BOARD OF RECREATION AND PARK COMMISSIONERS

APR 02 2020

BOARD REPORT

DATE

April 02, 2020

NO. 20-045

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BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: TRINITY RECREATION CENTER – SKATE PARK AND SITE IMPROVEMENTS PROJECT (PRJ21248) PROJECT – APPROVAL OF THE DESIGN; CATEGORICAL EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PURSUANT TO ARTICLE III, SECTION 1, CLASS 1(3) [MINOR ALTERATION OF EXISTING PEDESTRIAN TRAILS], CLASS 1(12) [OUTDOOR LIGHTING FOR SECURITY], CLASS 3(6) [NEW CONSTRUCTION OF ACCESSORY STRUCTURES], CLASS 4(3) [TREE PLANTING AND LANDSCAPING], CLASS 4(12) [MINOR TRENCHING AND BACKFILLING] AND CLASS 11(6) [PLACEMENT OF MINOR STRUCTURES ACCESSORY TO EXISTING FACILITIES] OF CITY CEQA GUIDELINES AND ARTICLE 19, SECTIONS 15301(c), 15303(e), 15304(b), 15304(f) AND 15311 OF CALIFORNIA CEQA GUIDELINES

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RECOMMENDATIONS

- 1. Approve the scope of work for the Trinity Recreation Center Skate Park And Site Improvements Project (PRJ21248) (Project), as on file with the Board of Recreation and Park Commissioners (Board) Office and as attached as Attachment 1 to this Report, and authorize Department of Recreation and Parks (RAP) staff to go out to bid for the construction of the Project through RAP's on call contractor list;
- 2. Authorize RAP staff to commit from the following Transfer of Floor Area Rights (TFAR) fund a maximum of Four Hundred Ninety-Eight Thousand, Six Hundred Forty-Four Dollars (\$498,644.00) for the Project;
- Find that the proposed Project is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), pursuant to Article III, Section 1, Class 1(3) [Minor alteration of existing pedestrian trails], Class 1(12) [Outdoor lighting for security], Class 3(6) [New construction of accessory structures], Class 4(3) [Tree planting and landscaping], Class 4(12) [Minor trenching and backfilling] and Class 11(6) [Placement of minor structures accessory to existing facilities] of City CEQA guidelines and Article 19,

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Sections 15301(c), 15303(e), 15304(b), 15304(f) and 15311 of California CEQA guidelines and direct RAP staff to file a Notice of Exemption (NOE);

- 4. Authorize RAP's Chief Accounting Employee to prepare a check to the Los Angeles County Clerk in the amount of Seventy-Five Dollars (\$75.00) for the purpose of filing an NOE; and,
- 5. Authorize RAP's Chief Accounting Employee to make technical corrections as necessary to carry out the Intent of this Report.

<u>SUMMARY</u>

Trinity Recreation Center is located at 2415 Trinity Street in the South Los Angeles community of the City. This 2.06-acre park features children's play areas, basketball courts, outdoor fitness, equipment, and a gymnasium. An estimated 13,068 residents live within a 1/2 mile walking distance of Trinity Recreation Center. Due to the facilities, features and programs, and services it provides, Trinity Recreation Center meets the standard for a Community Park, as defined in the City's Public Recreation Plan.

PROJECT SCOPE

The proposed Project consists of the development of a new skate park, which will be located in the south side of the park immediately west of the recreation center adjacent to East 25th Street. Attachment 1 details the scope of work, including its general form and provided skate features, a 3,000 square-foot poured-in-place, above ground concrete skate park. In addition, there will be security lighting, re-sodding of the adjacent turf area, new sustainable planting and irrigation, 13 new trees for shade, an accessible path of travel and accessible hydrations station. Attachment 2 shows the location of the skate park.

The Project was presented to the Facility Repair and Maintenance Task Force (Task Force) on March 5, 2020. The Task Force recommended that the proposed Project move forward for the Board's consideration.

PROJECT FUNDING

Upon approval of this Report, Four Hundred Ninety-Eight Thousand, Six Hundred Forty-Four Dollars (\$498,644.00) dollars in TFAR funds (Council File (CF) #14-1411-S3 Mayor Approved on 07/16/2018) will be available for the project

The estimated cost of the proposed Project including soft cost, administration cost, contingency cost, and construction cost, is Four Hundred Fifty Thousand Dollars (\$450,000)

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The total funding available for the proposed Project is Four Hundred Ninety Eight Thousand Six Hundred Forty Four Dollars (\$498,644.00) available from TFAR Funds as indicated below.

FUNDING SOURCE MATRIX

Source	Fund/Dept/Acct	Amount	Percentage
TFAR	205/88/88RMDM	\$498,644	100%
Total		\$498,644	100%

PROJECT CONSTRUCTION

RAP staff has determined that there is sufficient funding to cover the proposed Project scope of work and anticipates a construction start date in spring of 2020. Construction is estimated to take 6-8 months to complete.

TREES AND SHADE

The impact on existing trees is minimal though 4 existing trees will have to be removed. 3 of the existing trees have reached maturity and have been extremely compromised by the surrounding hardscape conditions. The third tree is dead and needs to be removed as it poses a public safety hazard. The 13 new trees that will be planted to provide additional shade canopy for the skate park and park in general are: 4 Texas Red Oak 36" box and 9 Evergreen Pear Tree 36".

COMMUNITY OUTREACH:

There were community outreach meetings held on June 24, 2019 and October 30, 2019 with Council District 9 to discuss project scope and design and to get community input on the proposed Project. Out of these meetings came a consensus of support for the project.

