Humate Plus with Gypsum] or approved equal. Contact Todd Burns, Live Earth Products, Inc. (661) 978-7307 for availability, or TRI-C Organics Inc., (800) 590-3301 <https://www.tricorganics.com>, or an approved equal. Apply per manufacturer's instructions.
- (6) Soil Penetrant: Shall be "Ground Breaker" by Green As it Gets, Inc. or approved equal. Soil penetrant shall contain organic yucca and kelp extracts. Soil penetrant MAY NOT contain alcohol. Apply soil penetrant per manufacturer's instructions. Contact: Green As It Gets Inc., 300 Morning Drive, Bakersfield, CA 93306 Phone: 1-800-476-0034. <https://www.greenasitgets.com>
- (7) Organic Soil Amendment: "Type 1" organic soil amendment shall be a relatively dry and friable fine-textured organic composite that is well-composted and nitrogen stabilized, derived from composted greenwaste or processed wood products, and free of foreign matter including animal waste and any viable plant, tree or weed seed. 99% of material shall pass through a 1/2" screen. CONTRACTOR shall submit a sample of the organic soil amendment to the PROJECT MANAGER for approval prior to installation.

All Organic Soil Amendment shall conform with the following criteria:

- a. The pH of the material shall be between 6 to 7.5.
- b. Salinity: material shall have a maximum saturation extract conductivity of 2.50 millisiemens per centimeter.
- c. Boron content of the saturated extract shall be less than 1.0 parts per million.
- d. Sludge-based or animal waste materials are not allowed.
- e. Carbon:Nitrogen ratio is less than 25:1.
- f. All compost shall be aerobic without malodorous presence of decomposition products.

**GRADING AND SITE PREPARATION:**

A. Rough Grading:

Earthwork and Topsoil Placement: Shall include excavation and backfilling for the irrigation system and the preparation for the spreading, densification, cultivation and raking of topsoil.

B. Topsoil Preparation and Amendment:

1. After completion of **all necessary trenching and backfill** for electrical, irrigation, or drainage piping and conduit, bring planting areas to approximate finish grade, including construction of landscape mounds, before performing soil amendment. CONTRACTOR shall account for the amount of fertilizer and soil amendments to determine the appropriate grade.
2. Turf Areas: For all TURF planting areas **outside of tree protection zones**, Class "C" on-site ("native") topsoil shall be scarified and cultivated to a uniform, finely divided condition to a depth of 12 inches. Soil shall not be worked when it is so wet as to cause excessive compaction to cause the formation of large clods; or so dry as to create excessive dust. All soil amendments shall then be broadcast evenly at the rate as specified below (or per the recommendations of the approved agricultural suitability and fertility analysis if directed by the PROJECT MANAGER), and then thoroughly and uniformly incorporated to the depth of 12 inches. Prior to planting, the top 3 inches of all planting areas (including slopes) shall be free of weeds, stones and other deleterious matter 1-inch diameter and larger.
  - a. All turf planting areas shall receive the following soil amendments per 1,000 square feet:
 

4 cubic yards, Type I organic soil amendment
15 lbs. Agricultural Gypsum
50 lbs. Gro-Power Plus fertilizer
  - b. Topsoil shall be restored to a smooth finish grade after amendment process is complete and irrigated thoroughly to activate amendments and fertilizers.
3. For all planting areas **inside of tree protection zones**, the Class "C" on-site ("native") topsoil shall be scarified to a depth of 1 inch, taking care not to damage surface roots.
  - a. After scarification, apply "GROUND BREAKER" soil penetrant to all planting areas at a rate of 1 gallon per 1,000 square feet per manufacturer's instructions.
  - b. 12 hours minimum after applying soil penetrant, all planting areas shall receive the following soil amendment per 1,000 square feet:
    - 20 lb. GRANULAR HUMIC ACID SOIL CONDITIONER
  - c. Soil amendment shall be evenly broadcast on the surface and uniformly cultivated into the top 1" of the soil and thoroughly irrigated. Soil shall not be worked when it is so wet as to cause excessive compaction or to cause the formation of large clods; or so dry as to create excessive dust. Prior to planting, the top 3 inches of soil (including slopes) shall be free of weeds, stones and other deleterious matter 1-inch diameter and larger.
4. CONTRACTOR shall furnish the CITY Inspector with delivery tickets to verify the source, kind and quantities delivered and applied. Furnish PROJECT MANAGER duplicate copies of the material invoices as required in Subsection 1.3 (C).

C. Finish Grading:

1. Make finish grade smooth, uniform and free of abrupt grade changes and depressions to insure proper surface drainage.
2. Finish grade below adjacent paving, curbs or headers shall be 3/4 inch in sodded lawn areas.

D. Herbicide Application: Pesticides must be applied by a licensed Pest Control Applicator in accordance with the requirements of the California Food and Agricultural Code and specified herein. The CONTRACTOR shall abide by all laws and codes governing weed abatement operations including but not limited to CAL-OSHA requirements and The Healthy School Act of 2000 (AB2260). Prior to herbicide application CONTRACTOR shall:

1. Notify the PROJECT MANAGER a minimum of 72 hours in advance of each application of pesticide/herbicide and shall indicate the hours during which the application will occur. No applications shall be made on Saturdays, Sundays, or legal holidays, unless otherwise prior approval by the PROJECT MANAGER in writing.
2. Notify the Pest Management Supervisor of the RAP Forestry Division at (213) 485-4826. Do not add other products to any herbicide mix, including spreader, stickers, or surfactants, unless required by the label directions and approved by the RAP Pest Management Supervisor.
3. Submit to the BCA Inspector and to RAP Forestry a "Pest Control Recommendation Form" prepared by a licensed Pest Control Advisor, and a provide completed and accurate SDS (Safety Data Sheet) to be kept at the site of application. The area of application shall be posted as such and barricaded for public safety and information (site construction fencing is deemed adequate for this purpose when present).
4. Any questions regarding pesticide application and procedures at Recreation and Parks facilities shall be directed to the PROJECT MANAGER/BCA Inspector and the RAP Forestry group, Vegetative Management at (213) 485-4826.

E. "Grow and Kill" method: The CONTRACTOR shall adhere to the following steps:

1. Clear and grub the surface of the designated planting area by mechanical means or by hand, removing all surface vegetation (excepting any trees, shrubs or turf designated to remain per plans and notes), rocks, debris, etc. Do not disturb the roots or compact soil around any existing vegetation to remain or within designated Tree Protection Zones, and do not remove any topsoil during clearing work.
2. "Grow Period": Water all planting areas daily or as needed to keep soil evenly moist and promote weed germination and growth for a period of a minimum of **two weeks**. If, in the opinion of the ENGINEER the "Grow Period" irrigation was insufficient to achieve adequate germination, the "Grow Period" may be extended in minimum 7-day intervals at no additional expense to the CITY.
3. "Kill Period": At the conclusion of the grow period and approval by the ENGINEER, treat all emergent weeds within the planting area with approved herbicide per the submitted and approved "Pest Control Recommendation Form" following the manufacturer's instructions and labelling - *taking care to protect all trees, shrubs, turf etc. designated to remain*. If nutsedge (nutgrass) is determined to be present in any of the planting areas by the ENGINEER during the "Grow Period", CONTRACTOR will be required to apply a separate selective herbicide manufactured specifically for the control of nutsedge at no additional cost to the CITY until nutsedge is completely eradicated.
4. After spraying, do not water or otherwise disturb treated areas for a minimum period of two (2) weeks.
5. After the two-week kill period, remove all dead vegetation. If any living plants are observed, the entire plant, including roots, shall be removed by hand, minimizing physical disturbance of the soil.

F. Herbicide Damage: New and/or existing plants which in the opinion of the ENGINEER have been damaged, disfigured, or stunted by the application of herbicide shall be replaced in kind (type, size, and age) by the CONTRACTOR at their expense.

**ENGINEERING**  
CITY OF LOS ANGELES

**BUREAU OF ENGINEERING**

NO. \_\_\_\_\_ DATE \_\_\_\_\_

REVISION DESCRIPTION \_\_\_\_\_

INDEX NO. **243**

**MF-300494**

**DEPARTMENT OF PUBLIC WORKS**

**GARY LEE MOORE, PE, ENV SP** CITY ENGINEER

ARCHITECTURAL DIVISION

LANDSCAPE ARCHITECT: GREG MOESER LIC. NO.: 6280

DESIGNED BY: GREG MOESER

DRAWN BY: GREG MOESER

CHECKED BY: RICHARD FISHER, P.E.

APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL

DATE: 04/01/21

DATE: 04/01/21

DATE: 04/01/21

DATE: 04/01/21

DATE: 04/20/21

**CITY OF LOS ANGELES**

CLIENT: DEPARTMENT OF RECREATION & PARKS  
GENERAL MANAGER: MICHAEL A. SHULL

SHEET TITLE: LANDSCAPE CONSTRUCTION NOTES  
SHEET 8

PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM  
PARKING LOT DEVELOPMENT

ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

WORK ORDER NO. **E170515D**

PLAN FILE NO. \_\_\_\_\_

DRAWING NO. **L008**

SHEET 11 OF 25 SHEETS

PLOTTED: 8/9/2021 11:54 AM

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

G. Weed Suppression (Non-Herbicide Weed Removal: shall apply to all turf and planting areas. The suppression operation shall be commenced only after removals, grading, hardscape construction, installation of irrigation system, soil preparation, and fine grading of turf and planting areas have been completed. The CONTRACTOR shall thoroughly water all turf and planting areas for a minimum period of two weeks prior to commencing removal. CONTRACTOR shall completely remove from the site all unwanted vegetation and weeds including underground roots and stolons by hand or mechanical means. All removed vegetation shall be properly disposed of off-site. Watering and removal process shall be repeated again 2 weeks after completion of initial removal. CONTRACTOR shall maintain the entire work area weed-free on a weekly basis from completion of weed removal process until Final Acceptance.

3.4 PLANTING

A. General: All plant materials, including plants previously approved at the nursery, shall be inspected by the ENGINEER prior to planting. The CONTRACTOR shall be responsible for the condition of all plants, planted or otherwise, until final acceptance by the CITY and termination of maintenance and establishment period. CONTRACTOR shall be obligated to honor all requirements of warranty as indicated herein.

- 1. Perform planting with materials and equipment according to procedures favorable to the optimum growth of the plant. Do not plant during high wind conditions.
2. Except as noted for specimen planting, do not start planting operations until the completion of weed suppression and completion and acceptance of the irrigation system.

B. Protection and Storage:

- 1. Keep all plant materials delivered to the jobsite in a healthy condition for planting.
2. Do not allow plants to dry out or suffer physical damage from other construction activities. Protect from heavy winds.

C. Turf Planting: Soil amendment, irrigation installation, weed abatement, and fine grading shall be completed and approved before sod installation.

- 1. Sod Planting: The type of sod and the area to be sodded shall be in accordance with the Contract Drawings. Sod shall be machine cut to between 3/8" and 5/8" thick, not including top growth or thatch.
a. Site shall be fine graded to the specified thickness of the sod below finish grades. Soil conditioning and fine grading shall be completed before sodding. No heavy equipment shall operate over the site after grading is completed.
b. The soil shall be moist but not wet when sod is laid. Sod shall be laid with closely fitted joints, and the ends of the strips shall be staggered forming a running bond pattern. Openings shall be plugged with sod or topsoil. Within 2 hours after installing sod and before rolling, the sod shall be lightly irrigated. All seams and joints shall then be rolled with a 200-300 lb. water ballast roller until the sod is well bonded to the soil below.
c. The sodded areas shall then be watered thoroughly to penetrate the subsoil at least 8 inches. Watering shall be repeated as necessary to keep the sod moist until rooted into the subgrade. Sodded areas shall be protected against all traffic until the sod is well established.
2. Turf Repair: All trenches shall be fully compacted, and the grade brought flush with the adjacent undisturbed finish grade. This repair shall include areas of irrigation or other piping trenches, conduit trenches or where vehicles or equipment has damaged the existing turf. Turf repair shall be accomplished using existing sod shall be carefully cut, removed, and reused to re-sod trenches after backfilling and compaction, or new. CONTRACTOR shall use sod to match existing turf type in areas being repaired unless directed otherwise by the ENGINEER.

3.5 MAINTENANCE AND PLANT ESTABLISHMENT

A. General Maintenance: Maintain all areas of work on a continuous basis as they are completed during the progress of the work and during the plant establishment period.

- 1. CONTRACTOR shall maintain the entire area of work until final acceptance of the Contract by the CITY. Maintenance activities shall include continuous operations of picking up trash, watering, weeding (including all broadleaf weeds in lawn areas), mowing, rolling, edging, fertilization, spraying & pest control of insects and rodents, reseeded & plant replacement (irrespective of cause), or any other operations necessary to provide normal healthy plant growth.
2. Any malfunctions of, or damage to the irrigation system due to workmanship or materials or as caused by the CONTRACTOR in the execution of his work shall be repaired by the CONTRACTOR within 24 hours at his own expense. The CONTRACTOR is responsible for keeping all plant material sufficiently watered during any irrigation failures.

B. Plant Establishment Period:

- 1. The Plant Establishment Period shall be for a minimum period of 90 days unless extended as described in this section. The Plant Establishment Period shall be started when all planting and irrigation related work has been completed in accordance with the contract documents and approved by the PROJECT MANAGER. CONTRACTOR shall request a review of completed work by the PROJECT MANAGER at the appropriate time to determine if the Plant Establishment period may begin. A field notification will be issued to the CONTRACTOR to establish the effective beginning date of the plant establishment period.
2. The designated plant establishment period is part of the total contract time. The plant establishment period will be extended at fourteen (14) day intervals if, at the end of the plant establishment period, the planting, irrigation and other improvements do not reflect the intent of the plans and specifications. All extensions of the plant establishment period shall be subject to the assessment of liquidated damages, (801-6).
3. All lawns shall be of the grass seed or sod specified and shall be free from all broadleaf weeds. The lawn shall not be allowed to grow higher than three (3) inches and shall be mowed to a 1 1/2" - 2" inch height. The lawn shall be mowed at least weekly during the Plant Establishment Period. All lawn areas shall have 95 percent coverage with bare areas not exceeding three square inches at the end of the Plant Establishment Period. 60 days after commencement of Plant Establishment Period, CONTRACTOR shall apply a slow release 38-0-0 granular fertilizer at a rate of 15 pounds per 1000 sq. ft. (or per manufacturer's instructions) to all lawn areas and irrigate immediately afterwards. The fertilizer shall be applied in the presence of the BCA Inspector.

- 4. During the plant establishment period, all damage caused by erosion shall be repaired by the CONTRACTOR at his own expense within three (3) working days.
5. During the plant establishment period, the irrigation system shall be operated in the automatic mode, unless otherwise permitted by the ENGINEER. No hand watering or manual station operations should be performed without notifying the ENGINEER. CONTRACTOR shall be responsible for setting an appropriate watering schedule for all irrigation zones, such as to provide adequate watering for each plant type, but not so much as to create any wasteful or unhealthful growing conditions. CONTRACTOR shall be responsible for modifying the watering schedule as needed to accommodate changing weather conditions.

C. Final Inspection/Final Acceptance:

- 1. Upon completion of the plant establishment period, a final inspection for acceptance will be performed by the BCA Inspector, PROJECT MANAGER and ENGINEER and authorized RAP representative. The CONTRACTOR shall request inspection at least three (3) working days prior to the anticipated date. For this inspection, the site must be thoroughly cleared of all debris and excess material removed. If work fails to pass final inspection, any subsequent inspection must be rescheduled as per above, and time will be charged to the CONTRACTOR.
2. If the plant establishment period is satisfactorily completed ahead of other work included in the Contract, the plants establishment shall be extended and shall be the responsibility of the CONTRACTOR until all other work has been completed and accepted by the CITY.

3.6 GUARANTEE

- A. General: All shrubs and ground covers shall be guaranteed for a period of ninety (90) days from the end of the Plant Establishment Period. CONTRACTOR shall provide a written guarantee for the above materials as a part of the final close out package.
B. Deficiencies: Should any deficiencies develop within the specified guarantee period, CONTRACTOR shall correct such deficiencies to the full satisfaction of the ENGINEER without added expense to the CITY. All replacement plants shall be subject to a new guarantee for a period as described herein above.



Project Status: BID SET
PROJECT ISSUE DATE: 08/09/2021

WORK ORDER NO. E170515D
PLAN FILE NO.
DRAWING NO. L009
SHEET 12 OF 25 SHEETS

CLIENT: DEPARTMENT OF RECREATION & PARKS
GENERAL MANAGER: MICHAEL A. SHULL
SHEET TITLE: LANDSCAPE CONSTRUCTION NOTES
SHEET 9
PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM
PARKING LOT DEVELOPMENT
ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

ARCHITECTURAL DIVISION
LANDSCAPE ARCHITECT: GREG MOESSER
DESIGNED BY: GREG MOESSER
DRAWN BY: GREG MOESSER
CHECKED BY: RICHARD FISHER, P.E.
APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL
DATE: 04/01/21
LIC. NO.: 6280

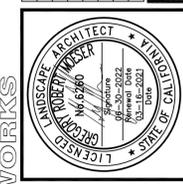
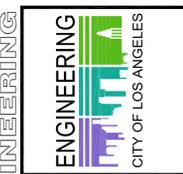


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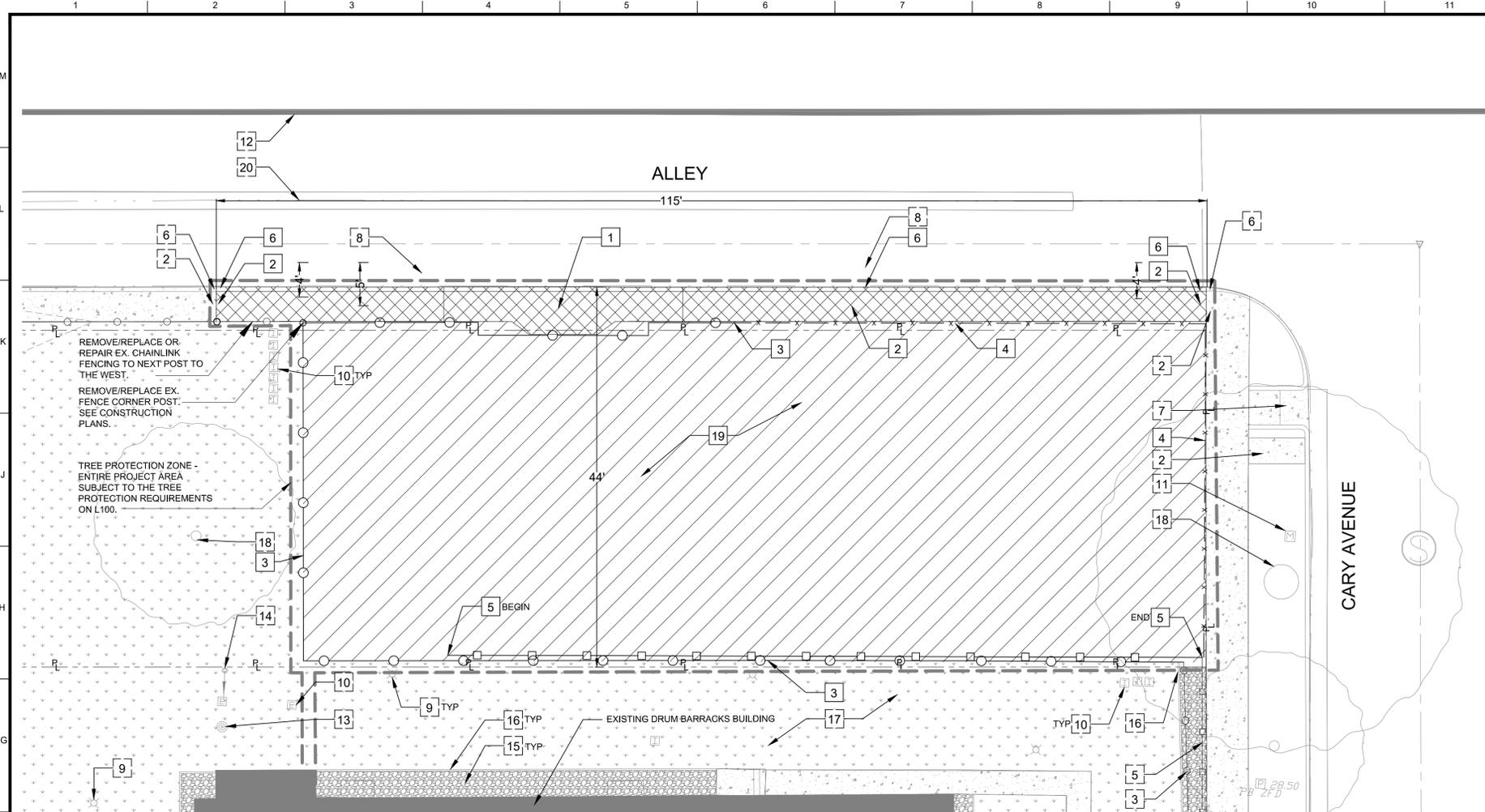


DEPARTMENT OF PUBLIC WORKS
BUREAU OF ENGINEERING
CITY OF LOS ANGELES



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THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



**DEMOLITION LEGEND:**

- EXISTING CONCRETE TO REMAIN. PROTECT IN PLACE.
- REMOVE EXISTING CONCRETE
- CLEAR AND GRUB ALL SURFACE PLANTING, WEEDS, DEBRIS, ETC. IN THEIR ENTIRETY.
- STONE MULCH TO REMAIN. PROTECT IN PLACE.
- LIMIT OF WORK (OFFSET FOR CLARITY) TOTAL WORK AREA = 4,703 SF
- PROPERTY LINE
- 6' CHAINLINK FENCE TO BE REMOVED AND PROPERLY DISPOSED OFFSITE.
- 6' CHAINLINK FENCE TO REMAIN. PROTECT IN PLACE.
- 4' CHAINLINK FENCE TO BE REMOVED AND PROPERLY DISPOSED OFFSITE.
- 4' WOOD FENCE TO BE REMOVED. CONTRACTOR MAY REUSE PANELS AS REQUIRED FOR FENCE RECONSTRUCTION AS NOTED ON SHEET L401 WITH APPROVAL OF THE CONSTRUCTION MANAGER/BCA INSPECTOR.
- 4' WOOD FENCE TO REMAIN. PROTECT IN PLACE.

- # REMOVE AND PROPERLY DISPOSE OFF-SITE
- # EXISTING-PROTECT IN PLACE
- 1. CONCRETE DRIVEWAY.
- 2. CONCRETE SIDEWALK.
- 3. 6' CHAINLINK FENCE.
- 4. 4' CHAINLINK FENCE.
- 5. 4' WOOD FENCE.
- 6. CONCRETE CURB.
- 7. CONCRETE CURB RAMP.
- 8. ASPHALT PAVING.
- 9. LIGHT ON CONCRETE BASE.
- 10. IRRIGATION VALVE BOX/ELECTRICAL PULLBOX.
- 11. WATER METER.
- 12. CONCRETE BLOCK WALL.
- 13. ELECTRIC UTILITY POLE.
- 14. GUY WIRE.
- 15. STONE MULCH.
- 16. WOOD HEADER.
- 17. TURF.
- 18. TREE.
- 19. CLEAR AND GRUB ALL SURFACE PLANTING, WEEDS, DEBRIS, ETC. IN THEIR ENTIRETY.
- 20. CONCRETE GUTTER.

**DEMOLITION NOTES:**

1. CONTRACTOR SHALL MEET WITH PROJECT MANAGER TO REVIEW EXISTING ELEMENTS TO BE DEMOLISHED/PROTECTED PRIOR TO COMMENCEMENT OF WORK.
2. ALL REMOVALS SHALL BE PROPERLY DISPOSED OF AT A CITY-APPROVED LOCATION OFF-SITE. DISPOSAL SHALL BE IN ACCORDANCE WITH CODES AND ORDINANCES GOVERNING LOCATIONS AND METHODS OF DISPOSAL.
3. LOCATIONS OF EXISTING EQUIPMENT ARE SHOWN DIAGRAMMATICALLY FOR THE LEGIBILITY OF THE DRAWING. THE CONTRACTOR SHALL VERIFY EXACT LOCATION FROM SITE SURVEY AND IN THE FIELD. CONTRACTOR SHALL IMMEDIATELY BRING TO THE ATTENTION OF THE PROJECT MANAGER ANY CONFLICTS.
4. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT BEFORE START OF CONSTRUCTION (811) AND OBTAIN AN UNDERGROUND SERVICE ALERT INQUIRY I.D. NUMBER BY CALLING 1-800-422-4133. PROVIDE TWO (2) WORKING DAYS AFTER THE I.D. NUMBER IS OBTAINED AND BEFORE THE EXCAVATION WORK IS STARTED SO THAT UTILITY OWNERS CAN BE NOTIFIED.
5. EXISTING UNDERGROUND UTILITIES TO BE PROTECTED IN PLACE UNLESS OTHERWISE SPECIFIED PER PLAN. EXISTING UTILITIES WERE OBTAINED FROM OWNER AND AGENCY RECORDS. THE LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR. CONTRACTOR MUST POTHOLE AND HAND EXCAVATE WHEN COMPLETING ANY SUB-SURFACE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ANY NECESSARY ADJUSTMENTS TO ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION AND SIZE OF ANY UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PREVENT DAMAGE TO ANY UTILITY FACILITIES SHOWN AND ANY OTHER FACILITIES NOT SHOWN ON THESE PLANS.
6. THE CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT CONDITIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
7. ALL EXISTING SITE ELEMENTS (INCLUDING BUT NOT LIMITED TO LIGHTING STANDARDS, TRAFFIC SIGNS, ELECTRICAL PULLBOX, CATCH BASIN, WATER METER, DWP WATER VALVES, POWER POLE & GUY WIRE, IRRIGATION CONTROL BOX, CONCRETE CURBS) NOT INDICATED ON PLAN FOR REMOVAL SHALL BE PROTECTED IN PLACE.
8. EXISTING STRUCTURES AND SUBSTRUCTURES WHICH ARE INDICATED TO BE REMOVED IN THIS CONSTRUCTION DOCUMENTS SHALL BE TOTALLY REMOVED AND DISPOSED OF OFFSITE. UNLESS OTHERWISE INDICATED, EXISTING FACILITIES WHICH ARE DISCOVERED DURING CONSTRUCTION (INCLUDING WALLS, FOOTINGS AND FOUNDATIONS) SHALL BE REPORTED TO AND COORDINATED WITH THE CITY AS TO THEIR REMOVAL. CONTRACTOR WILL NOTIFY THE CITY IN WRITING PRIOR TO COMMENCING THE WORK.
9. ALL COMPONENTS OF ADJACENT IRRIGATION SYSTEMS (VALVES, HEADS, LATERALS, CONTROL WIRING, ETC.) SHALL BE PRESERVED AND RETAINED. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ADJACENT IRRIGATION SYSTEMS AND SHALL REPAIR AT NO COST TO THE CITY.
10. ALL ADJACENT IRRIGATION SYSTEMS SHALL REMAIN OPERABLE DURING ALL PHASES OF CONSTRUCTION, INCLUDING DEMOLITION.
11. SEE IRRIGATION PLAN FOR DISPOSAL OF EXISTING IRRIGATION HEADS AND VALVE BOXES, ETC. PROTECT IN PLACE ALL IRRIGATION SYSTEM COMPONENTS TO REMAIN, TYP.
12. ENTIRE PROJECT AREA IS SUBJECT TO THE REQUIREMENTS LISTED IN THE TREE PROTECTION GUIDELINES. SEE L100.
13. COORDINATE WITH RAP ARBORIST STAFF TO DETERMINE LIMITS OF TREE PROTECTION FENCING. SEE "TREE PROTECTION SPECIFICATIONS" IN THE LANDSCAPE CONSTRUCTION NOTES FOR DETAILED REQUIREMENTS.
14. EXISTING TURF: PROTECT IN PLACE AND REPAIR ANY DAMAGE AS REQUIRED PER LANDSCAPE CONSTRUCTION NOTES.
15. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH CONSTRUCTION MANAGER/RAP STAFF TO LOCATE AND DELINEATE THE CONSTRUCTION STAGING AREA. AFTER COMPLETION OF WORK, THE STAGING AREA SHALL BE RESTORED, BY THE CONTRACTOR, TO ITS ORIGINAL CONDITION AT CONTRACTOR'S OWN EXPENSE.
16. CONTRACTOR SHALL OBTAIN A DEMOLITION PERMIT FOR FORMERLY DEMOLISHED RESIDENCE ON THE SITE AND PAY FOR ALL PERMIT FEES. CONTACT LADBS FOR FEE INFORMATION. CITY WILL PROVIDE STAMPED RTI DEMOLITION PLANS. DEMOLITION POSTING NOTICE AND PRE-INSPECTION HAVE ALREADY BEEN COMPLETED.
17. ALL DEBRIS SHALL BE WET AT TIME OF HANDLING TO PREVENT DUST.



**STORM WATER POLLUTION CONTROL FORM GRN 1**  
(2020 Los Angeles Green Building Code)

**Storm Water Pollution Control Requirements for Construction Activities**  
Minimum Water Quality Protection Requirements for All Construction Projects

The following notes shall be incorporated in the approved set of construction/grading plans and represents the minimum standards of good housekeeping which must be implemented on all construction projects.

Construction means constructing, clearing, grading or excavation that result in soil disturbance. Construction includes structure teardown (demolition). It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility; emergency construction activities required to immediately protect public health and safety; interior remodeling with no outside exposure of construction material or construction waste to storm water; mechanical permit work; or sign permit work. (Order No. 01-182, NPDES Permit No. CAS004001 - Part 5: Definitions)

1. Eroded sediments and pollutants shall be retained on site and shall not be transported from the site via sheet flow, swales, area drains, natural drainage or wind.
2. Stockpiles of earth and other construction-related materials shall be covered and/or protected from being transported from the site by wind or water.
3. Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and shall not contaminate the soil nor the surface waters. All approved toxic storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of properly and shall not be washed into the drainage system.
4. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained on the project site.
5. Excess or waste concrete may not be washed into the public way or any drainage system. Provisions shall be made to retain concrete waste on-site until it can be appropriately disposed of or recycled.
6. Trash and construction-related solid wastes must be deposited into a covered receptacle to prevent contamination of storm water and dispersal by wind.
7. Sediments and other materials shall not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the street/public ways. Accidental depositions must be swept up immediately and may not be washed down by rain or by any other means.
8. Retention basins of sufficient size shall be provided to retain storm water runoff on-site and shall be properly located to collect all tributary site runoff.
9. Where retention of storm water runoff on-site is not feasible due to site constraints, runoff may be conveyed to the street and the storm drain system provided that an approved filtering system is installed and maintained on-site during the construction duration.



**BUREAU OF ENGINEERING**

**ENGINEERING CITY OF LOS ANGELES**

NO. \_\_\_\_\_ DATE \_\_\_\_\_

REVISION DESCRIPTION

INDEX NO. **243**

**MF-300494**

**DEPARTMENT OF PUBLIC WORKS**

**GARY LEE MOORE, PE, ENV SP** CITY ENGINEER

ARCHITECTURAL DIVISION

LANDSCAPE ARCHITECT: GREG MOESER LIC. NO.: 6280

DESIGNED BY: GREG MOESER

DRAWN BY: GREG MOESER

CHECKED BY: RICHARD FISHER (EA)

APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL

DATE: 04/01/21

DATE: 04/01/21

DATE: 04/01/21

DATE: 04/01/21

**CITY OF LOS ANGELES**

CLIENT: DEPARTMENT OF RECREATION & PARKS

GENERAL MANAGER: MICHAEL A. SHULL

SHEET TITLE: **DEMOLITION PLAN**

PROJECT: **DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT**

ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

WORK ORDER NO. **E170515D**

PLAN FILE NO.

DRAWING NO. **L201**

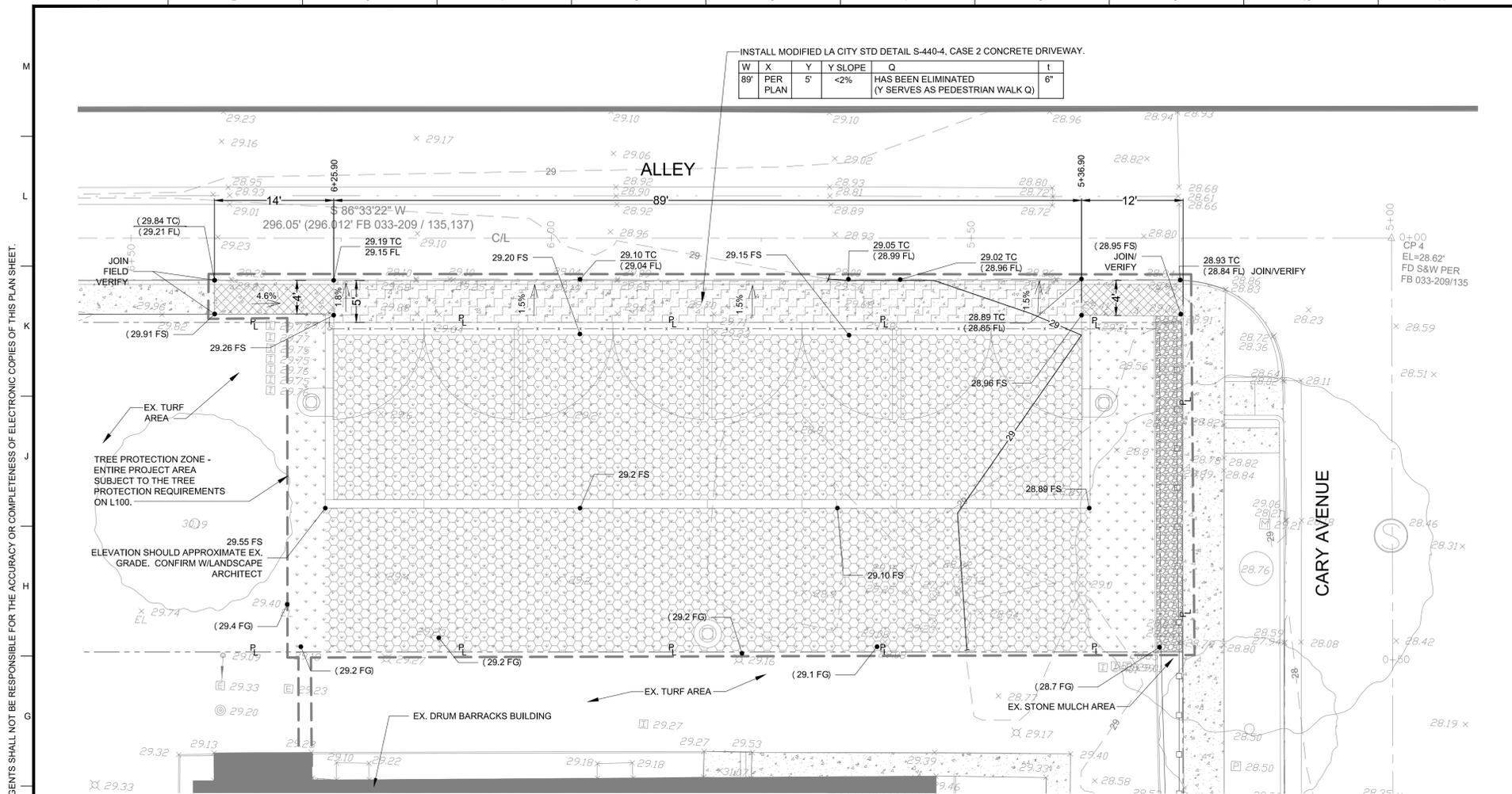
SHEET 14 OF 25

PLOTTED: 8/9/2021 11:48 PM

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

FILE PATH: Q:\IN-HOUSE-DESIGN\DRUM BARRACKS PARKING LOT\DESIGN\LANDSCAPE\WORKING DRAWINGS\L301.DWG

SHEET ISSUE DATE: 08/09/2021 11:49 AM



INSTALL MODIFIED LA CITY STD DETAIL S-440-4, CASE 2 CONCRETE DRIVEWAY.

W	X	Y	Q	t
89'	PER PLAN	5'	<2% HAS BEEN ELIMINATED (Y SERVES AS PEDESTRIAN WALK Q)	6"

### LEGEND

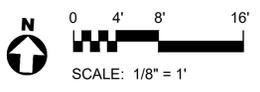
- LIMIT OF WORK (OFFSET FOR CLARITY)
- PROPERTY LINE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- DIRECTION OF SURFACE FLOW
- CONSTRUCT DRIVEWAY PER LA CITY STD DETAIL S-440-4. SEE PLAN NOTES.
- CONSTRUCT CITY SIDEWALK PER CITY STD DETAIL S-444-0.
- EX. CONCRETE. PROTECT IN PLACE.
- TURF GRID BY INVISIBLE STRUCTURES. INSTALL "BALLFIELD MIX" SOD FROM AG SOD OR APPROVED EQUAL. SEE LANDSCAPE CONSTRUCTION NOTES.
- TURF. INSTALL "BALLFIELD MIX" SOD FROM AG SOD OR APPROVED EQUAL. SEE LANDSCAPE CONSTRUCTION NOTES.
- STONE MULCH. INSTALL 3" OF STONE MULCH TO MATCH EXISTING. COMPACT SUBBASE AND MULCH TO 90% COMPACTION. PROVIDE SUBMITTAL FOR APPROVAL.

### ABBREVIATIONS

TC	TOP OF CURB	FL	FLOW LINE
TS	TOP OF SLAB	EX	EXISTING
BC	BOTTOM OF CURB	HP	HIGH POINT
FG	FINISH GRADE	LP	LOW POINT
FS	FINISH SURFACE	PA	PLANTING AREA/MULCH AREA
TW	TOP OF WALL		REFER TO PLANTING PLAN
BW	BOTTOM OF WALL	IE	INVERT ELEVATION
GB	GRADE BREAK	RE	RIM ELEVATION
BOS	BACK OF SIDEWALK	(173.2)	EXISTING GRADE
		x 29.2	EXISTING GRADE

### GRADING NOTES:

- 1) THE CONTRACTOR MUST NOTIFY THE PROJECT MANAGER, BCA INSPECTOR, THE GEOTECHNICAL ENGINEERING DIVISION AT LEAST THREE (3) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY GRADING/CONSTRUCTION OPERATIONS.
- 2) ALL GRADING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE CITY INSPECTOR. THE INSPECTION OF THE WORK AND MATERIALS BY THE BCA INSPECTOR DOES NOT DENOTE ACCEPTANCE NOR RELIEVE THE CONTRACTOR OF HIS/HER RESPONSIBILITIES TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL NOT BEGIN THE PAVING OPERATION UNTIL THE SUBGRADE HAS BEEN APPROVED BY THE GRADING INSPECTOR AND GEOTECHNICAL ENGINEER.
- 3) CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE DRAINAGE ON SURFACE FLOW AREAS AT .75% (MIN.) UNLESS OTHERWISE INDICATED.
- 4) CONTRACTOR SHALL ASSUME STRAIGHT GRADE BETWEEN ELEVATION POINTS LISTED FOR FINISH GRADE OF NEW CONSTRUCTION UNLESS INSTRUCTED OTHERWISE.
- 5) FINISH GRADE OF PLANTING AREAS SHALL BE WITHIN A TOLERANCE OF .04 FEET (1/2") OF GRADING PLAN AS SHOWN. AREAS SHALL BE GENERALLY SMOOTH AND FREE OF RIDGES AND DEPRESSIONS SO AS TO FACILITATE COMPLETE DRAINAGE.
- 6) DO NOT EXCEED A SLOPE OF 4.9% ON PROJECT WALKS. CROSS SLOPE 2% MAX.
- 7) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL DURING CONSTRUCTION AND MAINTENANCE PERIOD. REFER TO LANDSCAPE CONSTRUCTION NOTES.
- 8) THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. APPROVAL OF THESE PLANS BY THE CITY DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION OR THE EXISTENCE OR NONEXISTENCE OF ANY UTILITY AND/OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEANS TO PROTECT THE UTILITIES OF RECORD OR NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
- 9) THE GEOTECHNICAL REPORT SHALL BE MADE AS PART OF THIS PLAN. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND CONSTRUCTION SHALL BE PERFORMED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER.
- 10) ALL FILL OR BACKFILL SHALL BE COMPACTED AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL STORM DRAIN PIPES MUST BE BEDDED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT STORM DRAIN BACKFILL FOR ALL FACILITIES SHALL BE PLACED AND COMPACTED UNDER INSPECTION BY THE CITY OR PROJECT GEOTECHNICAL ENGINEER.
- 11) OVEREXCAVATION IS REQUIRED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT DATED OCTOBER 22, 2020.
- 12) ALL SURVEYING REQUIRED FOR VERTICAL AND HORIZONTAL ALIGNMENT MUST BE PROVIDED BY THE CONTRACTOR BY A LICENSED SURVEYOR AND SUFFICIENT REFERENCE STAKING MUST BE IN ACCORDANCE WITH THE REQUEST OF THE INSPECTOR.
- 13) CONTRACTOR SHALL OBTAIN GRADING PERMIT, NEW NON-BUILDING USE OF LAND PERMIT, AND A PERMIT AND PAY FOR ALL PERMIT FEES. CONTACT LADBS FOR FEE INFORMATION. CITY TO PROVIDE STAMPED RTI PLANS FOR GRADING AND NEW NON-BUILDING USE OF LAND PERMITS.