ENVIRONMENTAL IMPACT

The proposed Project consists of minor alterations to existing walkway and installation of new lighting for security and operations; of the construction of a new structure accessory to a park; of landscaping and planting new trees, as well as of minor trenching and backfilling, and of the installation of new minor accessory structures. As such, RAP staff recommends the Board determines the Project is exempt from the provisions of CEQA pursuant to Article III, Section 1, Class 1(3), Class 1(12), Class 3(6), Class 4(3), Class 4(12) and Class 11(6) of the City CEQA Guidelines and Article 19, Sections 15301(c), 15303(e), 15304 (b), 15304(f) and 15311 of California CEQA Guidelines. An NOE will be filed with the Los Angeles County Clerk upon approval of this Report.

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FISCAL IMPACT

The estimated costs for the proposed Project are anticipated to be funded by TFAR funds and RAP's General Fund will not be impacted by the construction of the Project.

The funding for maintenance cost of the new skate park will be requested through RAP's new and expanded facilities budget request process. Maintenance of the park improvements can be performed by current staff with no overall impact to existing maintenance service at this existing facility.

STRATEGIC PLAN INITIATIVES AND GOALS

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

Goal No. 3: Create and Maintain world-class parks and facilities **Outcome No. 2:** Newly developed Park Projects and the redesign of the city signature parks.

Result: The installation of a world-class skate park.

This Report was prepared by Craig A. Raines Landscape Architect, Capital Projects and Planning Division, Planning, Maintenance and Construction Branch.

List of Attachments

- 1. Construction Documentation Package
- 2. Existing Site Photos



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350 S GRAND 46TH FLOOR	\angle	ANGLE		BOTH HORIZ. & VERT.
LUS ANGELES. CA 900/1	APPROX.	APPROXIMATE	JT.	JOINT
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JENERAL MANAGER		MATERIALS	MAX.	MAXIMUM
213) 202-2033	Ø	AT	MFG.	MANUFACTURER
DARRYL FORD	BC	BEGINNING OF CURVE	MH	MANHOLE
PCM. SUPERINTENDENT	BPU	BACKELOW PREVENTION UNIT	MIN.	MINIMUM
213) 202-2655	BM	BENCH MARK	MISC.	MISCELLANEOUS
	BS	BOTTOM OF STEP	NIC	NOT IN CONTRACT
PLANNING CONSTRUCTION	BW/		NO.or #	NUMBER
	B/M/	BOTH WAYS	NTS	NOT TO SCALE
				ON CENTER
	СВ			
Craig Allen Raines (Primary Contact)	C			
ANDSCAPE ARCH. ASSOCIATE III				
RLA #: 4082	CJ	CONTROL JOINT		
213) 202-2652	CLF		P DOC	
ZHIYA HUANG	CO	CLEAN OUT	PUC	POINT OF CONNECTION
ANDSCAPE ARCH.	CONC.	CONCRETE	PP	POWER POLE
213) 202-2652	CONST.	CONSTRUCT	PRC	POINT OF REVERSE CUI
	CF	CUBIC FOOT	PSI	POUND PER SQUARE IN
GONGYING PU	CSP	CORRUGATED STEEL PIPE	PVC	POLYVINYL CHLORIDE
ANDSCAPE ARCH.	CY	CUBIC YARD	QCV	QUICK COUPLER VALVE
213) 202-2652	DF	DRINKING FOUNTAIN	R	RADIUS
	DG	DECOMPOSED GRANITE	RCP	REINFORCED CONCRET
	DIA.or O	DIAMETER	RCV	REMOTE CONTROL VAL
	EA	EACH	RP	REDUCED PRESSURE
	EC	END OF CURVE		BACKFLOW DEVICE
	EJ	EXPANSION JOINT	SD	STORM DRAIN
	ELEV.	ELEVATION	SHT.	SHEET
	EQ.	EQUAL	SPECS.	SPECIFICATIONS
	FB	FIELD BOOK	SS	SANITARY SEWER
	FI	FLOWLINE	SSPWC	STANDARD SPECIFICAT
	FG	FINISH GRADE		FOR PUBLIC WORKS CO
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	NOT IN CONTRACT
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	NOT TO SCALE
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	OUTSIDE DIAMETER
	PLANTING AREA
	PULL BOX
	PROPERTY LINE
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S.	SPECIFICATIONS
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-	FOR PUBLIC WORKS CONSTRUCTION
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<u>SECTION 02100</u> SITE CLEARING, DEMOLITION

1.00 GENERAL

1.01 DESCRIPTION

- All clearing of the site and demolition indicated on the drawings and in these specifications.
- (a) Obtain and pay for Demolition Permit(s) as may be required by the Los Angeles Dept. of Building & Safety.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- (a) Earthwork, Section 02200.
- (b) Asbestos Removal, Section 02040.
- 1.03 CODES AND REGULATIONS
- Perform all work in strict accordance with all applicable Federal, State, and City of Los Angeles Codes and Regulations. Particular care shall be taken to meet all safety standards and requirements. If, in the opinion of the General Manager or any other authority having jurisdiction, additional measure are needed, the Contractor shall furnish such materials and devices as directed and shall install them, at no extra cost to the City.

1.04 WASTE MATERIAL

Trees, shrubs, branches, roots, broken concrete and materials resulting from site clearing and demolition operations, waste materials, rubbish and debris shall be promptly removed from the job site; accumulation is not permitted.

1.05 REPAIR OF DAMAGE

- (a) Any damage to remaining portions of building, site improvements, street improvements and/or private property as caused by Contractor's operation outside the scope of required site clearing and/or demolition shall be repaired or replaced at Contractor's expense.
- (b) Contractor shall repair or replace existing remaining work with new materials as necessary to restore damaged areas or surfaces to a condition equal to and matching that existing prior to start of work of this contract to the satisfaction and approval of the General Manager.