### ESTIMATED EARTHWORK QUANTITY

ESTIMATED CUT = 104 CY (EXCAVATION FOR TURF GRID)  
 ESTIMATED FILL = 0 CY



BUREAU OF ENGINEERING

NO.	REVISION DESCRIPTION	DATE	BY

DEPARTMENT OF PUBLIC WORKS

GARY LEE MOORE, PE, ENV SP CITY ENGINEER  
 ARCHITECTURAL DIVISION

LANDSCAPE ARCHITECT: GREG MOESER  
 DESIGNED BY: GREG MOESER  
 DRAWN BY: GREG MOESER  
 CHECKED BY: RICHARD FISHER (EA)  
 APPROVED BY: STEVEN FERCE, AIA, PRINCIPAL

DATE: 04/01/21  
 LIC. NO.: 6280  
 04/01/21  
 04/01/21  
 04/01/21  
 04/01/21

PROJECT STATUS: BID SET  
 PROJECT ISSUE DATE: 08/09/2021

SHEET TITLE: GRADING PLAN  
 PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT  
 ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

WORK ORDER NO.  
 E170515D  
 PLAN FILE NO.

DRAWING NO.  
**L301**  
 SHEET 15 OF 25

CITY OF LOS ANGELES

CLIENT: DEPARTMENT OF RECREATION & PARKS  
 GENERAL MANAGER: MICHAEL A. SHULL

PROJECT STATUS: BID SET  
 PROJECT ISSUE DATE: 08/09/2021

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CITY OF LOS ANGELES

CLIENT: DEPARTMENT OF RECREATION & PARKS  
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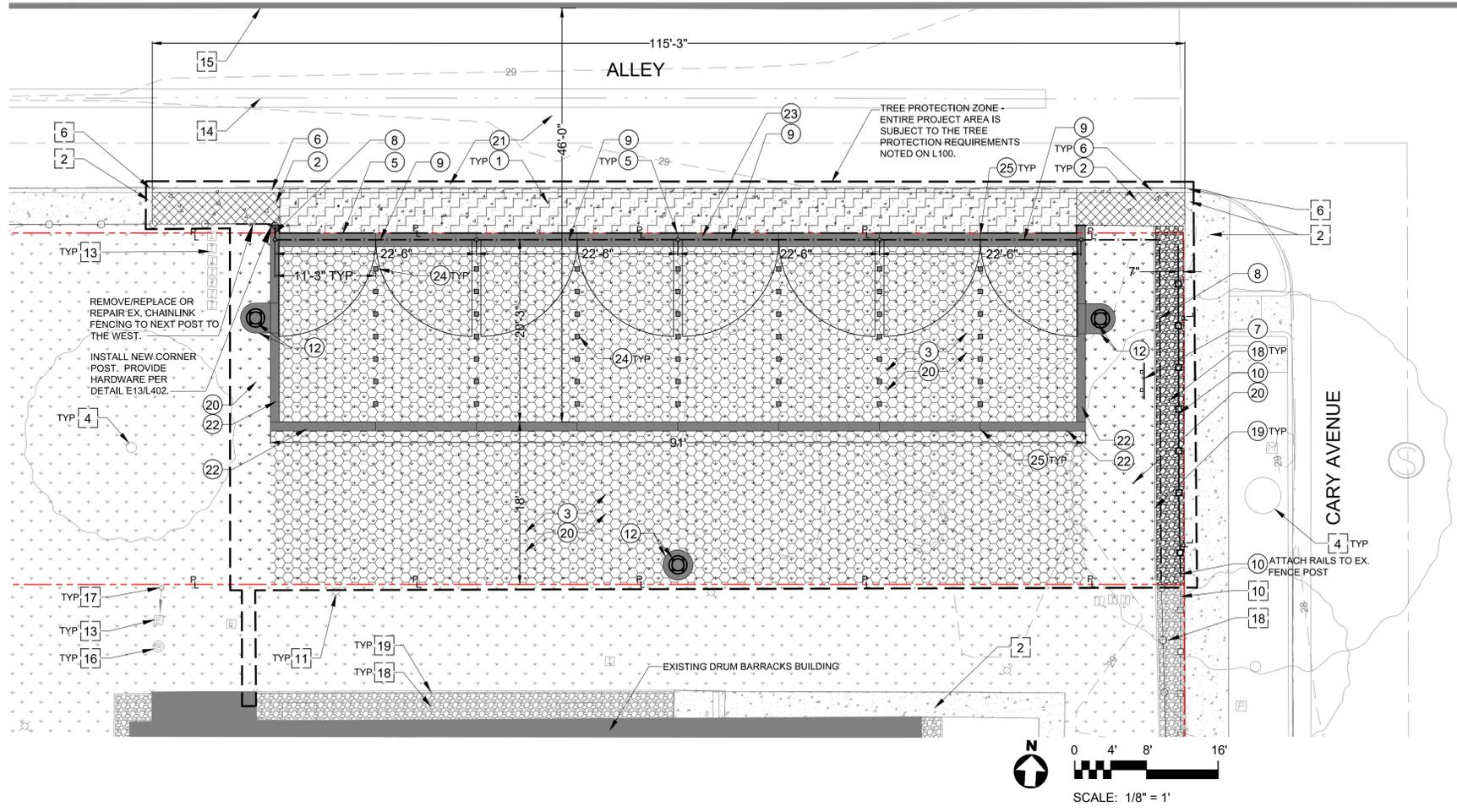
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**KEYNOTES:**

- # EXISTING-PROTECT IN PLACE (C) CONSTRUCT
- 1. CONCRETE DRIVEWAY. SEE L301.
- 2. CONCRETE SIDEWALK. LA CITY STD DETAIL S-444-0.
- 3. TURF GRID BY INVISIBLE STRUCTURES. INSTALL PER DETAIL E9/L402. INSTALL WITH "BALLFIELD MIX" SOD FROM AG SOD OR APPROVED EQUAL. SEE LANDSCAPE CONSTRUCTION NOTES.
- 4. EXISTING TREE TO REMAIN. PROTECT IN PLACE.
- 5. DOWELED JOINT. INSTALL 18" #3 REBAR DOWELS 24" O.C. BETWEEN HEADER AND DRIVEWAY.
- 6. CONCRETE CURB. LA CITY STD DETAIL S-410-2, TYPE A CURB.
- 7. CONSTRUCTION SIGN. INSTALL PER DETAIL J5/L402.
- 8. 6" CHAINLINK FENCE. INSTALL PER DETAIL E13/L402.
- 9. 6" CHAINLINK GATE. INSTALL PER DETAIL A13/L402.
- 10. 4" WOOD PICKET FENCE. INSTALL PER DETAIL J9/L403.
- 11. EXISTING LIGHT ON CONCRETE BASE. PROTECT IN PLACE.
- 12. LIGHT FIXTURE/POLE WITH CONCRETE BASE AND CONCRETE HEADER. INSTALL PER DETAIL A1/L402 AND ELECTRICAL PLANS.
- 13. EXISTING IRRIGATION VALVE BOX/ELECTRICAL PULLBOX. REFER TO ELECTRICAL/IRRIGATION PLANS.
- 14. EXISTING GUTTER TO REMAIN. PROTECT IN PLACE.
- 15. EXISTING CONCRETE BLOCK WALL. PROTECT IN PLACE.
- 16. EXISTING ELECTRIC UTILITY POLE. PROTECT IN PLACE.
- 17. EXISTING GUY WIRE TO REMAIN. PROTECT IN PLACE.
- 18. STONE MULCH. INSTALL 3" OF STONE MULCH TO MATCH EXISTING. COMPACT SUBBASE AND MULCH TO 90% COMPACTION. PROVIDE SUBMITTAL FOR APPROVAL.
- 19. PLASTIC WOOD HEADER. INSTALL PER DETAIL A9/L402.
- 20. TURF. INSTALL "BALLFIELD MIX" SOD FROM AG SOD OR APPROVED EQUAL. SEE LANDSCAPE CONSTRUCTION NOTES.
- 21. ASPHALT PAVING TO REMAIN. PROTECT IN PLACE. REPAIR AS REQUIRED FOR CONSTRUCTION OF DRIVEWAY PER GREENBOOK.
- 22. 12" CONCRETE HEADER. SEE DETAIL A5/L402.
- 23. 18" CONCRETE HEADER. SEE DETAIL E5/L402.
- 24. INVISIMARKER PARKING DELINEATORS BY INVISIBLE STRUCTURES. INSTALL 30" O.C. PER MANUFACTURER'S INSTRUCTIONS.
- 25. SCORELINE. SEE DETAILS A5/L402, AND E5/L402.

**CONSTRUCTION LEGEND:**

- CONSTRUCT DRIVEWAY. SEE L301.
- CONSTRUCT CITY SIDEWALK PER CITY STD DETAIL S-444-0.
- EX. CONCRETE. PROTECT IN PLACE.
- TURF GRID BY INVISIBLE STRUCTURES. INSTALL PER DETAIL E9/L402. INSTALL WITH "BALLFIELD MIX" SOD FROM AG SOD OR APPROVED EQUAL. SEE LANDSCAPE CONSTRUCTION NOTES.
- TURF. INSTALL "BALLFIELD MIX" SOD FROM AG SOD OR APPROVED EQUAL. SEE LANDSCAPE CONSTRUCTION NOTES.
- EX. TURF TO REMAIN. PROTECT IN PLACE.
- STONE MULCH. INSTALL 3" OF STONE MULCH TO MATCH EXISTING. COMPACT SUBBASE AND MULCH TO 90% COMPACTION. PROVIDE SUBMITTAL FOR APPROVAL.
- EX. STONE MULCH TO REMAIN. PROTECT IN PLACE.
- EX. PULLBOX/VALVE BOX. PROTECT IN PLACE. REFER TO ELECTRICAL AND IRRIGATION PLANS FOR NEW PULLBOX/VALVE BOX LOCATIONS.
- EXISTING 6' CHAINLINK FENCE TO REMAIN.
- 6' CHAINLINK FENCING W/ GATES PER PLAN. SEE DETAILS E13/L402 AND A13/L402.
- INSTALL 4' WOOD FENCE PER DETAIL J9/L403.
- 4' WOOD FENCE TO REMAIN. PROTECT IN PLACE.
- LIMIT OF WORK (OFFSET FOR CLARITY)
- PROPERTY LINE



**CONSTRUCTION NOTES:**

1. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH PROJECT MANAGER TO LOCATE AND DELINEATE THE CONSTRUCTION STAGING AREA. SEE GENERAL CONDITIONS AND GENERAL REQUIREMENTS.
2. CONSTRUCTION SIGN SHALL BE INSTALLED WITHIN TWO WEEKS OF THE START OF CONSTRUCTION. OBTAIN PROJECT MANAGER'S APPROVAL FOR SIGN LOCATION AND FINAL TEXT PRIOR TO FABRICATION AND INSTALLATION. SEE LANDSCAPE CONSTRUCTION NOTES AND CONSTRUCTION SIGN DETAIL J5/L402.
3. LIMIT OF WORK IS AT PROPERTY LINE UNLESS OTHERWISE NOTED HEREIN.
4. ALL EXISTING R.O.W. CONCRETE SIDEWALK, STREET TREES, LIGHT FIXTURES/WIRING AND DRAINAGE FIXTURES, ETC. ARE TO BE PROTECTED IN PLACE PER LANDSCAPE CONSTRUCTION NOTES UNLESS OTHERWISE NOTED.
5. ALL EXISTING SITE FEATURES SHOWN TO REMAIN OR LOCATED OUTSIDE THE LIMIT OF WORK SHALL BE PROTECTED IN PLACE.
6. ADJACENT FENCING AND C.M.U. WALLS OUTSIDE OF PROPERTY LINE SHALL BE PROTECTED IN PLACE AND NOT DISTURBED WITHOUT PROPERTY OWNERS WRITTEN PERMISSION.
7. ENTIRE PROJECT AREA IS SUBJECT TO THE REQUIREMENTS LISTED IN THE TREE PROTECTION GUIDELINES. SEE L100.
8. ALL MATERIAL AND WORK SHOWN ON THIS PLAN SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
9. LAYOUT AND STAKING OF ALL PROJECT ELEMENTS SHALL BE DONE A LICENSED SURVEYOR PROVIDED BY THE CONTRACTOR AT HIS OWN EXPENSE. DIGITAL PLAN FILES SHALL BE PROVIDED BY CITY TO FACILITATE LAYOUT. FINAL LAYOUT AND LOCATION OF ALL PROJECT ELEMENTS SHALL BE REVIEWED AND APPROVED BY THE PROJECT MANAGER PRIOR TO INSTALLATION. CONTRACTOR SHALL REQUEST REVIEW AND APPROVAL OF LAYOUT FOR ANY PROJECT ELEMENTS 48 HOURS MINIMUM IN ADVANCE. SEE LANDSCAPE CONSTRUCTION NOTES.
10. CONCRETE INSTALLERS ARE TO COORDINATE WITH THE ELECTRICAL, DRAINAGE AND IRRIGATION INSTALLER/SUBCONTRACTORS FOR SLEEVING, PIPING AND/OR CONDUIT INSTALLATION UNDER OR THROUGH HARDSCAPE ELEMENTS PRIOR TO INSTALLATION OF HARDSCAPE ELEMENTS.

**IMPERVIOUS SURFACE:**

TOTAL IMPERVIOUS SURFACE WITHIN PROPERTY BOUNDARY=348 SF

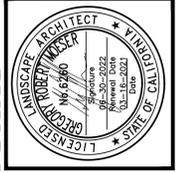
THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.

SHEET ISSUE DATE: 8/11/2021 10:45 AM FILE PATH: Q:\IN-HOUSE-DESIGN\DRUM BARRACKS PARKING LOT\DESIGN\LANDSCAPE\WORKING DRAWINGS\L401.DWG



NO.	REVISION DESCRIPTION	DATE	BY

RAP FACILITY NO. 243  
INDEX NO. MF-300494



ARCHITECTURAL DIVISION	DATE:	04/01/21
LANDSCAPE ARCHITECT: GREG MOESER	LIC. NO.:	6280
DESIGNED BY: GREG MOESER	04/01/21	
DRAWN BY: GREG MOESER	04/01/21	
CHECKED BY: RICHARD FISHER (EA)	04/01/21	
APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL	04/20/21	

**CITY OF LOS ANGELES**  
CLIENT: DEPARTMENT OF RECREATION & PARKS  
GENERAL MANAGER: MICHAEL A. SHULL

SHEET TITLE: CONSTRUCTION PLAN  
PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT  
ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

WORK ORDER NO. E170515D  
PLAN FILE NO.  
DRAWING NO. L401  
SHEET 16 OF 25 SHEETS  
PLOTTED: 8/11/2021 10:46 AM



Project Status: BID SET  
PROJECT ISSUE DATE: 08/09/2021

PROJECT NAME TO BE PROVIDED BY PROJECT MANAGER PRIOR TO SIGN FABRICATION.

**DRUM BARRACKS PARKING LOT DEVELOPMENT**

**ERIC GARCETTI, Mayor**  
Joe Buscaino, Councilmember  
Fifteenth District

**CITY OF LOS ANGELES DEPARTMENT OF RECREATION AND PARKS**  
Michael A. Shull, General Manager

Recreation and Park Board of Commissioners  
Silvia Patsouras, President  
Lynn Alvarez, Vice President  
Tafarai Bayne, Commissioner  
Nicole Chase, Commissioner  
Joseph Halper, Commissioner

Gary Lee Moore, City Engineer  
John L. Reamer, Jr., Inspector of Public Works

DESIGNER: BUREAU OF ENGINEERING ARCHITECTURAL DIVISION  
CONTRACTOR: (Name)

**SIGN TEXT LAYOUT**  
SCALE: 3/4" = 1'-0"

**SIGN CONSTRUCTION VIEWED FROM REAR**  
SCALE: 3/8" = 1'-0"

NOTES:  
1. SIGN SHALL BE CONSTRUCTED OF 3/4" ACX PLYWOOD. LETTERING SHALL BE PLACED ON "A" SIDE, PAINT ALL EXPOSED WOOD SURFACES WITH ONE COAT PRIMER AND TWO COATS ENAMEL PER DUNN-EDWARDS PRINTED SPECIFICATIONS, OR APPROVED EQUAL. COLORS: SIGN, TRIM, POSTS, AND DIAGONAL BRACING-SNOWCAP (WHITE) Q9-36P; ALL LETTERING (EXCLUDING CITY SEAL) AND TREE SILHOUETTE DESIGN SHALL BE BLACK.  
2. SECURE SIGN TO 6" X 6" POSTS WITH 1/2" DIAMETER CARRIAGE BOLTS OF SUFFICIENT LENGTH TO SECURE SIGN TO POSTS. FOUR BOLTS PER POST. PROVIDE GALVANIZED WASHERS UNDER NUTS. DO NOT PLACE BOLTS THROUGH LETTERING.  
3. ALTERNATE SIGN MOUNTING: UPON APPROVAL FROM PROJECT MANAGER, CONTRACTOR MAY OPT TO MOUNT SIGN ON A MOVEABLE BASE TO ACCOMMODATE CONSTRUCTION ACTIVITIES.  
4. IF BOX TO LEFT IS CHECKED, ENTIRE FACE OF SIGN SHALL BE COVERED WITH 4' X 8' X 3/16" SHEET OF CLEAR PLEXIGLAS TO PROTECT FROM GRAFFITI. SECURE TO FACE OF SIGN WITH 1" X 2" EDGE TRIM. SECURE EDGE TRIM WITH NUMBER 12 X 1-1/4" STAINLESS STEEL FLAT HEAD WOOD SCREWS. SPACE AT 18" ON CENTER. AROUND PERIMETER OF SIGN.  
5. SEE NOTICE TO CONTRACTORS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. SIGN SHALL BE INSTALLED WITHIN TWO WEEKS OF THE START OF CONSTRUCTION.

OBTAIN FULL SCALE COLOR GRAPHIC FILE OF DEPARTMENT LOGO FROM PROJECT MANAGER

**DETAIL OF DEPARTMENT LOGO**  
NOT TO SCALE

J5	PARK CONSTRUCTION SIGN	L6030
AS NOTED		

**SECTION**

CONCRETE HEADER PER PLAN

LIGHT POST PER ELECTRICAL PLANS

8" CONCRETE HEADER SEE DETAIL E1/L402

TURF GRID/TURF AREA SEE DETAIL E9/L402

LIGHT POST FOOTING PER ELECTRICAL PLANS

PAVING: SET MOW STRIP FLUSH WITH ADJACENT PAVING WHERE OCCURS. DO NOT RADIUS MOW STRIP CORNER ADJACENT TO PAVING, TYP.

TURF: SET FINISH GRADE AT 3/4" BELOW TOP OF CURB AND INCLUDE A 1/2" TOP CORNER RADIUS

**SECTION**  
TURF GRID @ NATURAL TURF

1/2" RADIUS TOP CORNER, TYP.

TURF GRID, SEE DETAIL E9 THIS SHEET.

NON-WOVEN GEOTEXTILE FABRIC

CMB BASE PER LANDSCAPE CONSTRUCTION NOTES; SUPPLEMENTAL GEOTECHNICAL REPORT DATED 10/22/2020

SUBGRADE PREPARED IN ACCORDANCE WITH SUPPLEMENTAL GEOTECHNICAL REPORT DATED 10/22/2020

#3 REBAR CONTINUOUS

**SECTION**  
TURF GRID @ CONCRETE HEADER

CONCRETE HEADER SEE DETAIL A5/L402 AND E9/L402

TURF GRID FILLED WITH SHARP SAND PER LANDSCAPE CONSTRUCTION NOTES. TOP OF TURF GRID SHALL BE 1/2" BELOW TOP OF CONCRETE HEADER

CMB BASE PER LANDSCAPE CONSTRUCTION NOTES; COMPACT PER SUPPLEMENTAL GEOTECHNICAL REPORT DATED 10/22/2020

SUBGRADE PREPARED IN ACCORDANCE WITH SUPPLEMENTAL GEOTECHNICAL REPORT DATED 10/22/2020

NOTES:  
1. TURFGRID SHALL BE GRASSPAVEZ BY INVISIBLE STRUCTURES OR APPROVED EQUAL. INSTALL PER LANDSCAPE CONSTRUCTION NOTES.

OPTIONS (OPTIONS CHECKED SHALL PREVAIL)

VINYL COATED CHAIN LINK FABRIC SHALL BE AS INDICATED IN LANDSCAPE CONSTRUCTION NOTES (LCN). ALL FENCE MATERIALS SHALL BE AS INDICATED HEREON AND PAINTED PER LCN TO MATCH THE FABRIC COLOR. THE COLOR SHALL BE BLACK.

ALL FENCING SHALL HAVE A STANDARD GALVANIZED FINISH.