1.06 MISCELLANEOUS GENERAL REQUIREMENTS

- (a) Erect and maintain all construction fences and planking, bridges, shoring, lights, warning signs, and guards as necessary for protection of streets, sidewalks, adjoining warning signs, and guards as necessary for protection of streets, sidewalks, adjoining properties and the public.
- (a) Protect all sidewalks, drives, streets, buildings on adjacent properties and other item which are to remain undisturbed, both on and off the site of the work and adjacent streets as prescribed by the City of Los Angeles Department of Building and Safety.
- (b) Remove all protections when the work is complete or when so authorized by the General Manager.
- (c) Water or sprinkle dusty ground surfaces during site clearing operations at such frequencies as will hold down dust during all hours of work.
- (d) Notify all companies owning conduit, wires or pipes running to the property; arrange for any required removal and relocation of power poles and their guy wires, utility lines running to and on the property; cap pipes, conduits and sewers, where required, in accordance with instructions of said owners and the General Manager.

2.00 EXECUTION

2.01 SITE CLEARING

- (a) Remove all growths on the job-site within the area of new work.
- (b) Remove large roots to a depth of at least 2 feet below finish grade or to a depth where settlement will not occur as caused by decomposition of roots.
- remove all rubbish and debris resulting from site clearing as soon as possible; do not allow to accumulate.

2.02 DEMOLITION

(a) Required

- Complete demolition and/or removal of all items indicated on the drawings and these specifications.
- 2. Removal of all debris and rubbish existing on the job site and/or resulting from
- demolition operations on and off the premises.
 Removal of fixtures, equipment, and appurtenances noted on the drawings.
- Complete removal of underground piping or conduit as well as obstructions interfering with new construction.

(b) Methods1. As devised by the Contractor for the work required, with suitable equipment.

- In accordance with City of Los Angeles Building Codes and all other applicable laws and ordinances.
- 3. Procedure to be orderly and careful, with due consideration for occupants of adjacent properties and the public.
- 1. Provide bracing and shoring as necessary to avoid accidents or collapse of
- where concrete walks, slabs, or sidewalks are required to be removed and
- adjoining work is to remain, straight line saw-cut the work to a minimum depth of one (1) inch to ensure straight removal.
- 3. Abandoned pipe or conduit shall be removed to a point not less than 5 feet beyond the construction limits of the contract work and shall be capped.

2.03 SALVAGEABLE MATERIALS

- (a) All salvageable materials indicated on the drawings or these specifications shall be carefully removed, cleaned and protected from damage and neatly stored on the site for pick-up by the City as directed by the General Manager.
- (b) All materials not indicated to remain on the premises or be reused in the project or classed as salvageable materials shall become the property of the contractor and shall be promptly removed from the job site.
- 2.04 STORAGE OF MATERIALS AT THE SITE
- Not permitted beyond brief accumulation awaiting pick-up by removal trucks; materials

and equipment removed from the building not to be stored at the site but to be hauled away promptly; any delay in removing materials and equipment from the site shall be subject to the approval of the General Manager.

END OF SECTION

PARK PROUDLA					
of Los Angeles regreation and parks	ASSISTANT GEN. MANAGER: Ramon Barajas	LIC. NO.	LIC. NO.	DATE:	
I 10 LNIMLYVJE DEPARTMENT OF I	GENERAL MANAGER: Micheal Shull	PROJECT LANDSCAPE ARCHITECT: CRAIG RAINES	PROJECT ENGINEER:	AS-BUILTS DRAWN BY:	
No. 4082 Signature Barewal Date					
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			ADDRESS: 2415 Trinity St,	Los Angeles, CA 90011	
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GENERAL

Division 1, General Provisions for the Department of Recreation and Parks; the Standard Specifications for Public Works Construction, hereinafter referred to as SSPWC, latest edition with the current yearly supplements; and the 2002 Edition of the Additions and Amendments to the SSPWC, shall be made a part of these plans. Website: http://eng.lacity.org/techdocs/stdplans/s-600/s61028.pdf. Where conflicts occur between Division 1, General Provisions for the Department of Recreation and Parks and the Standard Specifications for Public Works Construction, Division 1 of the Department of Recreation and Parks shall take precedence. Where conflicts occur between this Notice To Contractors (NTC) and the SSPWC this NTC shall take precedence. Subsections included within this NTC 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 hereon shall be used. This improvement consists only of work called for on these plans. The Contractor shall maintain adequate sanitary facilities on the jobsite from the beginning to end of grading operations. Underground substructures: the location of existing underground substructures, utilities, and pipelines as shown on the plans have been located from the best available records and have not been verified in the field. It shall be the contractor's responsibility to verify the locations of said substructures and lines even if not shown on the plans and to take all necessary precautions to prevent damage to the same. Straight grades shall be run between contours and/or spot elevations shown unless otherwise indicated. Should conflicting and/or erroneous information be found on the drawings, the Contractor shall notify the Landscape Architect prior to commencement of work. It shall be the responsibility of the Contractor to provide adequate supports for all excavations where necessary to protect personnel and property from any damage that might occur as a result of the collapse of excavation. The Contractor shall maintain current Cal OSHA permits as required and a copy of said permit shall be posted at the project. The Contractor shall provide access control for pedestrians and vehicles for entire project from the beginning to end of grading operations. The Contractor shall keep the construction area sufficiently dampened to control dust caused by grading and construction. Contractor shall, at all times, provide reasonable control of dust caused by wind. The Contractor shall control noise resulting from repair of heavy equipment after normal working hours by locating such activities as far as practicable from adjacent inhabited areas and so that such activities do not constitute a public nuisance or disturb the peace. Heavy equipment shall be kept in good operating condition and muffled as required by law.