**FENCING MATERIALS**

- POSTS: END, CORNER AND SLOPE POSTS 2-7/8" O.D., LINE POSTS 2-3/8" O.D. POST SPACING TO BE 10'-0" MAX.
- RAILS: TOP AND BOTTOM RAILS 1-5/8" O.D.
- FABRIC: 9 GAUGE, 2" MESH, KNUCKLE TOP AND BOTTOM, PLACE ON PATH OR EXTERIOR SIDE OF POSTS.
- TRUSS ROD: 3/8" DIAM. THREADED AT BOTH ENDS AND TENSIONED WITH TWO INDUSTRIAL TRUSS TIGHTENERS SECURED TO RAIL ENDS. TRUSS PANEL SHALL BE LOCATED AT END AND CORNER PANELS OF 30" OR GREATER TURN AND AT INTERVALS NOT TO EXCEED 100'. HOG RING FABRIC TO RODS AT MAX. 3'-0" O.C.
- STRETCHER BAR: 3/16" X 3/4" WITH 1/8" X 1" TENSION BANDS AT 1'-0" O.C.
- TIE WIRES: 11 GAUGE AT 1'-6" O.C. AT TOP, BOTTOM AND LINE POSTS.
- LINE POST EYE TOPS & RAIL ENDS SHALL BE MALLEABLE IRON OR PRESSED STEEL. SECURE RAIL ENDS TO POSTS WITH 1/8" X 1" BRACE BANDS.
- POST CAPS SHALL BE MALLEABLE IRON OR PRESSED STEEL.

**ELEVATION**

NOTES:  
1. CHAIN LINK FENCE MATERIALS SHALL CONFORM TO THE CHAIN LINK FENCE AND MISCELLANEOUS METAL CONSTRUCTION SECTION OF THE LCN.  
2. CONCRETE FOOTINGS SHALL BE ALLOWED TO SET FOR SEVEN (7) DAYS PRIOR TO INSTALLATION OF FABRIC OR HARDWARE.  
3. THE BOTTOM OF THE FABRIC SHALL BE POSITIONED ONE INCH ABOVE FINISH GRADE.  
4. HOLD DOWN CONC. FTG. TO RECEIVE FINISH SURFACE PAVEMENT WHERE FTG. IS NOT SURROUNDED BY LANDSCAPED AREA. PROVIDE 1" CROWN ON TOP OF ALL POST FTG.'S AT FINISH GRADE IN LANDSCAPED AREAS.  
5. CONC. FTG. TO BE 2500 PSI @ 28 DAYS. PROVIDE 3" OF GRAVEL UNDER CONC. FTG

E5	18" CONCRETE MOW STRIP	RP DETAIL L3200
N.T.S.	BOE VERSION Feb08 - RF,SD	

**PLAN VIEW AT CONCRETE HEADER**

CONCRETE HEADER PER PLAN

TURF GRID/TURF AREA SEE DETAIL E9/L402

8" CONCRETE HEADER SEE DETAIL A5/L402

SCORELINE, TYP

LIGHT POST/FIXTURE PER ELECTRICAL PLANS

LIGHT POST FOOTING PER ELECTRICAL PLANS

NOTES:  
1. MOWCURB/HEADER AT CONCRETE HEADER/WALK SHOWN. FOR HEADER IN TURF AREA PROVIDE 8" HEADER AROUND LIGHT POST PER A5/402.

SET MOW STRIP FLUSH WITH ADJACENT PAVING WHERE OCCURS. DO NOT RADIUS MOW STRIP CORNER ADJACENT TO PAVING, TYP.

**SECTION**  
12" CONCRETE MOW STRIP

1/2" RADIUS TOP CORNER, TYP.

FINISH GRADE-GROUND COVER OR LAWN, TYP.

3/4"

6"

SUBGRADE PREPARED/COMPACTED PER GEOTECHNICAL REPORT

#3 REBAR CONTINUOUS, CENTERED

NOTES:  
1. PROVIDE TOOLED SCORE LINES, 1" DEEP, AT LOCATIONS SHOWN ON CONSTRUCTION PLAN AT 10' O.C. MAX. AND AT ALL CHANGES IN DIRECTION. SAW-CUT SCORE LINES MAY BE APPROVED AS AN ALTERNATE METHOD AT THE DISCRETION OF THE PROJECT MANAGER.

D.G. PAVING PER DETAIL

**SECTION**  
PLASTIC WOOD HEADER

FINISH GRADE, TURF/PLANTING AREA

SECURE STAKE TO HEADER WITH (2) GALVANIZED SCREWS AT EACH STAKE. STAGGER SCREWS, TYP.

2" X 4" PLASTIC WOOD HEADER, BENDBOARD BY EPIC PLASTICS WWW.EPICPLASTICS.COM OR APPROVED EQUAL.

1" X 4" X 18" REDWOOD STAKE AT A MAXIMUM OF 48" O.C. PROVIDE A STAKE AT A MAXIMUM OF 12" FROM EACH BOARD END, TYP.

NOTES:  
1. BENDA BOARD ENDS SHOULD NOT BE SCREWED/NAILED TOGETHER.

**GATE MATERIALS**

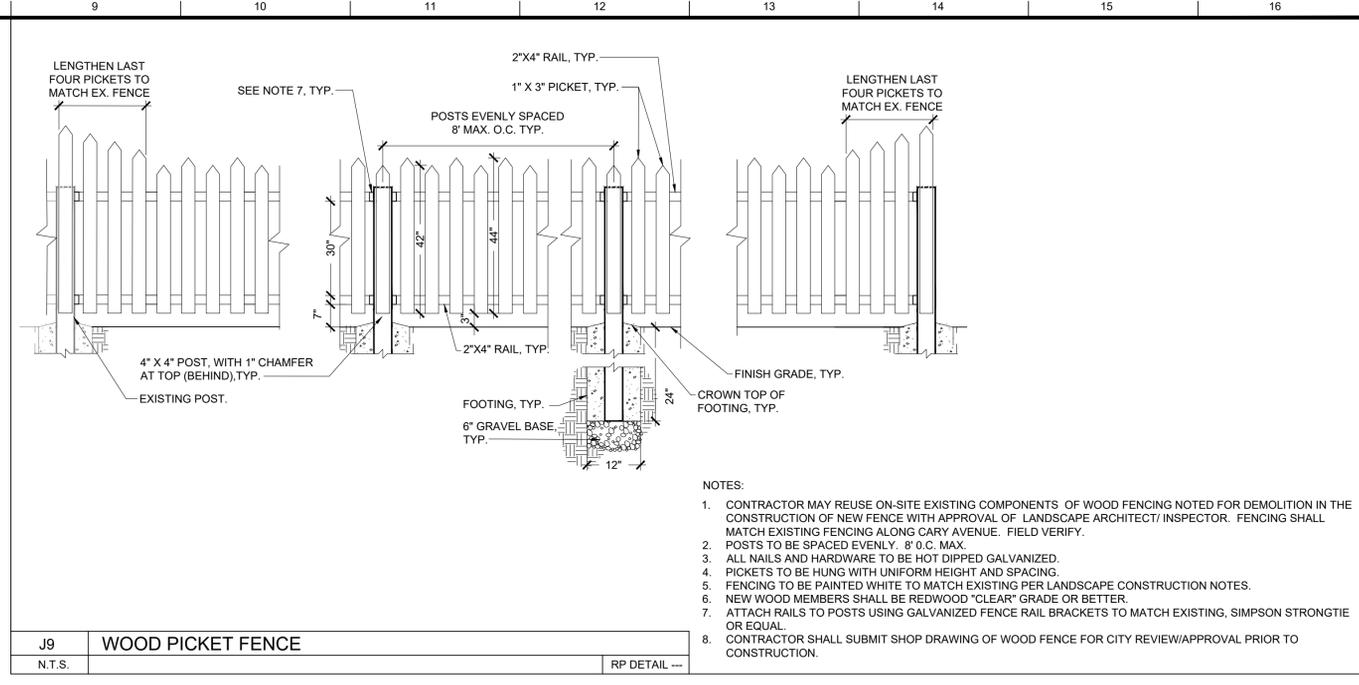
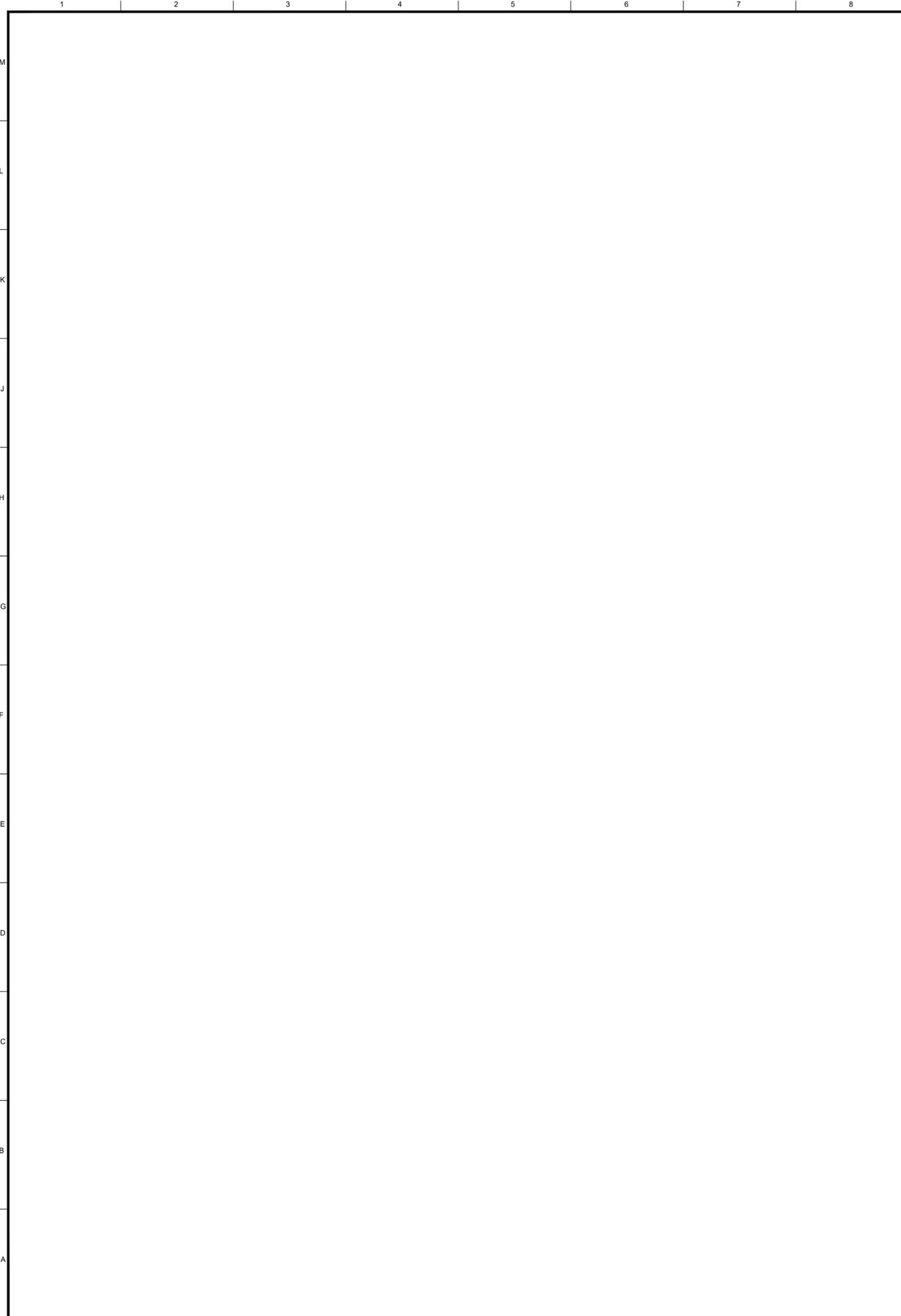
- POSTS: POSTS 5" O.D. WITH 12" DIA. X 4'-0" DEEP FOOTINGS.
- GATE FRAMES: TOP, BOTTOM AND SIDE MEMBERS 2-3/8" O.D., MID-RAIL 1-5/8" O.D. MITER GATE FRAME CORNERS, WELD AND GRIND SMOOTH.
- FABRIC: 9-GAUGE, 2" SQUARE MESH, KNUCKLE TOP AND BOTTOM, PLACE ON EXTERIOR SIDE OF GATES.
- HEAVY DUTY HINGE, 2 HINGES PER GATE, ONE AT TOP AND BOTTOM.
- TRUSS ROD: 3/8" DIA. THREADED AT BOTH ENDS & TENSIONED WITH TWO INDUSTRIAL TRUSS TIGHTENERS SECURED TO GATE FRAME.
- STRETCHER BAR: 3/16" X 3/4" WITH 1/8" X 1" TENSION BANDS AT 1'-0" O.C.
- TIE WIRES: 11-GAUGE & 1'-6" O.C. AT GATE FRAME TOP, BOTTOM AND MID RAILS.
- POST CAPS SHALL BE MALLEABLE IRON OR PRESSED STEEL.
- CAST ALUMINUM FORK LATCH
- WIDROP BAR
- DROP BAR PIPE STYLE CENTERSTOP WITH FOOTING.
- DROP ROD (SECURES SECOND GATE LEAF IN OPEN POSITION).

**ELEVATION**

NOTES:  
1. CHAIN LINK FENCE, GATE AND POST MATERIALS SHALL BE GALVANIZED STEEL UNLESS NOTED. ALL COMPONENTS SHALL CONFORM TO THE CHAIN LINK FENCE AND MISCELLANEOUS METAL CONSTRUCTION SECTION OF THE SPECIFICATIONS.  
2. CONCRETE FOOTINGS SHALL BE ALLOWED TO SET FOR SEVEN (7) DAYS PRIOR TO INSTALLATION OF FABRIC OR HARDWARE.  
3. HOLD DOWN CONC. FTG. TO RECEIVE FINISH SURFACE PAVEMENT WHERE FTG. IS NOT SURROUNDED BY LANDSCAPED AREA. IN SUCH CASES, PROVIDE 1" CROWN ON TOP OF ALL FTG.'S AT FINISH GRADE.  
4. CONC. FTG. TO BE 2500 PSI @ 28 DAYS. PROVIDE 3" OF GRAVEL UNDER CONC. FTG.  
5. PROVIDE (2) ADDITIONAL DROP BAR CENTERSTOPS/FOOTINGS (NOT SHOWN) TO SECURE EACH GATE LEAF IN THE OPEN POSITION.

A1	MOWCURB/HEADER AT LIGHT POST	RP DETAIL L3200
N.T.S.		
A5	12" CONCRETE MOW STRIP	RP DETAIL L3200
N.T.S.	BOE VERSION Feb08 - RF,SD	
A9	PLASTIC WOOD HEADER	RP DETAIL ---
N.T.S.		
A13	6' TALL CHAIN LINK DOUBLE-LEAF GATES	RP DETAIL 502
N.T.S.		

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



J9	WOOD PICKET FENCE	RP DETAIL ---
N.T.S.		

- NOTES:
1. CONTRACTOR MAY REUSE ON-SITE EXISTING COMPONENTS OF WOOD FENCING NOTED FOR DEMOLITION IN THE CONSTRUCTION OF NEW FENCE WITH APPROVAL OF LANDSCAPE ARCHITECT/INSPECTOR. FENCING SHALL MATCH EXISTING FENCING ALONG CARY AVENUE. FIELD VERIFY.
  2. POSTS TO BE SPACED EVENLY. 8' O.C. MAX.
  3. ALL NAILS AND HARDWARE TO BE HOT DIPPED GALVANIZED.
  4. PICKETS TO BE HUNG WITH UNIFORM HEIGHT AND SPACING.
  5. FENCING TO BE PAINTED WHITE TO MATCH EXISTING PER LANDSCAPE CONSTRUCTION NOTES.
  6. NEW WOOD MEMBERS SHALL BE REDWOOD "CLEAR" GRADE OR BETTER.
  7. ATTACH RAILS TO POSTS USING GALVANIZED FENCE RAIL BRACKETS TO MATCH EXISTING, SIMPSON STRONGTIE OR EQUAL.
  8. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF WOOD FENCE FOR CITY REVIEW/APPROVAL PRIOR TO CONSTRUCTION.



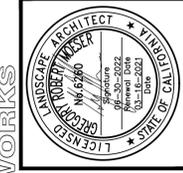
Project Status: **BID SET**  
 PROJECT ISSUE DATE: **08/09/2021**

WORK ORDER NO.  
**E170515D**  
 PLAN FILE NO.

DRAWING NO.  
**L403**  
 SHEET 18 OF 25 SHEETS

CITY OF LOS ANGELES  
 CLIENT: DEPARTMENT OF RECREATION & PARKS  
 GENERAL MANAGER: MICHAEL A. SHULL  
 SHEET TITLE: **CONSTRUCTION DETAILS SHEET 2**  
 PROJECT: **DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT**  
 ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

DEPARTMENT OF PUBLIC WORKS  
**GARY LEE MOORE, PE, ENV SP** CITY ENGINEER  
 ARCHITECTURAL DIVISION  
 LANDSCAPE ARCHITECT: GREG MOESER LIC. NO.: 6280 DATE: 04/01/21  
 DESIGNED BY: GREG MOESER 04/01/21  
 DRAWN BY: GREG MOESER 04/01/21  
 CHECKED BY: RICHARD FISHER, (EA) 04/01/21  
 APPROVED BY: STEVEN FERCE, AIA, PRINCIPAL 04/20/21

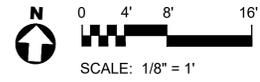
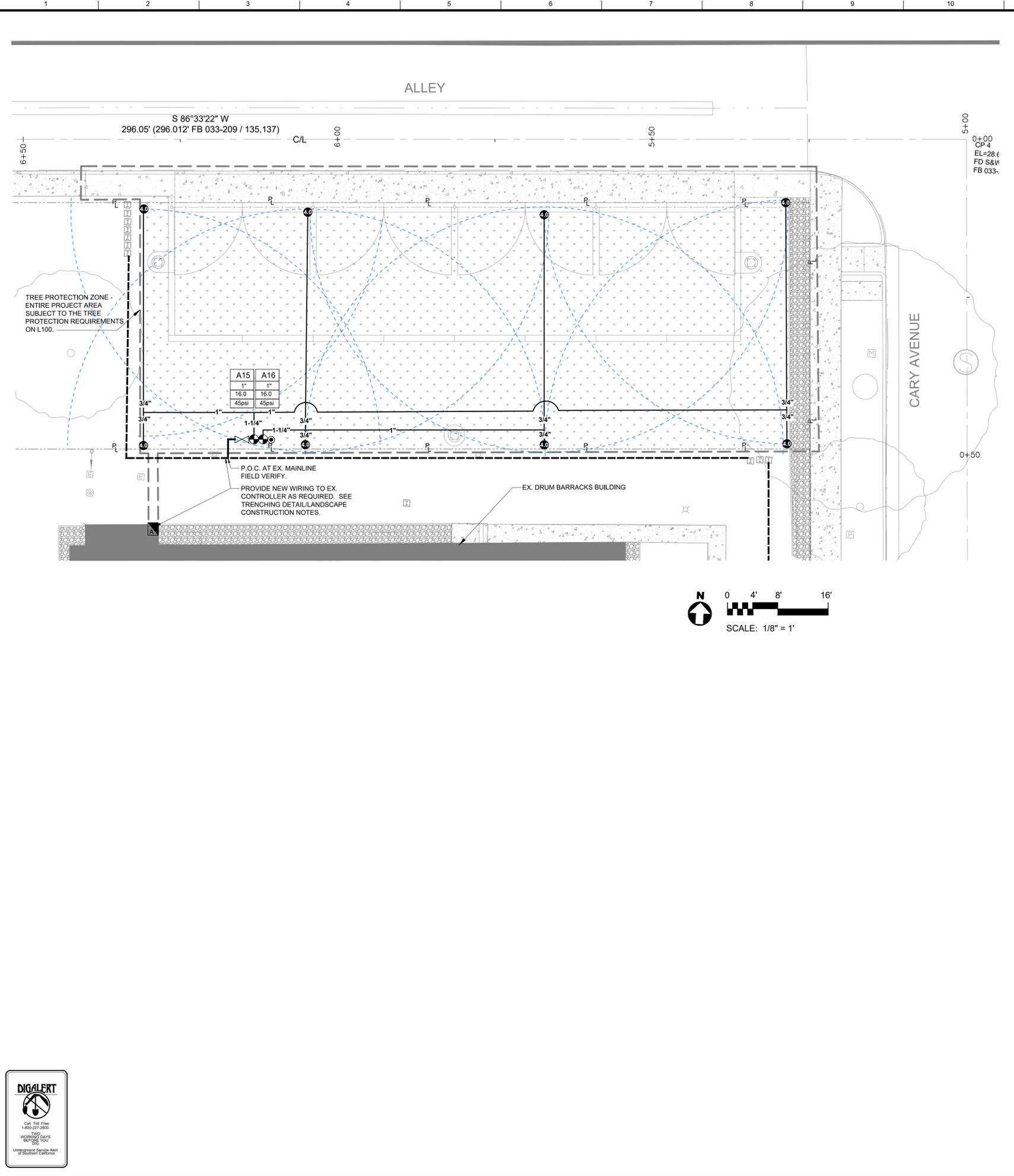


BUREAU OF ENGINEERING  
 INDEX NO. **MF-300494**  
 RAP FACILITY NO. **243**



SHEET ISSUE DATE: 8/9/2021 11:21 AM FILE PATH: Q:\IN-HOUSE-DESIGN\DRUM BARRACKS PARKING LOT\DESIGN\LANDSCAPE\WORKING DRAWINGS\L601.DWG

THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



**IRRIGATION EQUIPMENT LEGEND**

SYMBOL	DESCRIPTION & REMARKS	DETAIL
	EXISTING RAINBIRD CONTROLLER TO REMAIN. WIRE NEW VALVES TO OPEN STATIONS OF EXISTING CONTROLLER.	
	REMOTE CONTROL VALVE. RAINBIRD EFB-CP BRASS VALVE - SEE PLAN CALLOUT FOR VALVE SIZE. WIRE TO EXISTING CONTROLLER PER DETAILS/LANDSCAPE CONSTRUCTION NOTES.	J5/L602 J13/L602
	TWO PIECE QUICK COUPLING VALVE. RAINBIRD 44LRC, WITH 44K KEY AND SH-1 HOSE SWIVEL. PROVIDE ONE QUICK COUPLER KEY AND HOSE SWIVEL FOR EACH FIVE QUICK COUPLER INSTALLED. (MINIMUM ONE QUICK COUPLER KEY).	E1/L602
	MANIFOLD GATE VALVE. NIBCO T-113-LF OR APPROVED EQUAL.	J9/L602
	2" MAINLINE PIPING, PVC CLASS 200.	J1/L602
	EXISTING 2" MAINLINE PIPING, PVC CLASS 200. FIELD VERIFY. PROTECT IN PLACE.	
	SCH. 40 PVC LATERAL LINE PIPING; SOLVENT WELD. SIZE AS NOTED.	J1/L602
	EXISTING VALVE BOX TO REMAIN. PROTECT IN PLACE.	
	LIMIT OF WORK	

**IRRIGATION HEADS LEGEND**

SYMBOL	DESCRIPTION & REMARKS	GPM	SPACING	NOZZLE PRESSURE	PRECIP. RATE	DETAIL NUMBER
	RAINBIRD 5004-PC-R-SS WITH 4.0 STD NOZZLE ROTOR WITH STAINLESS STEEL RISER AND PRESSURE REGULATOR.	4.01	38'	45 PSI	.48 IN/HR	E5/L602 E9/L602

- A1 - Controller & Station No. (Verify with RAP Irrigation staff)
- 2" - Valve Size
- XX X - System GPM
- PSI - Set PSI Reg.

Typical turf rotor system (number is nozzle size):



**IRRIGATION NOTES**

- HIGH STATIC PRESSURE - 92 PSI  
LOW STATIC PRESSURE - 81 PSI
- INFORMATION PROVIDED BY LADWP ON 08/21/2019
- THE SPRINKLER SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE OF 45 P.S.I. AND A MAXIMUM FLOW DEMAND OF 16 G.P.M. THE CONTRACTOR SHALL VERIFY WATER PRESSURES PRIOR TO CONSTRUCTION, AND REPORT ANY DIFFERENCE BETWEEN WATER PRESSURE AND AVAILABLE FLOW INDICATED ON THE DRAWINGS AND THE ACTUAL READINGS AT THE IRRIGATION POINT OF CONNECTION IMMEDIATELY TO THE PROJECT MANAGER.
  - BEFORE COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL OBTAIN AN UNDERGROUND SERVICE ALERT I.D. NUMBER BY CALLING 1-800-422-4133. PROVIDE TWO (2) WORKING DAYS AFTER THE NUMBER IS OBTAINED AND BEFORE THE EXCAVATION WORK IS STARTED SO THAT UTILITY OWNERS CAN BE NOTIFIED.
  - THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF ANY UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
  - ANY EXISTING IRRIGATION SYSTEM COMPONENTS DEPICTED HEREIN ARE BASED UPON AS-BUILT RECORD DRAWINGS, AND ARE SHOWN HERE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SYSTEM COMPONENTS TO REMAIN PRIOR TO ENGAGING IN CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL IMMEDIATELY NOTIFY PROJECT MANAGER OF ANY DISCREPANCIES BETWEEN AS-BUILT AND EXISTING CONDITIONS.
  - THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT CONDITIONS OR OBSTRUCTIONS EXIST THAT WERE UNKNOWN AT THE TIME THESE PLANS WERE PREPARED. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT MANAGER OF ANY SUCH CONDITIONS PRIOR TO PERFORMING ANY AFFECTED WORK. IN THE EVENT THAT THIS NOTIFICATION IS NOT GIVEN, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.
  - THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR CLARITY ONLY AND SHALL BE INSTALLED IN PLANTING AREAS. SET ALL VALVES AND QUICK COUPLERS ADJACENT TO WALKS OR PAVED SURFACES PER DETAILS. ALL IRRIGATION PRESSURE AND LATERAL LINES AND CONTROL WIRING THAT PASS UNDER PAVING SHALL BE SLEEVED PER LANDSCAPE CONSTRUCTION NOTES.
  - ANY TRENCHES DUG TO ACCOMMODATE NEW IRRIGATION LINES OR CONDUIT ARE SUBJECT TO THE REQUIREMENTS LISTED IN TREE PROTECTION GUIDELINES, SHEET L100.
  - CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS UNDER PAVING IN A TIMELY MANNER. SEE TRENCHING DETAIL FOR SLEEVING REQUIREMENTS.
  - THE CONTRACTOR SHALL FLUSH AND PRESSURE TEST ALL MAINLINES PER LANDSCAPE CONSTRUCTION NOTES. CONTRACTOR SHALL FLUSH ALL LATERAL LINES AND IRRIGATION HEADS PER THE LANDSCAPE CONSTRUCTION NOTES.
  - THE INTENT OF THESE IRRIGATION PLANS IS TO PROVIDE 100% COVERAGE TO ALL TURF AREAS, AS PART OF THE SCOPE OF WORK, CONTRACTOR SHALL PROVIDE ANY ADDITIONAL HEADS, SPECIAL NOZZLES, OR PATTERNS TO ACHIEVE PROPER COVERAGE WITH A MINIMUM OF OVERSPRAY AT NO ADDITIONAL COST TO THE CITY.
  - UPON COMPLETION OF INSTALLATION, CONTRACTOR SHALL CONDUCT A COVERAGE TEST PER LANDSCAPE CONSTRUCTION NOTES. CONTRACTOR SHALL NOTIFY PROJECT MANAGER TO REQUEST THE TEST, WHICH WILL BE SCHEDULED AT THE SOONEST DATE POSSIBLE PER AVAILABILITY OF RAP AND LADWP STAFF.
  - REFER TO LANDSCAPE CONSTRUCTION NOTES FOR ADDITIONAL INFORMATION REGARDING THIS SECTION OF WORK.



ENGINEERING  
CITY OF LOS ANGELES

BUREAU OF ENGINEERING

NO. \_\_\_\_\_

REVISION DESCRIPTION \_\_\_\_\_

DATE \_\_\_\_\_

INDEX NO. MF-300494

RAP FACILITY NO. 243

ARCHITECTURAL DIVISION

LANDSCAPE ARCHITECT: GREG MOESER

DESIGNED BY: GREG MOESER

DRAWN BY: GREG MOESER

CHECKED BY: RICHARD FISHER, (EA)

APPROVED BY: STEVEN FERRE, AIA, PRINCIPAL

DATE: 04/01/21

LIC. NO.: 6280

DATE: 04/01/21

DATE: 04/01/21

DATE: 04/01/21

CLIENT: DEPARTMENT OF RECREATION & PARKS

GENERAL MANAGER: MICHAEL A. SHULL

SHEET TITLE: IRRIGATION PLAN

PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT

ADDRESS: 1081 CARY AVENUE, WILMINGTON, CA 90744

Project Status: BID SET

PROJECT ISSUE DATE: 08/09/2021

WORK ORDER NO. E170515D

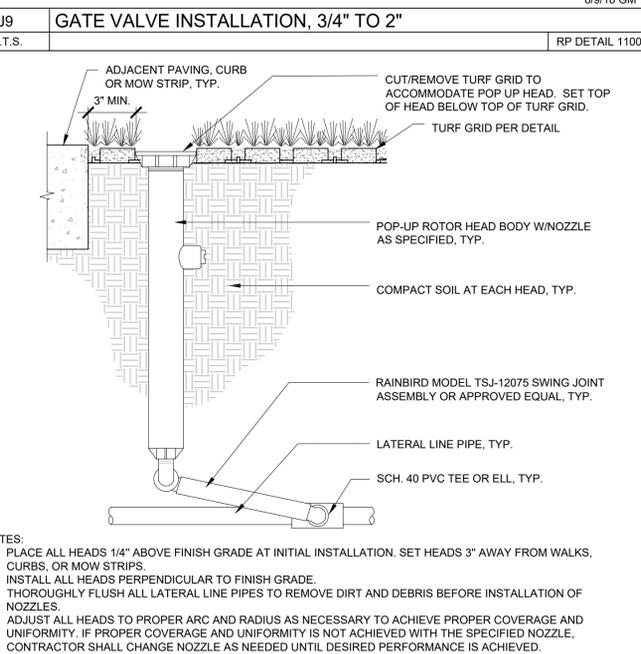
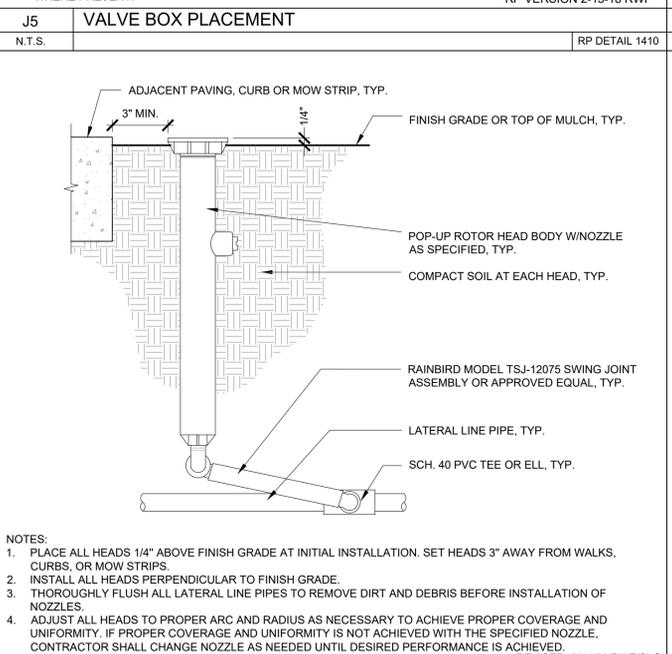
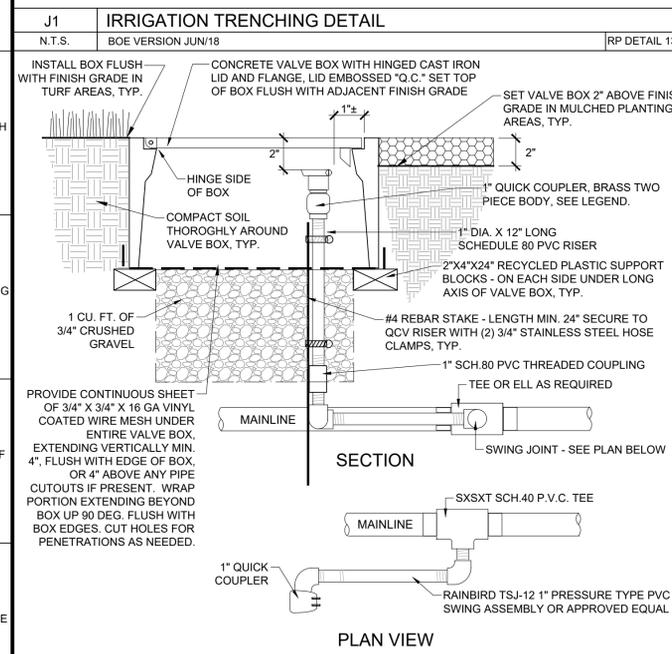
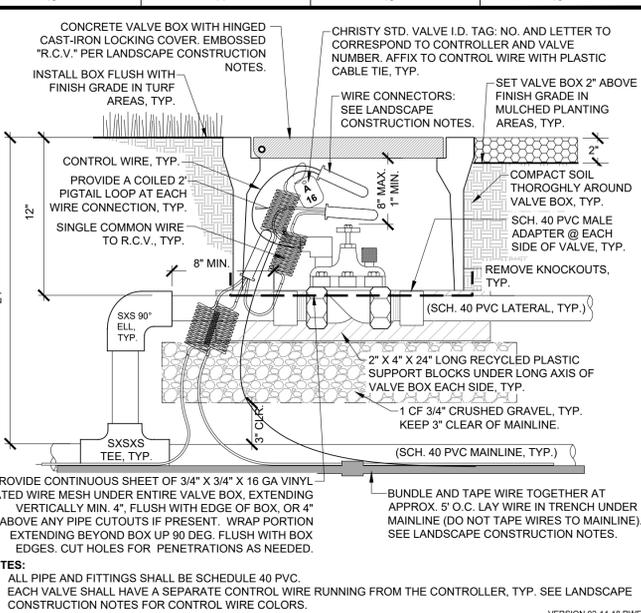
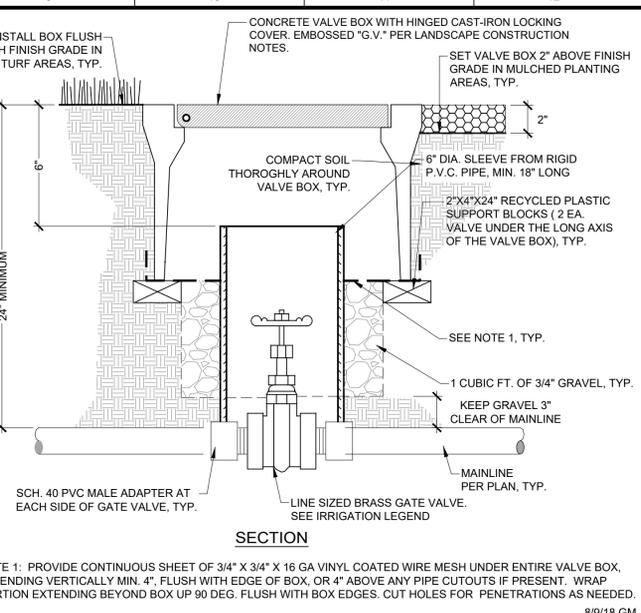
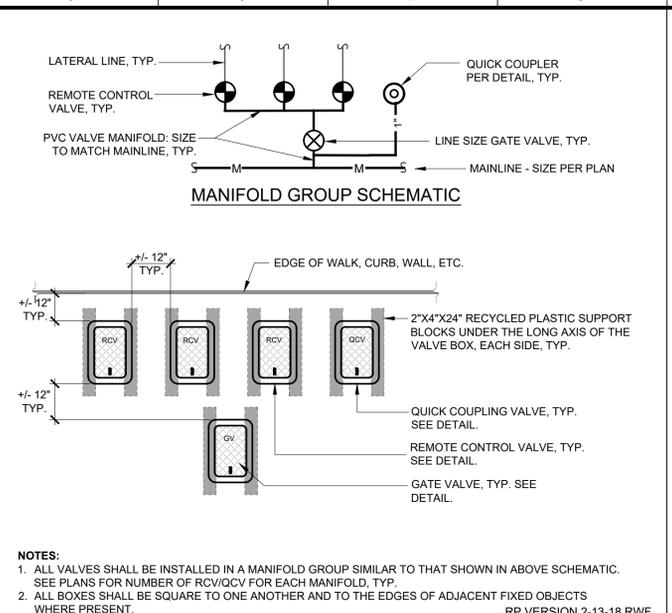
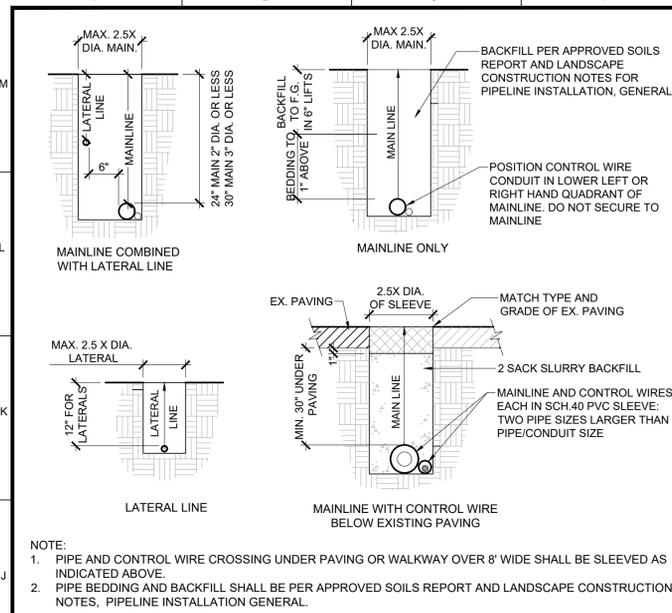
PLAN FILE NO.

DRAWING NO. L601

SHEET 19 OF 25

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REVISION DATES (DESIGN STAGE ONLY)



E1	QUICK COUPLER INSTALLATION (2" MAINLINE OR SMALLER)	E5	POP-UP ROTOR HEAD INSTALLATION
N.T.S.	BOE VERSION Dec'08 RF	N.T.S.	
	RP DETAIL L1200		RP DETAIL 162

E9	POP-UP ROTOR HEAD @ TURF GRID
N.T.S.	
	RP DETAIL 1000

J13	RCV INSTALLATION DETAIL (Concrete Box)
N.T.S.	BOE VERSION 02/13/18
	RP DETAIL L1401



Project Status: BID SET  
 PROJECT ISSUE DATE: 08/09/2021

**CITY OF LOS ANGELES**  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING

CLIENT: DEPARTMENT OF RECREATION & PARKS  
 GENERAL MANAGER: MICHAEL A. SHULL

SHEET TITLE: IRRIGATION DETAILS  
 PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT  
 ADDRESS: 1081 CARRY AVENUE, WILMINGTON, CA 90744

LANDSCAPE ARCHITECT: GREG MOESER  
 DESIGNED BY: GREG MOESER  
 DRAWN BY: GREG MOESER  
 CHECKED BY: RICHARD FISHER (EA)  
 APPROVED BY: STEVEN FERCE, AIA, PRINCIPAL

DATE: 04/01/21  
 LIC. NO.: 6280

WORK ORDER NO. E170515D  
 PLAN FILE NO.  
 DRAWING NO. L602  
 SHEET 20 OF 25

INDEX NO. MF-300494  
 RAP FACILITY NO. 243

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### GENERAL ELECTRICAL SYMBOLS LIST