PLANS AND SPECIFICATIONS $\sqrt{}$ The Contractor/RAP Staff shall be responsible for:

To get the necessary approval, sign offs and authorization form the project landscape architect, as indicate on the plans, prior to proceeding to the next project phase. All approvals and submittals shall be transmitted to the Recreation and Parks Advance Planning project landscape architect.

** Indicates required field inspections with the Department of Recreation and Parks Project Landscape Architect . Notify all party's three (3) days prior to the required inspection.

\checkmark SCHEDULE OF WORK

The Contractor/Rap Construction staff shall submit a Schedule of Work for approval to the Department of Recreation and Parks Project Landscape Architect prior to the commencement of work. The Contractor/Rap Construction staff shall schedule all work on weekdays (excluding Saturday, Sunday and City holidays) between the hours of 7:00 a.m. and 4:00 p.m. The work area shall be as defined on the Title Sheet, or as indicated on the Plans by means of a contract limit line.

$\sqrt{\sqrt{}}$ INSPECTIONS All work and materials are subject to inspection and approval by Department of Recreation and Parks Project Landscape Architect. Any work done without proper inspection will be subject to rejection The Contractor/RAP staff shall notify the Project Landscape Architect (3) days prior to inspection of the following for approval:

$\sqrt{1.ROUGH}$ GRADING: When forms have been set, to approve alignment. Offsets or vertical controls shall be verifiable in the field, or be provided in grade sheet form, and submitted to the Department of Recreation and Parks for approval prior to the inspection.

- $\sqrt{2.FINISH}$ GRADE REVIEW: For all finish grades in planting areas following rolling and prior to turf or landscape planting.
- √√**3.PRE-FINAL INSPECTION** (refer also to Section 42 of Division 1, General Provisions): A minimum of two weeks before the Final Inspection, Recreation and Parks shall hold a Pre-final Inspection. The Pre-Final Inspection shall be attended by the Department of Recreation and Parks, the Contractor, and invited parties associated with the Project. At this time, a list of items requiring correction or completion before the Final Inspection will be compiled. The following items shall be delivered to the appropriate Department of Recreation and Parks personnel: manufacturers' data, manuals, operating instructions, and keys, as required in Section 38 of Division 1, General Provisions
- $\sqrt{4.CONTRACT FINAL INSPECTION}$ (refer also to Section 43 of Division 1, General Provisions): Approximately seven (7) days prior to completion of the Work, the Contractor shall first notify the Department of Recreation and Parks Project Landscape Architect that he desires a Final Inspection of the Project. During this inspection, the Inspector, the Project Landscape Architect, the Contractor/RAP construction staff and other parties concerned only with the contractual requirements of the Work will compile a Final Inspection Correction List, ncorporating all items of work and corrections required to complete the Project. This list must be complete with thirty (30) days of the Final Inspection, or a new Final Inspection and Correction List shall be required.

$\sqrt{}$ MATERIALS SUBMITTAL

The Contractor shall submit a minimum of six copies of the Materials List to the Department of Recreation and Parks project landscape architect within ten days of receiving the Notice to Proceed. All submittals shall be sent to the Department of Recreation and Parks Project Landscape Architect at the same time as one submittal package. Any materials substituted for originally specified materials that have been rejected by Recreation and Parks shall have an alternate item resubmitted for approval within one week of the Contractor receiving the notice of rejection.

RECORD DRAWINGS (AS-BUILTS) SUBMITTALS

Record drawings shall reflect any changes made to the plans or specifications during the progress of the work as a result of addenda, change orders or adjustments due to field conditions or plan clarification. They shall also indicate any additional information discovered during the progress of construction that was not a part of the contract documents. All deviations from the specified depth at which materials are constructed shall be shown on the record drawings. Record all appropriate as-built information on the record drawings in red ink. As-built information shall include but not be limited to drain lines, valve locations, mainline locations and mainline wire installed separately from mainline. The record of each trade shall be made on the plan sheets for each trade as provided in the original plan set. The Contractor/RAP Construction Staff shall be responsible for coordinating all sub-Contractors work and shall produce a complete record of all installations, which shall be kept on the job site and updated daily during construction. At the completion of the Work and prior to final inspection, the Contractor shall submit signed 'as-built' blue-line prints to the Department of Recreation and Parks at the Operational Final Inspection, prior to the City's acceptance of the Contract Work, (per Section 39 of Division I of the General Provisions).

DEPARTMENT OF PUBLIC WORKS STANDARD PLANS

The following Department of Public Works Standard Plans are to be included as a part of these plans: (If needed for work within ROW and any 'A' or 'B' permit work)

SSPW

2002 Edition of the Additions and Amendments to the SSPWC website: http://eng.lacity.org/techdocs/stdplans/s-600/s61028.pdf

\checkmark LAYOUT OF WORK, GRADE SHEET APPROVAL

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 Department of Recreation and Parks for approval one week in advance of any grading operations.

UNDERGROUND SUBSTRUCTURES

The survey plans provided to the Contractor will show existing on-site underground substructures to the extent of the Department's records. Service lines from other public utilities, including the Department of Water and Power shall be located by notifying UNDERGROUND SERVICE ALERT at 1 - (800) 422-4133 OR DIG ALERT AT 1-800-227-2600 prior to commencing any excavation.

TREE PROTECTION - EXISTING TREES

All trees to remain in place shall be protected using the following guidelines:

1.No equipment is to be parked or operated under a tree. No materials shall be stored under a tree. Do not

- compact soil within the drip line of the tree. 2. All work shall be in accordance with the City of Los Angeles Oak Tree Ordinance.
- 3.No chemical herbicides are to be used within 100 feet of the tree's drip line.
- 4.Do not nail grade stakes or anything else to trees.

5. Any approved pruning shall be authorized by the Department of Recreation and Parks and done by a qualified Arborist.

6.No roots over two (2) inches in diameter are to be cut during the course of construction without the approval of the Department of Recreation and Parks. 7.No Irrigation trenching shall pass closer than eight (8) feet of the base of any tree.