(E)	NEXT TO EQUIPMENT, INDICATES TO REMAIN.
(R)	NEXT TO EQUIPMENT, INDICATES TO BE REMOVED.
E	EXISTING CONDUIT AND WIRES TO REMAIN.
R	EXISTING CONDUIT AND WIRES TO BE REMOVED.
(RL)	NEXT TO EQUIPMENT, INDICATES TO BE RELOCATED.
(RLD)	NEXT TO EQUIPMENT, INDICATES RELOCATED.
	3/4" MINIMUM CONDUIT CONCEALED IN A WALL, CEILING SPACE WITH POWER WIRING, UNLESS OTHERWISE NOTED ON THE ELECTRICAL PLANS.
	CONDUIT HOMERUN. 3/4" MINIMUM, OR AS NOTED ON THE ELECTRICAL PLANS.
	DURACLAD MC-PCS DUO ARMORED CABLE WITH LIGHTING POWER AND CONTROL WIRES(USE #12 SOLID WIRE FOR POWER AND #16 SOLID FOR CONTROL WIRES.)
	JUNCTION BOX, PLENUM MOUNTED, SIZED BY CONTRACTOR PER ACTUAL NUMBER OF CONDUITS AND/OR CONDUCTORS PASSING THRU
	STANDARD 20A, 120V-1Ø GROUNDING TYPE DUPLEX RECEPTACLE RECESSED MOUNTED AT +18" A.F.F. TO THE CENTER. - U.O.N.
	CONTROLLED STANDARD 20A, 120V-1Ø GROUNDING TYPE DUPLEX RECEPTACLE RECESSED MOUNTED AT +18" A.F.F. TO THE CENTER. - U.O.N. THE RECEPTACLE SHALL BE PERMANENTLY LABELED "CONTROLLED".
	GROUND FAULT CIRCUIT INTERRUPT DUPLEX RECEPTACLE 20A, 120V-1Ø.
	SPECIAL USE RECEPTACLE, GROUNDING TYPE, RECESSED MOUNTED AT +42" ABOVE THE FINISHED FLOOR TO THE CENTER, UNLESS OTHERWISE NOTED. THE VOLTAGE SHALL BE SPECIFIED.
	STANDARD 20A, 120V-1Ø GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE RECESSED MOUNTED AT +18" A.F.F. TO THE CENTER. - U.O.N.
	CONTROLLED STANDARD 20A, 120V-1Ø GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE RECESSED MOUNTED AT +18" A.F.F. TO THE CENTER. - U.O.N. HALF SHADING INDICATES HALF CONTROLLED.
	FURNITURE COMMUNICATION FEED, FROM THE WALL, PROVIDE 1" C.O TO THE COMMUNICATION ROOM
	FURNITURE POWER FEED, FROM THE WALL.
	WALL COMBINATION TELEPHONE AND DATA OUTLET AT +18" ABOVE THE FINISHED FLOOR, UNLESS OTHERWISE NOTED, PROVIDE 3/4" C.O TO THE COMMUNICATION ROOM.
	WALL COMBINATION DATA ONLY OUTLET AT +18" ABOVE THE FINISHED FLOOR, UNLESS OTHERWISE NOTED, PROVIDE 3/4" C.O TO THE COMMUNICATION ROOM.
	CEILING MOUNTED ILLUMINATED EXIT SIGN, WITH NUMBER OF FACES INDICATED BY SHADING, ARROWS INDICATE DIRECTION OF EGRESS PATH
	STANDARD 20A, 120/277V-1Ø SPST TOGGLE SWITCH MOUNTED AT +42" A.F.F. TO THE CENTER. - U.O.N. a,b - DENOTES TWO SWITCHES AND THEIR RESPECTIVE CONTROL ID. 3 - DENOTES 3-WAY SWITCH 4 - DENOTES 4-WAY SWITCH K - KEY SWITCH
	LOW VOLTAGE DIMMER SWITCH MOUNTED @ 42" A.F.F. TO THE CENTER, BY "WATT STOPPER" a - DENOTES THE CONTROLLED LIGHTS
	LOW VOLTAGE SWITCH MOUNTED @ 42" A.F.F. TO THE CENTER, BY "WATT STOPPER" CATALOGUE # LMSW-100, U.O.N. a - DENOTES THE CONTROLLED LIGHTS
	LINE VOLTAGE DIMMER SWITCH MOUNTED @ 42" A.F.F. TO THE CENTER, a - DENOTES THE CONTROLLED LIGHTS
	TWO-WAY CEILING MOUNTED OCCUPANCY SENSOR
	0-10V DIMMING WALL MOUNTED OCCUPANCY SENSOR/SWITCH.
	LINE VOLTAGE WALL MOUNTED OCCUPANCY SENSOR/SWITCH.
	POWERPACK DIMMING MODULE.
	EMERGENCY LIGHTING CONTROL MODULE.
	SINGLE-PHASE EMERGENCY LIGHTING INVERTER BY "DUAL LITE", CATALOGUE# DLS-525-277
	LINEAR LED LIGHT FIXTURE, FOR EXACT LENGTH REFER TO LIGHTING PLAN. EM AND/OR HALF SHADED LIGHTING FIXTURE INDICATES FIXTURE ON EMERGENCY CIRCUIT. N.L. INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT.
	RECESSED/SURFACE LED DOWNLIGHT FIXTURE. EM AND/OR HALF SHADED LIGHTING FIXTURE INDICATES FIXTURE ON EMERGENCY CIRCUIT. N.L. INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT.
	NEMA 3R FUSED DISCONNECT SWITCH.
	SURFACE MOUNTED ELECTRICAL PANEL
	RECESSED MOUNTED ELECTRICAL PANEL
	TRANSFORMER
	MOTOR RATED SWITCH DISCONNECT

### ANNOTATION TAGS

	KEY NOTE REFERENCE
	DETAIL REFERENCE INDICATOR, # DESIGNATES DETAIL NUMBER, ## DESIGNATES ON WHICH DETAIL SHEET IT IS LOCATED
	LIGHT FIXTURE TYPE DESIGNATION

### GENERAL NOTES AND SPECIFICATIONS

- ELECTRICAL CONTRACTOR SHALL PAY FOR ALL NECESSARY ELECTRICAL PERMITS.
- COMPLETE ELECTRICAL INSTALLATION SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF (1) YEAR UPON ACCEPTANCE BY THE CITY...
- ELECTRICAL CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BID DATE, TO VERIFY ALL EXISTING CONDITIONS TO BE ENCOUNTERED IN THE INSTALLATION OF ALL NEW EQUIPMENT, FIXTURES DEVICES, FEEDERS, ETC. EXACT INSTALLATION METHOD AND REQUIREMENTS SHALL BE VERIFIED AND DETERMINED PRIOR TO BID DATE. CONTRACTORS SHALL IMMEDIATELY NOTIFY THE CITY ENGINEER OF ANY REQUIRED MODIFICATIONS OR DISCREPANCIES WHICH ARE NOT SHOWN ON THESE DRAWINGS. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED.
- ALL EQUIPMENT ELECTRICAL CHARACTERISTICS, LOCATIONS, AND CONNECTION REQUIREMENTS SHALL BE VERIFIED PRIOR TO ANY ROUGH-IN WORK.
- COMMUNICATION CONDUIT RUNS GREATER THAN 100 FT. OR WITH MORE THAN (2) RIGHT ANGLE BENDS SHALL HAVE A PULLBOX INSTALLED AT A CONVENIENT INTERMEDIATE LOCATION.
- COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE PRESENTLY ADOPTED EDITION OF THE N.E.C. ART. 250
- PROVIDE THE CITY ENGINEER WITH ONE SET OF ELECTRICAL "AS-BUILT" DRAWINGS AT THE COMPLETION OF JOB. SHOW CONDUIT AND EQUIPMENT EXACT LOCATION AND MOUNTING DIMENSIONS ON THE DRAWINGS.
- ALL CONDUITS AND JUNCTION BOXES SHALL BE LOCATED IN CONCEALED SPACES. SURFACE MOUNTED CONDUITS AND BOXES ARE ONLY PERMITTED WHEN PREVIOUSLY DIRECTED BY THE CITY ENGINEER.
- ALL EXTERIOR COVER PLATES TO BE PAINTED TO MATCH SURROUNDING COLOR.
- NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
- ALL FUSE HOLDERS SHALL BE REJECTION TYPE.
- ALL BRANCH CIRCUITS SHALL HAVE A SEPARATE NEUTRAL FOR EACH CIRCUIT.
- ALL REMOVED EQUIPMENT AND MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED PROPERLY.
- INCLUDE ALL NECESSARY DEMOLITION AS PART OF THE WORK.
- PULL BOXES BY EISEL ENTERPRISES, SIZED PER PEC.
- THE NEW LIGHTING CONTROLS SHALL MEET THE ACCEPTANCE REQUIREMENTS FOR CODE COMPLIANCE IN ACCORDANCE WITH TITLE-24 SECTION 130.4. THE ACCEPTANCE TESTING OF THE LIGHTING SYSTEM SHALL BE PERFORMED BY A CERTIFIED "LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN" SELECTED BY THE CONTRACTOR.
- THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE INTENT OF EQUIPMENT, DEVICES, ETC... TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED TO. THE CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES, ETC... AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
- COORDINATE WITH THE LANDSCAPE ARCHITECT TO AVOID ROUTING BELOW GRADE CONDUIT WITHIN THE DRIP LINES OF THE NEW AND EXISTING TREES.
- COORDINATE WITH THE LANDSCAPE ARCHITECT TO AVOID ROUTING BELOW GRADE CONDUIT THROUGH THE INFILTRATION GALLERY (GALLERIES).
- USE SCHEDULE 40 P.V.C. CONDUIT UNDERGROUND WITH A CODE SIZED GROUND. CONDUIT RISERS, STUBS ABOVE GRADE, AND UNDERGROUND CONDUIT ELBOWS, SHALL BE P.V.C. SCHEDULE 80.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH, TO THE CITY ENGINEER, SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION AND PRODUCT DELIVERY.
- PER RECREATION AND PARK DEPARTMENT'S REQUEST, ALL NEW CONCRETE PULLBOXES BY EISEL INDUSTRIES SHOWN ON THIS PROJECT SHALL BE TACK WELD SHUT, IF IT IS ONLY ACCEPTABLE AND APPROVED BY THE BUILDING AND SAFETY ELECTRICAL SITE INSPECTOR PRIOR TO FINAL INSPECTION.

### TELEPHONE AND COMMUNICATIONS SYSTEM NOTE AS APPLICABLE

- THE TELEPHONE AND COMMUNICATIONS (INTERNET) SERVICE SHALL BE PROVIDED BY OTHERS. THE CONDUIT ONLY, WITH PULL WIRES AND JUNCTION BOXES, SHALL BE INSTALLED FOR THE TELEPHONE AND COMMUNICATIONS SERVICE AS INDICATED ON PLAN. ALL CONDUITS AND PULL WIRES SHALL TERMINATE IN THE COMMUNICATIONS ROOM.

### SYMBOL LIST

(E)	NEXT TO EQUIPMENT, INDICATES TO REMAIN.
(R)	NEXT TO EQUIPMENT, INDICATES TO BE REMOVED.
E	EXISTING CONDUIT AND WIRES TO REMAIN.
R	EXISTING CONDUIT AND WIRES TO BE REMOVED.
(RL)	NEXT TO EQUIPMENT, INDICATES TO BE RELOCATED.
(RLD)	NEXT TO EQUIPMENT, INDICATES RELOCATED.
(N)	NEXT TO EQUIPMENT, INDICATES NEW.
C.O.	INDICATES CONDUIT ONLY.
→	HOMERUN TO DESTINATION AS INDICATED.
---	UNDERGROUND CONDUIT
	EISEL INDUSTRIES PULL BOX.
	IRRIGATION CONTROLLER

### ABBREVIATIONS

A, AMP	AMPERE(S)
A.C.	ABOVE COUNTER
A.F.F.	ABOVE FINISH FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C.	CONDUIT
C.O.	CONDUIT ONLY W/ PULL ROPE
C.U.	COPPER
E	EXISTING CONDUIT AND WIRES TO REMAIN
(E)	NEXT TO EQUIPMENT, INDICATES EXISTING TO REMAIN
EM.	EMERGENCY
FLA	FULL LOAD AMPS
G.D.	GARBAGE DISPOSAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND.G	GROUND
LMP	LUMEN MAINTENANCE PHOTOCCELL
LCP	LIGHTING CONTROL PANEL
MCB	MAIN CIRCUIT BREAKER
M.L.O	MAIN LUGS ONLY
MP	MICROPANEL
MICROWATT	MICROWATT
(N)	NEXT TO EQUIPMENT, INDICATES NEW
N.I.C	NOT INCLUDED IN CONTRACT
N.L.	NIGHT LIGHT
O.C.	ON CENTER
PC	PHOTOCCELL
R	EXISTING CONDUIT AND WIRES TO BE REMOVED
(R)	NEXT TO EQUIPMENT, INDICATES REMOVE AND DISCARD
(RL)	NEXT TO EQUIPMENT, INDICATES REMOVE AND RELOCATE
(S.R)	SERIES RATED
U/G	UNDERGROUND
U.O.N	UNLESS OTHERWISE NOTED
V	VOLT(S)
V.L.	VERIFY LOCATION
WP	WEATHERPROOF

### NEW OUTDOOR LIGHTPOLE SCHEDULE

MANUFACTURER	CATALOGUE NUMBER	HEIGHT (FT)	MATERIAL	NOTES
STERNBERG LIGHTING	84106"TFP6-3-CV9	10' - 6"	ALUMINIUM	THE 15" SQUARE CAST 356 ALUMINIUM ALLOY BASE & ALLOY SHAFT SHALL BE A ONE PIECE CONSTRUCTION.

### NEW OUTDOOR FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOGUE NUMBER	TYPE	UNIT WATTS	VOLTAGE	NOTES
A	STERNBERG LIGHTING	PT-G16LED/5P/VC0B-4L/40TS/MDL05/WA	LED	83	120V	

### ELECTRICAL SHEET LIST

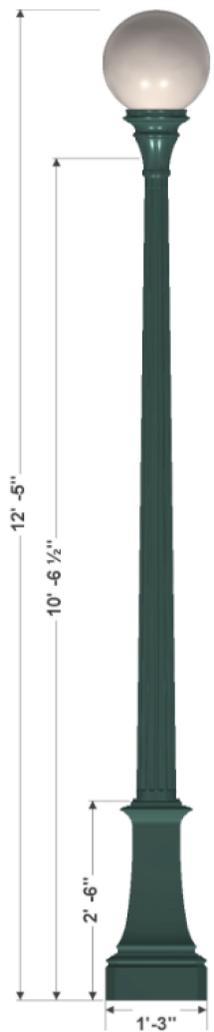
SHEET NUMBER	SHEET NAME
E001	SYMBOL LIST, NOTES, FIXTURES SCHEDULE
E101	SITE PLAN, SLD & PANEL SCHEDULE
E102	PHOTOMETRICS
E201	ELECTRICAL SPECIFICATIONS
E202	ELECTRICAL SPECIFICATIONS

### ELECTRICAL SCOPE OF WORK

INSTALL NEW LIGHTING POLE & FIXTURE FOR NEW PARKING LOT

### TITLE 24 NOTE

- TITLE 24 PLANCHECK IS EXEMPT DUE TO TITLE 24, PART 11 SECTION 5, 106.8 & TITLE 24, PART 6 SECTION 140.7 EXCEPTION 12 TO SECTION 140.7(A).



## LIGHT POLE SPECIFICATION

**CENTER POST TOP FIXTURE: G**  
The globe is offered in sizes ranging from 16" - 24" in diameter with an 8" aluminum neck. It will be made of dent resistant acrylic. Globes shall be available in the white. The Luminaire shall be UL listed in US and Canada.

Globe Size: 16 Inch White Acrylic (16LED)  
Filter: 5P

**LIGHT SOURCE: -VC0B-4L**  
Array: 4 LEADS (VC0B-4L)

**POLE: 8410'6"TFP6-3-C**  
The 15" square cast 356 aluminum alloy base and aluminum shaft shall be a one-piece construction. The pole shall be U.L. or E.T.L. listed in U.S. and Canada. All pole heights to have a tolerance of ± 2"

Model: 8400 Monrovia (84)  
Height: 10 Ft 6 In (TFP6-3) (10'6")  
Shaft Type: Fluted Tapered 6-3 Inch 356 Aluminum Alloy (TFP6-3)  
Gauge: Varied Wall Thickness (Cast) (C)

**FINISH: VG**  
Assembly shall be powder coated to Verde Green finish. Prior to coating, the assembly shall be chemically cleaned and etched in a 5-stage washing system which includes alkaline cleaning, rinsing, phosphoric etching, reverse osmosis water rinsing, and non-chrome sealing to ensure corrosion resistance.

**Wind Load Evaluation**  
This assembly, as configured, MEETS AASHTO requirements for wind loading  
Wind Speed: 90 mph  
Gust Factor: 1.14



BUREAU OF ENGINEERING

CITY OF LOS ANGELES

ENGINEERING

CITY OF LOS ANGELES

NO.

DATE

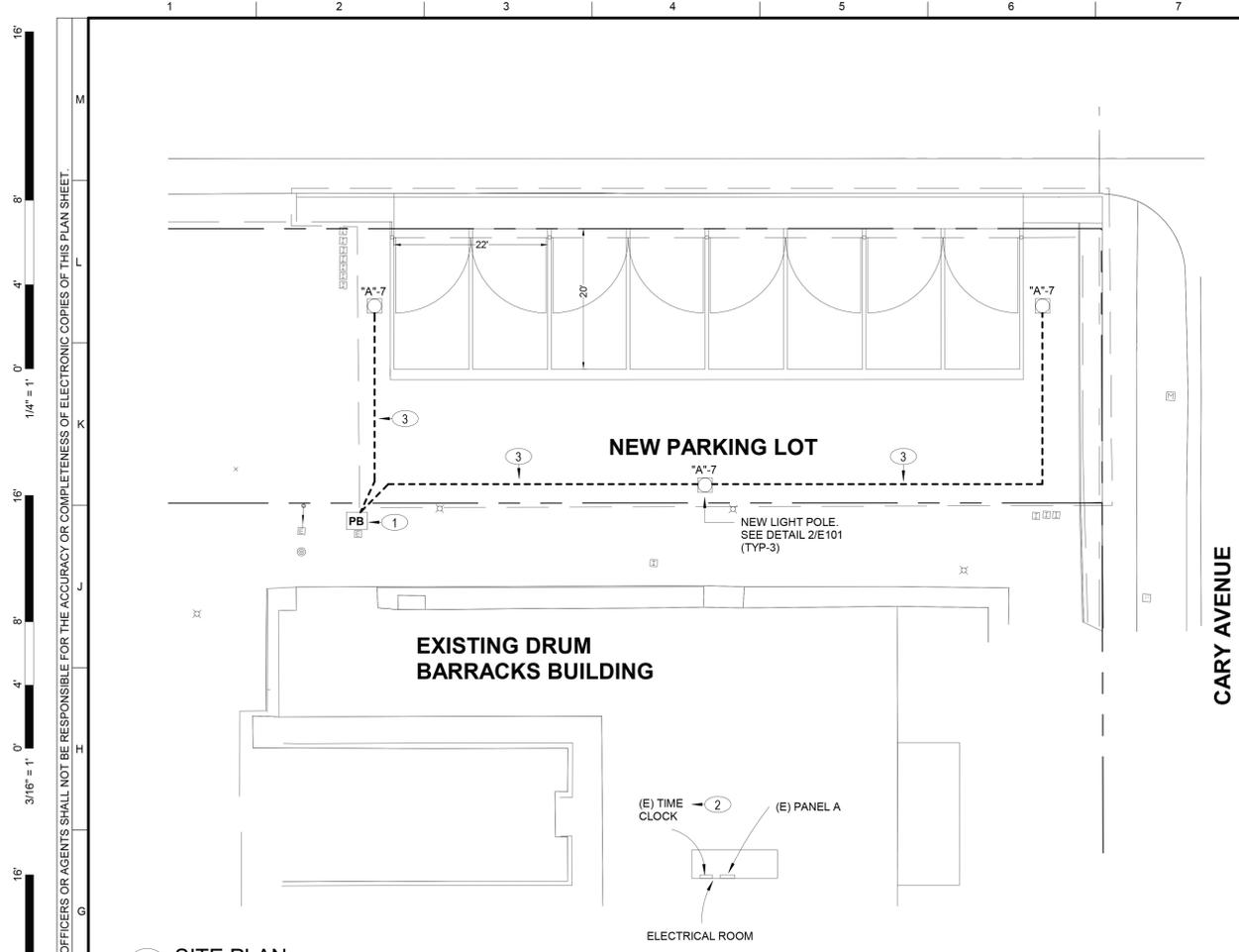
REVISION DESCRIPTION

INDEX NO.

NO.

DATE

REVISION DESCRIPTION



**1 SITE PLAN**  
1" = 1'-0"

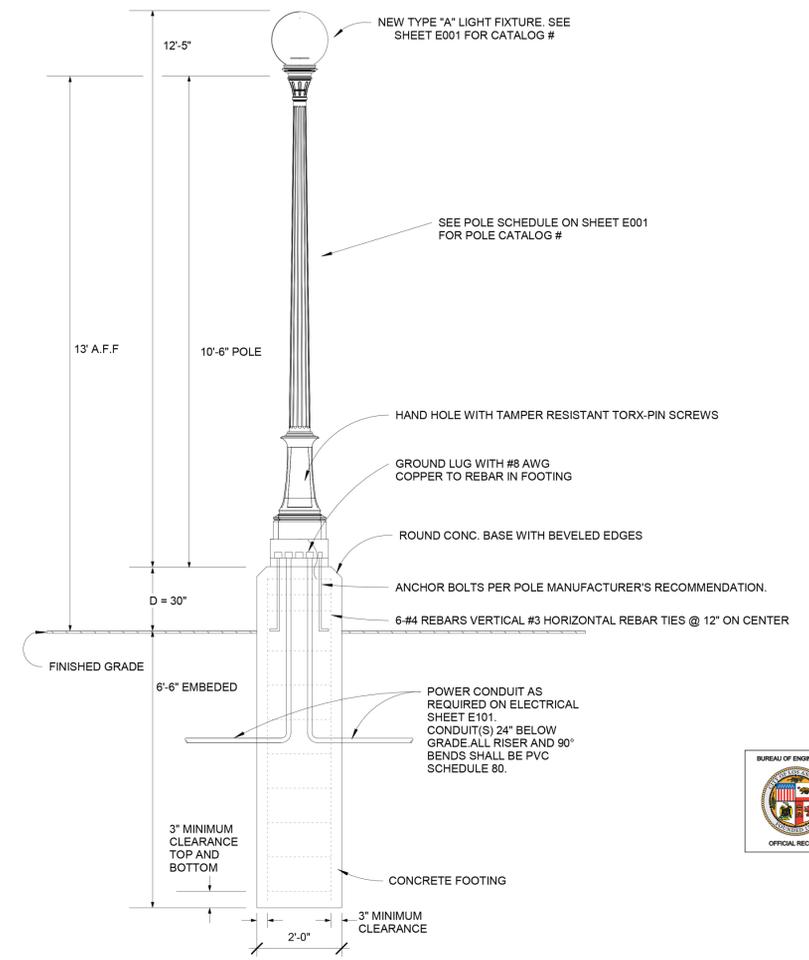
EXISTING ELECTRICAL SERVICE INFORMATION  
AVAILABLE SHORT CIRCUIT: 19,200 AMPS SYMMETRICAL AT 240 V-1PH-60HZ

**LIGHTING PLAN KEYNOTES:** #

1. CONNECT THE NEW CONDUCTORS TO THE EXISTING SWITCHED CIRCUIT "A-7" LOCATED INSIDE THE EXISTING CONCRETE PULLBOX. THE CIRCUIT 7 IS BEING CONTROLLED BY THE EXISTING ASTRONOMICAL TIME CLOCK AS SPECIFIED IN NOTE 2.
2. EXISTING ASTRONOMICAL TIMECLOCK \* TORK MODEL 7200Z \*
3. 3/4" PVC SCHEDULE 40 - 2 #12 + 1 # 12 GND

**SINGLE LINE SHEET NOTES:**

1. ALL ELECTRICAL COMPONENTS ARE EXISTING TO REMAIN



**2 LIGHTING POLE BASE DETAIL**  
1/2" = 1'-0"

**PANEL: (E) PANEL A**

LOCATION: DRUM BARRACKS CIVIL WAR MUSEUM  
 SUPPLY FROM: 225 AMP PANEL MAIN  
 MOUNTING: SURFACE  
 ENCLOSURE: Type 1

VOLTS: 120/240 Single  
 PHAS... 1  
 WIRES: 3

A.I.C. RATING:  
 BUS RATING: 225  
 MAINS RATING: 225 A  
 MAINS TYPE: MCB

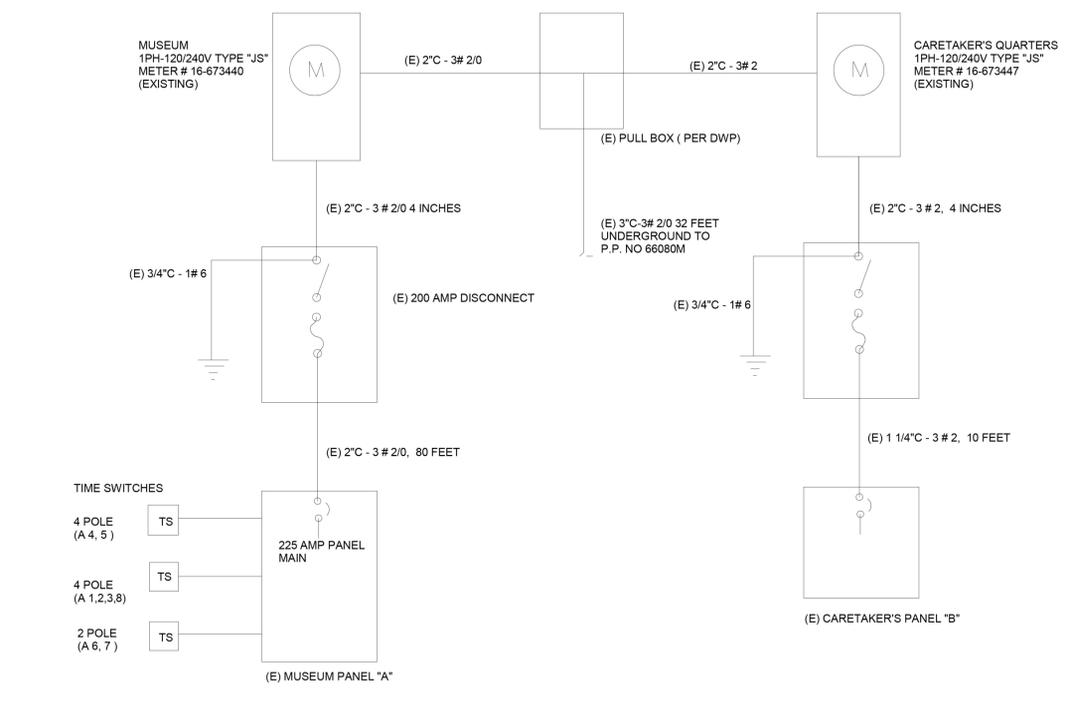
**NOTES:**

CKT	POLES	BREA...	A	B	BREA...	POLES	CKT
1	1	20	1920	1620 VA		1	EXISTING LOADS
3	1	20		1900 VA	1800 VA	20	EXISTING LOADS
5	1	20	1800	1440 VA		20	EXISTING LOADS
7	1	20		1689 VA	1440 VA	20	EXISTING LOADS
9	1	20	360	720 VA		20	EXISTING LOADS
11	1	20		1080 VA	1500 VA	20	EXISTING LOADS
13	1	20	1500	1440 VA		20	EXISTING LOADS
15	1	20		1260 VA	1440 VA	20	EXISTING LOADS
17	1	20	1440	0 VA		20	EXISTING LOADS
19	1	20		0 VA	0 VA	20	EXISTING LOADS
<b>TOTAL LOADS:</b>			12240 VA	12109 VA			
<b>TOTAL AMPS:</b>			102 A	101 A			

**LEGEND:**

	12240 VA	12109 VA	24100 VA
TOTAL CONNECTED LOAD:	12240 VA	12109 VA	TOTAL CONNECTED LOAD: 24100 VA
LCL LOAD:	1785VA	1645VA	TOTAL ESTIMATED DEMAND: 27530 VA
TOTAL ESTIMATED DEMAND:	14025 VA	13505VA	TOTAL CONNECTED: 114.71 A

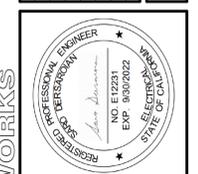
\* EXISTING CIRCUIT WITH MODIFIED LOAD.



**3 EXISTING SINGLE LINE DIAGRAM**  
3/32" = 1'-0"

NO.	REVISION DESCRIPTION	DATE	BY

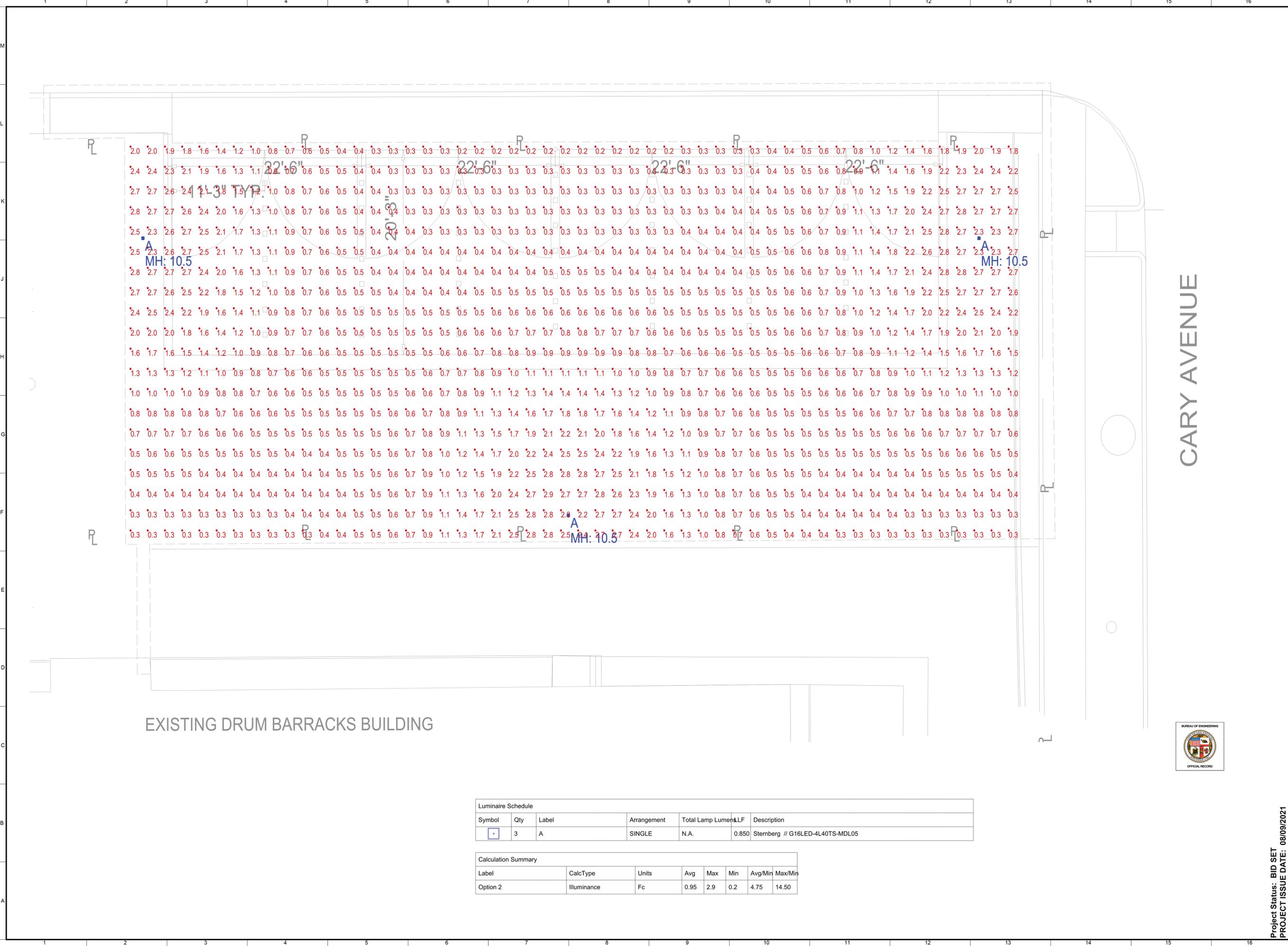
INDEX NO. **MF-300494**  
RAP FACILITY NO. **243**



CITY ENGINEER	DATE
GARY LEE MOORE, P.E., ENV SP <td>11/17/2020</td>	11/17/2020

ARCHITECTURAL DIVISION  
 ENGINEER: SARO DERSARJOAN LIC. NO.: E1231  
 DESIGNED BY: KARTHIK BHASKARAN  
 DRAWN BY: KARTHIK BHASKARAN  
 CHECKED BY: SARO DERSARJOAN  
 APPROVED BY: STEVEN FIERCE, A.I.A., PRINCIPAL ARCHITECT

VERTICAL CONTROL:	WORK ORDER NO.
HORIZONTAL CONTROL:	E170515D
SHEET TITLE: SITE PLAN - SLD & PANEL SCHEDULE	PLAN FILE NO.
PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM PARKING LOT DEVELOPMENT	DRAWING NO. <b>E101</b>
ADDRESS: 1052 N BANNING BLVD, WILMINGTON, CA 90744	SHEET <b>22</b> OF <b>25</b>



EXISTING DRUM BARRACKS BUILDING



Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Total Lamp Lumen&LF	Description
⬢	3	A	SINGLE	N.A.	0.850 Sternberg // G16LED-4L40TS-MDL05

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min Max/Min
Option 2	Illuminance	Fc	0.95	2.9	0.2	4.75 14.50

Project Status: BID SET  
 PROJECT ISSUE DATE: 08/09/2021

**ENGINEERING**  
CITY OF LOS ANGELES

**BUREAU OF ENGINEERING**

INDEX NO. MF-300494  
RAP FACILITY NO. 243

DATE: 11/17/2020  
NO. E 1231  
EXP. 9/30/2022

REVISION DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER  
SARO DERSARJOAN  
NO. E 1231  
EXP. 9/30/2022  
STATE OF CALIFORNIA

CITY ENGINEER  
DATE: 11/17/2020  
ARCHITECTURAL DIVISION  
ENGINEER: SARO DERSARJOAN LIC. NO.: E1231  
DESIGNED BY: KARTHICK BHASKARAN  
DRAWN BY: KARTHICK BHASKARAN  
CHECKED BY: SARO DERSARJOAN  
APPROVED BY: STEVEN FIERCE, A.I.A., PRINCIPAL ARCHITECT

VERTICAL CONTROL:  
HORIZONTAL CONTROL:

PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM  
PARKING LOT DEVELOPMENT

WORK ORDER NO. E170515D  
PLAN FILE NO.

DRAWING NO. E102

SHEET 23 OF 25

PROJECT: DRUM BARRACKS CIVIL WAR MUSEUM  
PARKING LOT DEVELOPMENT  
ADDRESS: 1052 N BANNING BLVD, WILMINGTON, CA 90744

PLOTTED 6/22/2021 2:02:55 PM

ELECTRICAL SPECIFICATIONS

THE CITY OF LOS ANGELES ELECTRICAL CODE(LATEST EDITION) IS MADE PART OF THESE PLANS AND SPECIFICATIONS. WHERE CONFLICT OCCURS BETWEEN LOS ANGELES ELECTRICAL CODE AND THESE ELECTRICAL SPECIFICATIONS, THE SPECIFICATION SPECIFIED HERE SHALL TAKE PRECEDENCE.

1. GENERAL SCOPE OF WORK:

WORK IN THIS CONTRACT TO INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE LIGHTING AND ELECTRICAL DISTRIBUTION SYSTEM. COMPLETE AND READY FOR USE, IN ACCORDANCE WITH THESE CONTRACT DRAWINGS AND THESE SPECIFICATIONS.

2. CLEANING, INSTALLATION AND REMOVAL OF RUBBISH:

BESIDES THE GENERAL CLEANING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE FOLLOWING SPECIAL CLEANING FOR ALL TRADES SHALL BE DONE AT THE COMPLETION OF THE WORK AND DURING INSTALLATION.

(A.) CLEAN ALL ELECTRICAL EQUIPMENT AND DEVICES. REMOVE STAINS, DUST, DIRT, PLASTER, PAINT AND ETC.

(B) REMOVE ALL SPOTS, SOILS, PLASTERS AND PAINTS, SOILED DURING CONSTRUCTION, FROM ALL EXISTING WORK AND CLEAN TO ORIGINAL CONDITION.

(C) PROTECT AND CLEAN ALL FIXTURES AND EQUIPMENT.

3. CONSTRUCTION WATER, LIGHT AND POWER:

(A) THE DEPARTMENT WILL FURNISH AT NO COST TO CONTRACTOR WATER AND ELECTRICITY AS IT EXIST ON THE SITE. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL TEMPORARY LINES, FIXTURES AND EQUIPMENT FOR WATER AND ELECTRICITY AND REMOVE SAME AT COMPLETION OF WORK AT HIS/HER OWN EXPENSE.

(B) THE DEPARTMENT WILL NOT BE HELD RESPONSIBLE FOR FAILURE OF EXISTING SOURCES TO SUPPLY CONTINUOUS WATER OR POWER, NOR WILL THE DEPT. BE HELD RESPONSIBLE FOR THE EXISTING SOURCES TO SUPPLY ADEQUATE DEMAND AS REQUIRED BY THE CONSTRUCTION OF THIS WORK.

4. MAIN SERVICE:

(A) REQUIRED:

1. UNDERGROUND SERVICE CONDUIT FOR LIGHT AND POWER FROM MAIN SWITCHBOARD TO PROPERTY LINE TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE DEPARTMENT OF WATER AND POWER. CONDUITS SHALL HAVE A MINIMUM 3" CONCRETE COVER.

(B). COORDINATE ALL LADWP WORK AS FOLLOWS:

1. UNDERGROUND SERVICE CONDUITS FROM PROPERTY LINE TO UTILITY SOURCE INSTALLED BY THE DEPARTMENT OF WATER AND POWER. UTILITY FEES TO BE PAID FOR BY LA RECREATION AND PARKS.

2. MAIN SERVICE UNDERGROUND CONDUCTORS FROM UTILITY SOURCE TO MAIN SWITCHBOARD.

3. CURRENT TRANSFORMERS FOR SWITCHBOARD.

4. SERVICE CONNECTIONS TO TRANSFORMERS AND METERS.

5. METERS.

6. EXCESS CABLE CHARGES TO BE PAID BY LA RECREATION AND PARKS.

5. MAIN SWITCHBOARD:

(A) TYPE:

NEMA 1 FLOOR STANDING ENCLOSURE, DEAD FRONT, DEAD REAR, WITH ALL BUSSING, WIRING AND CONNECTIONS ACCESSIBLE FROM THE FRONT. ARRANGED IN ACCORDANCE WITH WIRING DIAGRAMS AND APPROVED SHOP DRAWINGS AS MANUFACTURED BY SQUARE D, GE, EATON OR APPROVED EQUAL.

(B) CONSTRUCTION:

1. ALL BUSSING MATERIALS SHALL BE TIN PLATED COPPER PER NEMA STANDARDS.

2. VERTICAL SECTIONS SHALL HAVE FULL HEIGHT BUSSING AND WHERE SPACES FOR FUTURE USE DEVICES ARE SHOWN ON THE DRAWINGS. ALL THE NECESSARY MOUNTING HARDWARE AND PROVISIONS SHALL BE FURNISHED.

(C) SERVICE SECTION:

SHALL CONTAIN FIXED POSITION MAIN CIRCUIT BREAKER EQUIPPED WITH PROVISIONS FOR UTILITY COMPANY METERING IN STRICT ACCORDANCE WITH THE DEPARTMENT OF WATER AND POWER REQUIREMENTS. THE MAIN CIRCUIT BREAKER SHALL BE TRIP FREE, THERMAL MAGNETIC, MOLDED CASE TYPE, BY SQUARE D,GE,EATON OR APPROVED EQUAL.

THERE SHALL BE MEANS TO LOCK EACH MAIN CIRCUIT BREAKER IN THE OPEN POSITION WITH A PADLOCK. THE DEPARTMENT OF WATER AND POWER WILL FURNISH THE LOCK AND OPEN THE MAIN BREAKER WHEN REQUIRED BY STATION MAINTENANCE OR REPAIR.

(D) DISTRIBUTION SECTION:

SHALL CONTAIN THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKER OF THE REQUIRED VOLTAGE & AMPERAGE WITH A MINIMUM 25,000 RMS SYMMETRICAL SHORT CIRCUIT INTERRUPTING CAPACITY BY SQUARE D, (TYPE LAL), GE, EATON OR EQUAL, UNLESS NOTED OTHERWISE ON THE PLAN.

(E.) IDENTIFICATION:

ENGRAVE LAMINATED PLASTIC NAMEPLATES TO BE PROVIDED FOR EACH DEVICE ON THE SWITCHBOARD. NAMEPLATES TO BEAR THE DESIGNATION OF THE LOAD CONTROLLED.

(F.) TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS PUBLISHED TORQUE TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MFRS. TORQUING REQUIREMENTS ARE NOT INDICATED, USE TIGHTENING TORQUES SPECIFIED IN UL STANDARD 486A.

(G.) MOUNTING INDOOR TYPE:

SECURELY BOLTED TO FLOOR AND WALL AND PLUMB AND SQUARE. PROVIDE 3" RAISED CONCRETE SLAB FOR MOUNTING SWITCHGEAR LOCATED ON THE GROUND FLOOR. DIMENSION OF RAISED CONCRETE SLAB TO BE THE SAME AS THE SWITCHGEAR. VERIFY SITE SPECIFICATION INSTALLATION WITH RAP ENGINEERS/PROJECT MANAGER.

(H.) MOUNTING OUTDOOR TYPE:

SHALL BE NEMA 3R, GAUGE 10 METAL ENCLOSURE UNLESS NOTED OTHERWISE ON THE PLAN.

(I.) SHOP DRAWINGS:

BEFORE ANY FABRICATION OF SWITCHGEAR IS BEGUN, SHOP DRAWINGS INDICATING THE MATERIALS AND DETAILS OF CONSTRUCTION AND EQUIPMENT AND UL LISTING SHALL BE APPROVED BY THE DEPARTMENT OF WATER AND POWER PRIOR TO THEIR SUBMITTAL TO THE DEPT. OF RECREATION AND PARKS.

(J.) GROUNDING:

PROVIDE AND INSTALL A DRIVEN GROUND COPPER ROD 5/8" IN DIAMETER BY 10 FT. LONG FOR SERVICE GROUNDING REQUIREMENTS LOCATED INSIDE THE ENCLOSURE. ALSO PROVIDE AND USE OTHER GROUNDING ELECTRODES AS INDICATED ON PLAN OR AS REQUIRED BY CODE. EACH ELECTRODE SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM. THE BONDING JUMPERS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CODE, ARTICLE 250. TIGHTEN CONNECTORS TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STD. 486 TO ASSURE PERMANENT AND EFFECTIVE GROUND.