8. If any contractor is unsure of a tree to remain in place or to be removed they are to contact the Department of Recreation and Parks immediately and prior to taking any action. 9.See plans for Oak Tree guidelines if applicable.

1.GENERAL EARTHWORK

METHODS

The Grading Plan when approved shall be on the job at all times. All grades between contours and/or spot elevations shall be assumed to be straight grades. There shall be no localized depressions or humps, (308-2.1). The Contractor shall verify all grades and amounts of cut and fill before commencing work. The area to be filled shall be cleared of all vegetative material, except the existing trees to remain. Protect remaining trees during all construction.

All fill soil shall be compacted to 90% relative compaction and the Contractor shall obtain and pay for all soil compaction tests. Locations where compaction testing is required are shown on the plans with the \bigoplus symbol. The Department of Recreation and Parks may modify the exact location in the field, depending on field conditions. The total number of compaction test shall be no less than the number shown by the symbol. Minimum compaction of earthwork shall be 90% relative compaction unless noted otherwise. Prior to placing fill rip existing subgrade to a depth of 6 inches. Intermix first 6 inches of fill placed with ripped subgrade to eliminate interface lens. Place remaining fill in 8" lifts. The source of import soil shall be approved by the Department of Recreation and Parks prior to any grading operations. The Contractor/RAP Staff shall be required to provide an Agricultural Suitability soil test to establish the suitability of any imported soil and that soil concentrations of boron and salinity are within agricultural limits. The Contractor shall, at his own expense, amend the soil according to the recommendations of the soils report. Fill material 24 inches, or more, below the finish grade may contain up to 25 percent broken concrete or bituminous paving with maximum dimension of 3 inches of any piece. The top 24 inches of fill may contain up to 10 percent broken concrete or bituminous paving with a maximum dimension of 1-1/2 inches of any piece. Where the plans call for turf, the top 6" of soil shall have no object larger than 1" in least dimension. The contractor shall be responsible for removal and disposal of all excess soil and debris from the work area,

(300-1.3.1, 300-2.6). No soil or debris shall be disposed of on Recreation and Parks Property without the permission of the Department of Recreation and Parks. The Contractor shall conform to Section 7-8.1 of the SSPWC latest edition with the current yearly supplements for clean up and dust control.

Ground water conditions encountered during the course of the work shall be brought to the attention of the Project Landscape Architect.

If any grading operation covered by this section shall extend into or through, or shall be commenced during the period of October 15 to April 15, *the contractor/RAP STAFF shall be required to submit plans of the* temporary erosion control methods and devices he proposes to use in connection with the grading operations to be performed during that period. Said plans shall be submitted to the Landscape Architect. The Contractor shall at no additional cost to the Department engage the services of an approved California licensed Soils Engineer and approved soils testing laboratory to provide subgrade, pipe bedding, and fill compaction control. The Soils Engineer shall perform field observation and testing during grading to assist the Contractor in obtaining the proper moisture content, compactive effort and degree of compaction. Where compaction is less than required, additional compaction effort shall be made with adjustment of moisture content, as necessary, until the specified compaction is obtained

Upon completion of grading, the Contractor shall furnish the Department of Recreation & Parks' compaction report, certified by the Soils Engineers, showing the results of compaction tests of fill, subgrade and bedding and certifying that fill, subgrade and pipe bedding compaction complies with the percentage compaction specified.

2. CONCRETE All concrete construction shall be as specified in this Section unless specified otherwise in this Notice to Contractors.

MATERIALS **BASE MATERIAL**

Base material for Portland Cement concrete shall be (CMB) crushed miscellaneous base, (200-2.4).

CONCRETE SPECIFIED BY CLASS Placed concrete shall be class 520-C-2500, maximum 4 inch slump. Pumped concrete shall be class 560-E-2500, maximum 6 inch slump. A complete delivery receipt shall be required for each truckload of concrete delivered. The receipt shall be given to the Department of Recreation and Parks, (201-1.1.2).

PORTLAND CEMEN

AGGREGATES The Contractor's attention is directed to the provisions of this subsection regarding: (1) avoiding concrete The aggregates for all concrete construction shall be fractured face aggregates obtained from a quarry in the San segregation; (2) wetting forms and subgrade; (3) consolidation of concrete with vibrators; and (4) provision for Gabriel River drainage area only and shall be certified non-reactive by an approved testing laboratory as approved by construction and expansion joints, (303-1.8). the Bureau of Contract Administration, (201-1.2.2). CONCRETE SURFACE FINISH AND CURING COMPOUND

COMBINED AGGREGATE GRADINGS Combined aggregate gradings for Portland Cement shall be as specified under this section, (201-1.3.2).

EXPANSION JOINTS Expansion joints shall use a 3/8 inch thick asphalt impregnated felt expansion joint.

JOINT URETHANE SEALANT

EXPANSION JOINT PREMOLDED ASPHALTIC JOINT MATERIAL When specified, expansion joint material shall be 1/4 inch thick asphaltic joint material as manufactured by Sealtight Co., or an approved equal, (201-3).

DOWELS (EXPANSION AND END-OF-POUR JOINTS) Shall be grade 40 or grade 60 billet steel, (201-2.2).

END OF POUR JOINTS End of pour joints shall be 1/4 inch thick asphaltic joint material as manufactured by Sealtight Co., or an approved equal, (201-3).

COLORED CONCRETE ADMIXTURES

Admixtures for colored concrete shall be Lithochrome Color Hardener by L.M. Scofield Company (800) 800-9900, or Davis Mix-in Colors for concrete by Davis Colors, (800) 800-6856, or an approved equal. 2'X2' Samples to be poured for each color specified on the plan for approval by the project landscape architect. METHODS

SUBGRADE AND BASE PREPARATION AND COMPACTION Subgrade under all concrete shall be prepared and compacted in accordance with this section (301-1.). Locations where compaction testing is required are shown on the plans with the symbol. The Department of Recreation and Parks may modify the exact location in the field, depending on field conditions, if permission is granted from the Department of Recreation and Parks. The total number of compaction tests shall be no less than two (2) or the number indicated on the plans. The Contractor shall provide compaction tests for both subgrade and base material, if applicable, at the locations indicated on the construction plans. Results of the compaction tests shall be submitted to the Department of Recreation and Parks for approval prior to the pouring of concrete. Minimum subgrade and base compaction shall be 90% relative compaction.

EXPANSION JOINTS

Shall be placed against previously constructed concrete structures or as indicated in the plans (303-5.4.2) and per Recreation and Parks Detail 300 series. CONCRETE SURFACE FINISHING

Concrete walks, pads shall have a medium sand blast finish/med water wash finish, unless otherwise noted on the plans. The Contractor shall prepare a minimum two (2) foot by two (2) foot sample for approval by the Project Landscape Architect before any concrete is placed, (303-5.5.3). Any sidewalk in the public street right of way constructed as a portion of this contract shall be finished as directed by the Department of Recreation and Parks and shall meet all the standards as per the SSPWC and LACBC requirements

3. DISINTEGRATED GRANITE AND SOIL STABILIZERS

MATERIALS

DISINTEGRATED GRANITE Disintegrated granite shall be referred to by the abbreviation (D.G.), or referred to as a decomposed granite. All disintegrated granite shall conform to the following grading requirements:

Sieve Designation	% Passing	Sieve Designation	%Passing
3/8 inch	100	No. 30	40-50
No. 4	95-100	No. 50	25-35
No. 8	75-80	No. 100	20-25
No. 16	55-65	No. 200	5-15

The portion of D.G retained on the no. 4 sieve shall have a maximum percentage of wear of 50 at 500 revolutions as determined by AASHTO T96-77. The portion passing a No. 40 sieve shall have a maximum liquid limit of 25 and maximum plasticity index of 7 as determined by AASHTO T89-81 and AASHTO T90-81, respectively.

SOIL STABILIZER

The stabilizer shall be a non-toxic, colorless, odorless, organic powder that binds D.G. screenings. The stabilizer shall be manufactured by Stabilizer Inc., (800) 336-2468, or an approved equal.

All cement shall be Type II, low alkali Portland cement conforming to ASTM C150 (201-1.2).

When specified, expansion joint material shall be urethane elastomeric sealant for concrete pavement shall be Lithoseal Trafficalk-G3 by L. M. Scofield Company, or an approved equal, (201-3). Color to match concrete.

Crushed aggregate screenings shall be free from clay lumps, vegetative matter and deleterious material.

DISINTEGRATED GRANITE AND SOIL STABILIZERS cont.

PORTLAND CEMENT (FOR SOIL CEMENT) Portland Cement shall be Type II, (201-1.2).

4. STRUCTURAL CONCRETE AND MASONRY

All work shall conform to the latest edition, L.A. City Building Code (LACBC) in addition to the SSPWC; the LACBC shall take precedence where conflicts occur with the SSPWC.

CERTIFICATION AND TESTING

As required by the LACBC, certificates of identification and/or testing shall be provided for all concrete, reinforcing steel, concrete block, mortar, and grout materials delivered to the job site.

The following items refer to the corresponding SSPWC subsections in order to resolve conflicts with the LACBC, to stress items of particular concern, or modify, add to, or choose options in the SSPWC.

MATERIALS

CONCRETE SPECIFIED BY CLASS

Concrete is designed for Fc=2000 psi; for durability placed concrete shall be class 560-C-3250, maximum 4 inch slump and pumped concrete shall be class 660-E-3250, maximum 6 inch slump. A complete delivery receipt shall be required for each truckload of concrete delivered. The receipt shall be given to the Department of Recreation and Parks

PORTLAND CEMENT

All Cement shall be Type II, low alkali Portland cement conforming to ASTM C150. (201-1.2).

AGGREGATES The aggregates for all concrete construction shall be fractured face aggregates obtained from a quarry in the San Gabriel River drainage area only and shall be certified non-reactive by a testing laboratory as approved by the Bureau of Contract Administration per Section (201-1.2.2).

COMBINED AGGREGATE GRADINGS

Combined aggregate gradings for Portland Cement shall be as specified under this section, (201-1.3.2). REINFORCING STEEL

Use ASTM A615 Grade 40 billet steel, (201-2). **EXPANSION JOINTS**

Use "Sealtight" 1/2 inch thick, full depth, self-sealing asphalt expansion joints by W. R. Meadows Inc. or equal,

(201-3).

CONCRETE CURING COMPOUND Use Type I compound, (201-4).

CEMENT MORTAR

In lieu of the class and proportions shown in SSPWC 201-5.1, use Type S mortar, Fc=2000 psi, LACBC 91.2403(g), (201-5, 202-2.1.2).

GROUT

In lieu of SSPWC 202-1.5.2, use 2000 psi grout per LACBC 91.2403(r), (201-1.5). CONCRETE BLOCK

Use 8" x 8" x 16" lightweight (103 pcf) units conforming with ASTM C90 Grade N-1, (202.2.1).

LUMBER AND PLYWOOD FORMS Formwork shall comply with this section, (204-1).

METHODS

FOUNDATION MATERIAL TREATMENT AND SUBGRADE FOR CONCRETE SURFACES

Footing excavations shall comply with these subsections, (303-1.3). **CONCRETE FORMWORK**

Installation and removal of formwork for concrete footings and structures shall comply with these subsections, (303 - 1.3).