6. PANELBOARDS:

(A) PANELBOARDS SHALL BE CIRCUIT BREAKER TYPE WITH BOLT-ON TYPE, TRIP FREE CIRCUIT BREAKERS. PANELBOARDS SHALL BE FURNISHED WITH COPPER BUSSING AND MAIN LUGS OR MAIN BREAKER AND ALL BRANCH CIRCUIT BREAKER AS INDICATED ON THE SCHEDULES. EACH BRANCH CIRCUIT BREAKERS SHALL HAVE PERMANENT TYPE PLASTIC OR METAL NUMBERS TO IDENTIFY THE CIRCUIT PROTECTED. MIN. SIZE SHALL BE 20"W X 5 3/4"D, HEIGHT AS REQUIRED. PANELBOARD SHALL BE SQ. D, GE, EATON OR EQUAL.

(B.) IDENTIFICATION SHALL HAVE ENGRAVED LAMINATED PLASTIC NAMEPLATES. SCHEDULES SHALL BE TYPEWRITTEN AND SHALL DESIGNATE THE AREA OR EQUIPMENT SERVED BY EACH CIRCUIT MOUNTED IN A CARD HOLDER ON THE INSIDE OF THE DOOR AND COVERED WITH GLASS OR CLEAR PLASTIC.

(C.) SHOP DRAWINGS ARE REQUIRED. THEY SHALL INDICATE ALL THE DETAILS OF CONSTRUCTION AND EQUIPMENT. ALL ITEMS SUBMITTED FOR INSTALLATION SHALL BEAR A UL LABEL AND LISTED FOR THE PURPOSE.

(D.) CIRCUIT BREAKERS SHALL HAVE A MINIMUM OF 10,000 AMPS RMS SYMMETRICAL FOR 120/240 VOLTS AND 22,000 AMPS FOR 277/480 VOLTS SYSTEM UNLESS NOTED ON THE PLAN.

(E.) MOUNTING SHALL BE FLUSH WITH SURROUNDING WALLS UNLESS SPECIFICALLY NOTED TO BE SURFACE MOUNTED ON THE PLAN. MAXIMUM HEIGHT OF THE HIGHEST CIRCUIT BREAKER OR CONTROL DEVICES SHALL NOT BE MORE THAN 6 FT. ABOVE THE SURROUNDING FINISH FLOOR.

(F.) TIGHTEN CONNECTORS AND TERMINALS INCLUDING SCREWS AND BOLTS IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS PUBLISHED TORQUE TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MANUFACTURERS TORQUING REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS TO COMPLY WITH TIGHTENING TORQUE SPECIFIED IN UL STANDARDS 486 A & B.

7. RAINPROOF ENCLOSURES FOR SWITCHBOARD AND/OR PANELBOARDS. SEE DETAIL DWG.

(A) RAINPROOF ENCLOSURE FOR OUTDOOR INSTALLATION SHALL BE FREE STANDING NEMA TYPE 3R GAUGE 10 CONSTRUCTION (EXCEPT GAUGE 12 STAINLESS STEEL FOR IRRIGATION CONTROLLER SERVICE) ENCLOSURE OF SUITABLE DIMENSION. ALL BOLT HEADS EXPOSED ON THE EXTERIOR OF ENCLOSURE SHALL BE ROUND HEAD GALVANIZED TYPE BY HOFFMAN ENGINEERING CO. OR MYERS POWER PRODUCTS, IEM OR EQUAL.

(B.) DOORS SHALL BE CUSTOM EQUIPPED WITH STRONG PADLOCKABLE STEEL COVER TO PROTECT THE OPERATING HANDLES. PAD LOCKABLE COVERS SHALL ACCOMMODATE THE DEPARTMENT OF RECREATION AND PARKS LOCKS. PROVIDE TOP AND BOTTOM DOOR LOUVERS.

(C.) MOUNTING: OUTDOOR TYPE SHALL BE SECURELY BOLTED TO A STEEL REINFORCED CEMENT CONCRETE PAD EXTENDING 6 INCHES BEYOND THE PANEL ENCLOSURE IN BOTH LENGTH AND WIDTH DIMENSIONS AND 36 INCHES IN FRONT OF PANEL ENCLOSURE. THE PAD SHALL EXTEND 6" ABOVE AND 6" BELOW FINISHED GRADE. REINFORCING STEEL SHALL BE #4 REBAR LAID LENGTHWISE AND CROSSWISE 12" O.C. WITH 3 INCH CLEAR COVER TO SUBGRADE, AND SECURELY TIED AT EACH POINT OF CONTACT.

SWITCHGEAR INSTALLATION ON EXISTING SLABS: SECURELY BOLTED TO A STEEL REINFORCED CONCRETE PAD EXTENDING 6" BEYOND THE PANEL ENCLOSURE IN BOTH REAR & SIDES AND 0' IN FRONT OF ENCLOSURE. PAD SHALL EXTEND 3" ABOVE & 6" BELOW FINISH GRADE. REINFORCING STEEL SAME AS ABOVE.

(D.) LIGHTS AND RECEPTACLES: PROVIDE AND INSTALL A SURFACE MOUNTED LED FIXTURE, WP WALL SWITCH AND A 20 AMP RATED GFI TYPE RECEPTACLE INSIDE THE ENCLOSURE FED FROM ONE 20A-1P CIRCUIT BREAKER WIRED WITH 2#12 THINWTHWN CU IN 1/2" CONDUIT.

8. CONTROLS:

(A.) TYPES

1. CIRCUIT BREAKERS - SHALL BE THERMAL MAGNETIC. EACH BREAKER SHALL BE EQUIPPED WITH A DEVICE FOR INDIVIDUAL PADLOCKING.

2. TIME SWITCHES - SHALL BE AN ET90215CR INTERMATIC. CONTROL SHALL HAVE AN ASTRO-DIAL, TWO CHANNEL FEATURE, SKIP-A-DAY, OFFSET TO SUNRISE AND/OR SUNSET AND MANUAL OVERRIDE INDEPENDENTLY PROGRAMMABLE FOR EACH CHANNEL. IT SHALL BE SURFACE MOUNTABLE OR SHALL BE IN NEMA 3R FOR OUTDOOR INSTALLATION.

3. LIGHT SWITCH TIMER - SHALL BE PARAGON MODEL NO. ET1100 SERIES. IT SAHLL BE SOLID STATE WITH ADJUSTABLE TIME RANGE FROM ONE MINUTE TO 18 HOURS. THE CONTROL SHALL BE TAMPER-PROOF WITH OUT-OF-SIGHT PROGRAMMING DIAL. THE CONTROL SHALL BE RATED UP TO 1100 WATTS AND CAPABLE OF OPERATING BETWEEN 24 VAC AND 277 VAC.

4. LOCAL SWITCHES - SHALL BE SPECIFICATION GRADE, HUBBELL 1221-I SERIES EQUIVALENT LEVITON MODEL OR EQUAL.

5. LIGHTING CONTACTORS - AMPERE RATING, NUMBER OF POLES, LINE VOLTAGE, CONTROL VOLTAGE, MOMENTARY OR MAINTAINED CONTACT AS INDICATED ON DRAWINGS, OR AS REQUIRED, SQUARE D CLASS 8903, OR EQUIVALENT AUTOMATIC SWITCH CO. MODEL OR EQUAL.

6. PUSH BUTTON STATIONS - HEAVY DUTY CONTROL STATIONS, LOCATE IN RECREATION DIRECTORS OFFICE ( UNLESS OTHERWISE INDICATED ) FOR REMOTE CONTROL OF FIELD LIGHTING. SQUARE D CLASS 9001, TYPE B IN NEMA 4 ENCLOSURE. FOR OUTSIDE INSTALLATION REES 04969-415 MUSHROOM PLUNGER OR EQUAL. LOCATE PUSH BUTTON AS SPECIFIED ON THE PLAN OR DETAIL.

(B) IDENTIFICATION - ALL CONTROL DEVICES SHALL BE IDENTIFIED BY ENGRAVED PLATES DESIGNATING THE EQUIPMENT CONTROLLED. MOTORS AND EQUIPMENT SHALL BEAR NEAT, LEGIBLE AND PERMANENT IDENTIFICATION CORRESPONDING WITH THAT ON THE CONTROL DEVICES USING ENGRAVED LAMINATED PLASTIC NAMEPLATES AFFIXED WITH A MINIMUM OF TWO ESCUTCHEON PINS OR SCREWS.

(C) LOCATIONS - FOR OUTDOOR INSTALLATION, TIME SWITCHES AND CONTACTORS SHALL BE LOCATED IN A SEPARATE PARTITIONED SPACE INSIDE THE RAINPROOF ENCLOSURE, OR AS INDICATED IN THE PLAN.

9. BOXES:

(A) TYPES: WEATHERPROOF CAST BOXES FOR OUTDOOR AND SURFACE WIRING AND WHERE INDICATED ON THE DRAWINGS BY SYMBOL "WP", CROUSE-HINDS FD OR RUSSELL-STOLL FD SERIES OUTLET BOXES OR EQUAL. CONCRETE PULL BOX WITH BOLT DOWN STEEL COVER IS PERMITTED FOR UNDERGROUND INSTALLATION. BROOKS PRODUCT H20 RATED WITH GALVANIZED FRAME OR EQUAL, OR AS INDICATED ON THE PLAN. PULL BOXES TO BE SEIZED PER NEC.

(B) ACCESSORIES: WEATHERPROOF FOR CROUSE-HINDS FD SERIES OUTLET BOXES OR RUSSELL-STOLL FD SERIES OR EQUAL.

(C) UNDERGROUND PULL BOXES, AVOID INSTALLATION AT THE LOWEST SPOT OF THE SURROUNDING AREAS. PULL BOX SHOULD HAVE AT LEAST 12" LAYER OF PEA GRAVEL BENEATH THE BOX.

10. RECEPTACLES:

(A) TYPES: ALL RECEPTACLES SHALL BE SPECIFICATION GRADE AND SHALL MEET NEMA WD-1-1974 TESTS.

(B) FLUSH WALL TYPE, HUBBELL 5262-I, 15 AMPERE, 125 VOLTS OR HUBBELL 8300-I 20 AMPERE, 125 VOLTS, OR EQUIVALENT LEVITON MODEL OR EQUAL.

(C) SHALL BE SCREW-TERMINAL TYPE. NO PUSH-IN TYPE CONNECTIONS ARE PERMITTED.

11. OUTLET PLATES:

(A) SHALL BE STAINLESS STEEL FOR ALL RECEPTACLE AND LIGHT SWITCH, SIGNAL AND COMMUNICATION OUTLETS.

(B) SHALL BE ENGRAVED PLATES FOR SPECIAL EQUIPMENT, MOTORS, VOLTAGE OTHER THAN 120 VOLT AND GANGED SWITCHES.

12. INSTALLATION OF POLES:

(A) TYPE SHALL BE ROUND TAPERED GALVANIZED STEEL UNLESS OTHERWISE INDICATED. POLE HEIGHT SHALL BE LESS THAN 30' UNLESS NOTED ON THE PLAN.

(B) ERECTION: IN ACCORDANCE WITH APPROVED SHOP DRAWINGS, PLUMB AND PROPERLY ALIGNED. BASE PLATES SHALL BE GROUTED USING AN APPROVED STANDARD COMMERCIAL NON-SHRINK GROUTING MORTAR.

(C) GROUNDING: SECURELY GROUND ALL PARKING LOT LIGHTING POLES WITH APPROVED GROUNDING BUSHINGS AND GROUNDING CLAMPS.

(D.) CONDUITS ENTERING AND/OR LEAVING POLE FOOTING SHALL BE PVC SCHED 80 TO A MINIMUM DISTANCE OF 3'-0" FROM FOOTINGS.

(E) TACK WELDING OF NUTS TO WASHER AND WASHER TO BASE PLATE IS REQUIRED.

13. CONDUIT:

(A) REQUIRED: ALL WIRING SHALL BE IN RIGID OR PVC COATED STEEL CONDUIT EXCEPT AS FOLLOWS:

1. PVC MAYBE USED UNDERGROUND FROM PVC SCHED 80 CONDUIT STUBS LOCATED 3 FEET OUTSIDE FOOTING LINES.

2. EMT MAYBE USED ABOVE GROUND INSIDE BUILDINGS 10'AFF WHERE NOT ENCASED IN MASONRY OR CONCRETE AND NOT SUBJECT TO PHYSICAL DAMAGE.

3.FOR METHANE ZONES: ALL UNDERGROUND CONDUITS SHALL BE THREADED PVC COATED GALVANIZED RIGID CONDUIT STEEL CONDUIT. FOR ALL PENETRATIONS THROUGH THE GRADE, A CONDUIT SEAL SHALL BE INSTALLED WITHIN 18" ABOVE THE FINISHED GRADE. UNLESS OTHERWISE NOTED.

(B.) TYPES:

1. RIGID STEEL CONDUIT: IN ACCORDANCE WITH USA STD C80.1 AND ASTM B-6.

2. ELECTRICAL METALLIC TUBING: IN ACCORDANCE WITH USA STD C80-3 & ASTM B-6.

3. PVC CONDUIT: SHALL CONFORM TO NEMA STANDARD TC-6-1967, WC-1094 AND UL STANDARD 651, 1974 HEAVY WALL SCHEDULE 40 BURIED NOT LESS THAN 24 INCHES BELOW GRADE.

4. PVC EXTERNALLY COATED RIGID STEEL CONDUIT, RIGID STEEL ZINC COATED WITH ADDITIONAL COATING OF PVC CONFORMING TO ANSI C-80 & NEMA RN1.

(C.) FITTINGS AND ACCESSORIES:

1. FOR RIGID STEEL CONDUIT: APPROVED TYPES; ERICSON COUPLING OR THREADLESS CONNECTORS FOR JOINING RUNS. GROUNDING BUSHING SHALL BE THOMAS & BETTS, APPLETON OR EQUAL MALLEABLE IRON INSULATED GROUNDING BUSHINGS, UL FILE E14814A.

2. FOR ELECTRICAL METALLIC TUBING: COMPRESSION GLAND OR STEEL SET SCREW TYPE COUPLINGS AND CONNECTORS WITH INSULATED THROAT.

(D.) SIZES: MINIMUM 3/4" CONDUIT UNLESS NOTED ON THE PLAN.

(E.) CONCRETE COVER:

U.O.N. UNDERGROUND CONDUIT RUNS IN RECREATION AND PARKS PROPERTY INSTALLED WITH SCHEDULE 40 PVC SHALL HAVE A MINIMUM 6" DETECTABLE "CAUTION" TAPE, 12" ABOVE CONDUIT, OVER ITS ENTIRE LENGTH WIDE, AND SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR SIZED ACCORDING TO THE PREVAILING CODE BUT NOT LESS THAN SHOWN ON THE PLAN. ROUTE CONDUIT UNDER HARDSCAPE WHERE POSSIBLE.

14. CONDUIT INSTALLATION:

(A.) ALL CONDUITS SHALL BE CONCEALED EXCEPT WHERE OTHERWISE INDICATED ON THE DRAWINGS.

(B.) PVC COATED STEEL CONDUIT WHICH WILL BE BURIED IN THE GROUND SHALL HAVE WATER TIGHT JOINTS. JOINTS SHALL BE ASSEMBLED WITH ANTI-SEIZE COMPOUND.

(C.) INSTALL EXPANSION FITTINGS IN ALL RACEWAY WHENEVER EXPANSION JOINTS ARE CROSSED. FITTINGS SHALL BE EQUAL TO "OZ" TYPE "XZ" OR "TX".

(D.) NO HORIZONTAL CONDUIT SHALL BE INSTALLED IN CONCRETE SLABS-ON-GRADE. SLEEVES FOR CONDUIT PENETRATING FLOORS OR CONCRETE SLAB SHALL TERMINATE 3 INCH ABOVE THE FLOOR. CONDUITS SHALL BE PROTECTED FROM CORROSION BY ONE OF THE FOLLOWING METHODS. (EXTEND 3" ABOVE AND 3" BELOW TOP OF CONCRETE.)

1. PVC EXTERNALLY COATED STEEL CONDUIT BY ROBROY INDUSTRIES.

2. SPIRAL WRAP WITH 40 MIL HALF LAP PLASTIC TAPE.

3. PVC SLEEVE.

(E.) TOPS OF UNDERGROUND CONDUIT RUNS OUTSIDE OF BUILDING OR UNDER CONCRETE SLABS SHALL NOT BE LESS THAN 24" BELOW FINISHED GRADE, NOR LESS THAN THAT REQUIRED BY THE DEPARTMENT OF WATER AND POWER. UNDERGROUND CONDUIT SHALL NOT PASS OVER TANKS OR OTHER UNDERGROUND EQUIPMENT OR THROUGH FOOTINGS EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS.

(F) ALL CONDUIT BENDS INSTALLED UNDERGROUND SHALL BE THE LONG RADIUS TYPE WITH RADI NOT LESS THAN 10 TIMES THE INTERNAL DIAMETER OF THE CONDUIT AND WITH NOT MORE THAN TWO 90° BENDS AND ONE 45° SWEEP IN ANY RUN. EXCEPTION: FOR POWER AND LIGHT CONDUIT ABOVE GROUND, FACTORY ELLS ARE PERMITTED.

(G.) EACH RUN SHALL BE TESTED IMMEDIATELY AFTER INSTALLATION TO ASSURE FREEDOM FROM OBSTRUCTION AND EACH END PLUGGED AFTER THE TESTING IS COMPLETED. A GALVANIZED IRON PULL WIRE NO. 12 AWG OR 1/8-INCH NYLON POLYPROPYLENE CORD SHALL BE INSTALLED IMMEDIATELY AFTER CONDUIT INSTALLATION IN EACH CONDUIT IN WHICH THE CONDUCTORS WILL NOT BE IMMEDIATELY INSTALLED.

(H.) CONDUITS "JACK-THRU" AND/OR BORED THRU UNDERGROUND SHALL BE MINIMUM 1". PULL IN PVC SCHED 40. CONDUIT MAY BE PULLED IN WITH BORING ROD.

1. CONDUITS IN UNDERGROUND PULL BOXES SHALL BE SEALED WITH "LHD"-1# OR 5# DUCT SEAL AS MANUFACTURED BY DOTTIE CO. OR APPROVED EQUAL.

15. CONDUCTORS:

(A) TYPE THHN/THWN, 600 VOLTS INSULATION PER UL 83 FOR ALL GENERAL WIRING SUBJECT TO TEMPERATURES AT 75°C MINIMUM, WET OR DRY LOCATIONS.

(B.) TYPES:

1. COPPER WIRE FOR ALL CONDUCTORS.

2. NO CONDUCTORS SMALLER THAN NO. 12 AWG EXCEPT FOR CONTROL WIRES WHICH SHALL BE NO. 14 AWG OR AS INDICATED ON THE PLAN.

3. CONDUCTORS FROM BASE OF NEW OR EXISTING POLES UP TO LUMINAIRES SHALL BE NO. 10 AWG MINIMUM UNLESS OTHERWISE NOTED ON THE PLAN. PROVIDE APPROXIMATELY 18" SLACK IN HAND HOLE AND PULL BOXES.

4. FOR IRRIGATION CONTROL WIRES, REFER TO IRRIGATION SPECIFICATIONS.

(C.) SPLICES:

1. BRANCH AND FEEDER CONDUCTOR JOINTS SHALL BE LOCATED ONLY IN OUTLET BOXES, FIXTURES OR PULL BOXES. CONDUCTOR JOINTS SHALL NOT BE MADE IN CONDUIT FITTINGS.

2. ALL SPLICES IN UNDERGROUND PULL BOXES SHALL BE SCOTCH BAGGED AND WATER TIGHT OR USE POLARIS, DRYCON CONNECTOR OR EQUIVALENT.

(D.) COLOR CODE:

1. FOR POLYPHASE CIRCUITS, IDENTIFY EACH PHASE THROUGHOUT THE CIRCUIT WITH DESIGNATION PHASE A (BLACK), PHASE B (RED) AND PHASE C (BLUE), NEUTRAL (WHITE) FOR 208/120V, 3 PHASE; PHASE A (BLACK), PHASE B HIGH-LEG (ORANGE), PHASE C (BLUE), NEUTRAL (WHITE) FOR 240/120V 3 PHASE; PHASE A (BROWN), PHASE B (ORANGE), PHASE C (YELLOW), NEUTRAL (GRAY) FOR 480/277V, 3 PHASE.

2. FOR CONDUCTOR NO. 6 AWG OR SMALLER COLOR CODING SHALL BE ACCOMPLISHED BY INHERENT INSULATION COLOR. TAGGING PAINT OR OTHER MARKINGS SHALL NOT BE USED FOR COLOR IDENTIFICATION.

(E.) INSPECTION:

CONTRACTOR SHALL NOTIFY THE GENERAL MANAGER OR AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO START OF PULLING WIRE THROUGH ANY OF THE UNDERGROUND CONDUIT RUNS. THE CONTRACTOR SHALL START PULLING WIRE ONLY AFTER THE AUTHORIZED REPRESENTATIVE INSPECTS AND FIND THAT: THE WIRE CONTAINS NO SPLICES, THE NEUTRAL WIRE IS WHITE AND THE EQUIPMENT GROUND WIRE IS GREEN.



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