PLACING REINFORCEMENT

The Contractor's attention is directed to the provisions of this subsection regarding: (1) securing reinforcing steel in position in accordance with the "Concrete Reinforcing Steel Institute" standards; (2) splicing of bars; and (3) bending of bars, (303-1.7). In masonry the thickness of grout between block units and reinforcing steel shall not be less than 1/2 inch.

PLACING CONCRETE

Surface finish and provision for curing compound shall comply with these subsections, (303-1.9). MASONRY CONSTRUCTION

The Contractor's attention is directed to the provisions of this subsection regarding: (1) workmanship; (2) proper masonry units; (3) metal stops on horizontal reinforcing; (4) thoroughly rodding vertical cores; (5) cleaning cores of debris and mortar; (6) holding reinforcement straight and in place; and (7) cutting masonry with a power driven abrasive saw. If work is stopped for one hour or longer a horizontal construction joint shall be provided by stopping the grout $1 \frac{1}{2}$ inches below the top of block.

Masonry shall be laid in running bond, unless otherwise noted, (303-4).

MATERIALS

7. IRRIGATION SYSTEMS

SOLVENT WELDED PLASTIC PIPE

Schedule 40 PVC plastic pipe shall be used for pipe sizes up to and including 1 1/2 inch diameter on both the discharge and supply side of control valves, (212-2.1.3). Class 315 PVC plastic pipe shall be used for pipe sizes from 2 inch up to and including 3 inch diameter.

RESTRAINED PLASTIC PIPE Class 150, DR 18, C900 PVC pipe shall be used for pipe sizes of 4inch up to and including 10inch diameter.

REMOTE CONTROL VALVES All remote control valves shall be electrically operated with body of cast brass or bronze construction, (212-2.2.4) and installed per details.

CONTROL WIRE

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 provided in the following colors: red, yellow, blue, green, orange, tan, purple, pink, brown, gray, and white.

CONTROL WIRE CONNECTIONS

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: Connector shall be a flame retardant PVC insulator with a steel spring and shell within. Connector shall be

a non-crimping system

Tube material shall be clear see-through polypropylene. Gel material shall be hixotropic calcium organic complex.

Wire sizes and numbers of wires shall be as shown below:

CONNECTORCOLORNO. AND SIZE OF WIRE3M Model DBYYellowMax. 4-12 gage UF wires3M Model DBRRedMax 3-14 gage UF wires

VQUICK COUPLING VALVES AND ASSEMBLIES

Quick couplers shall be 1 inch i.p.s., two piece, brass or bronze construction equipped with a cover, unless otherwise specified on plans. The Contractor shall provide one quick coupler key with hose swivel for each five quick couplers installed. Contractor shall supply a minimum of one quick coupler key with hose swivel, (212-2.2.6) and shall be installed per details.

√VALVE BOXES

To Be Rainbird VB series Jumbo or approved equal.

METHODS

NEW PIPELINE INSTALLATION - GENERAL

- $\sqrt{\sqrt{}}$ When pipelines run parallel they shall be separated horizontally by a minimum distance of 12". When pipelines cross each other they shall be separated vertically by a minimum distance of 3". **VV** NOTE: ALL TRENCHING SHALL BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT PRIOR THE BACKING FILLING OF TRENCHES.
- $\sqrt{\sqrt{}}$ No irrigation trenching shall pass closer than eight feet of the base of any tree. No tree root larger than 2" diameter shall be cut without approval of Department of Recreation and Parks.

COVER OVER MAINLINES:

 $\sqrt{\sqrt{}}$ Maintain 24 inches of cover over mainlines 3" and smaller in diameter. Mainlines 4" and larger in diameter shall have 30" of cover over the top of the pipe, (308-5.2). All trenching shall be per

details.

COVER OVER LATERAL LINES:

 $\sqrt{\sqrt{}}$ Maintain 12 inches of cover over all lateral lines.

Pipe bedding and backfill: bedding shall surround the pipe to one foot above the top of the pipe. Bedding shall be placed in 6 inch lifts. All bedding shall be densified by water jetting. Water jetting shall be sufficient to thoroughly wet bedding material around the pipe, (306-1.2.1). There shall be no rocks over 1/2" in greatest dimension and no organic matter placed in the bedding material. Backfill shall be the material placed above the bedding. Backfill shall be placed in one-foot lifts and densified by water jetting. Jetting shall be continued until backfill collapses and water is forced to the surface, (306-1.3.1). Pipe trenches thoroughly densified by water settling shall have a minimum relative compaction of 85%. There shall be no rocks over 2" in greatest dimension or organic matter in the backfill. Trench areas which exhibit insufficient densification shall be subject to compaction tests as requested by the Department of Recreation and Parks. All such compaction tests shall be at the expense of the Contractor. Additional tests may be required until the 85% minimum compaction is achieved. Finished trenches shall match finish grades flush with adjacent finish grades. The Contractor shall be responsible for maintaining the trenches flush and smooth until final acceptance of the project. Trenches in existing lawn shall be repaired per method A lawn repair of the Landscape Planting section of the Notice to Contractors. The maximum trench width shall be two and a half diameters of the pipe.

PIPES CROSSING UNDER PAVING:

Where irrigation piping crosses a vehicular roadway or other paving having a width of less than 25 feet, a PVC Schedule 40 PVC sleeve which is a minimum of two pipe sizes larger than the piping to pass through it, shall be jacked under the paving at a depth of 36" minimum. Where remote control wiring crosses under paving having a width of less than 25 feet, a 3 inch PVC Schedule 40 PVC sleeve shall be jacked under the paving at a depth of 36" minimum. All sleeves shall extend 3' minimum beyond the edges of paving.

Where irrigation piping crosses a vehicular roadway or other paving having a width greater than 25 feet, a trench shall be excavated across the roadway or paving to accommodate a Class 315 PVC sleeve a minimum of two pipe sizes larger than the piping to pass through it, at a depth of 36" below the bottom of the paving, as measured from the top of the sleeve. Where remote control wiring crosses under paving having a width greater than 25 feet, a 3 inch Schedule 40 PVC sleeve shall be installed at a depth of 36" below the bottom of the paving, as measured from the top of the sleeve. The backfill of the trench shall be a 2 sack cement slurry. The slurry shall extend from the bottom of the trench to within one inch of the bottom of the existing paving. The trench in the existing paving shall be repaired with a like paving material and join the existing paving both horizontally and vertically.

REMOTE CONTROL WIRING UNDER PAVING

Remote control wire under paving shall be placed in a 3" class 315 PVC sleeve buried at a depth of 36. Roadways less than 25 feet in width shall have the sleeve jacked under the roadway.

FITTINGS ON MAINLINES:

All outlets from a mainline shall be accomplished with line sized tees with an outlet of the specified size. No saddle tees shall be permitted.

INSTALLATION OF VALVE BOXES

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 by water settlement as indicated in the trench repair section of this specification. Boxes are to be positioned per details.

LAYOUT OF PIPING

Pipe layout as shown on irrigation plan is schematic. Contractor may route piping in the most expedient manner consistent with the requirements set forth herein, including avoidance of tree roots. Contractor shall adhere to As-Built requirements as shown below.

INSTALLATION OF IRRIGATION HEADS

Sprinkler heads in lawn areas shall be set flush with finish grade at initial installation and protected during construction. All soil 12 inches from the perimeter of the head shall be compacted by water jetting as indicated in this specification, or set in sand as shown on details.

MAINTENANCE KIT

(Applies to cast iron and brass gear driven rotary pop-up heads only.) The Contractor shall supply to the Department of Recreation and Parks one rotor maintenance kit per 100 heads, or one kit minimum if less than 100 heads, (308-5.4.4).

SPRINKLER HEAD RISER

All plastic sprinkler heads shall be installed on swing joint assemblies as shown on details. Swing joint assemblies for Thompson gear driven rotary pop-up heads shall be fabricated of Schedule 40 galvanized steel pipe and fittings as specified in details.

CONTROLLER WIRE COLOR	CONTROLLER STATIONS	CONTROLLER STATIONS	CONTROLLER STATIONS	CONTROLLER STATIONS
RED	1	11	21	31
YELLOW	2	12	22	32
BLUE	3	13	23	33
GREEN	4	14	24	34
ORANGE	5	15	25	35
TAN	6	16	26	36
PURPLE	7	17	27	37
PINK	8	18	28	38
BROWN	9	19	29	39
GRAY	10	20	30	40



IRRIGATION SYSTEMS cont

CONTROLLER	TAPE BUNDLE COLOR
A	RED
В	YELLOW
С	BLUE
D	GREEN
E	WHITE
F	BLACK

INSTALLATION OF IRRIGATION CONTROL WIRING

Wire bundles shall be taped at 5' o.c. Lay bundles in the mainline trench. Do not tape bundles to the mainline piping. $\sqrt{\sqrt{}}$ The Contractor shall run two extra black control wires from the automatic controller to the farthest value on the system, or to the farthest valve at each end of the controller area, if the farthest area extends in two directions from the controller.

Each controller shall have a separate 14 gage, AWG-UF, 600 volt, WHITE common wire for each 10 consecutive stations on each irrigation controller.

Common 1,	stations 1-10
Common 2,	stations 11-20
Common 3,	stations 21-30
Common 4,	stations 31-40

Each exterior controller enclosure shall have a ground rod installed if detailed on controller installation detail. Wire shall not be taped to mainline (308-5.5). If control wires run in same trench as lateral lines, or are dead

IRRIGATION SYSTEM FLUSHING AND TESTING

headed, wire depth shall be maintained at 24". For installation, see details.

The irrigation system shall be flushed in the presence of the Departmen/Project Landscape Architect. Flushing shall start with the valve closest to the point of connection and proceed with each consecutive valve toward the valve farthest from the point of connection. Each lateral system shall have each riser capped during the flushing commencing with the riser closest to the valve and proceeding to the farthest riser. After the entire irrigation system has been flushed the system shall be pressure tested in accordance with section 308-5.6 of the SSPWC.

 $\sqrt{\sqrt{}}$ The irrigation system mainlines shall be pressure tested following the flushing of the complete system. The mainlines shall be 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 Department of Recreation and Parks.

RECORD DRAWINGS (AS-BUILTS) AND CONTROLLER CHARTS

As built plans shall be maintained daily throughout the construction period and turned over to the Department of Recreation and Parks at the Operational Final Inspection, as indicated in the General section of this Notice to Contractors in the Record Drawings Submittal section.

The Contractor/RAP staff shall provide two copies of a controller chart showing the irrigation system installed. The chart shall be done on a half size photographic reproduction of the irrigation plan and shall reflect the as-built data. Each station shall be shown in a different color and control wire locations shall be indicated. The complete plan shall be laminated on each side with a 20 mil acrylic plastic sheet. A 3/4" brass grommet shall be placed in each top corner. The Contractor shall obtain approval of the controller chart from the Department of Recreation and Parks, before proceeding with the plastic lamination.

WARRANTY FOR IRRIGATION SYSTEM WORK

The entire sprinkler irrigation system shall be warranted to be free from defects in materials and workmanship, and installed in accordance with this Notice to Contractors and the SSPWC. The Contractor/RAP Construction staff 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, ordinary wear and tear and unusual abuse or neglect excepted. Further, the Contractor/RAP Construction Staff shall be required to make any necessary repairs within 24 hours of notification at no cost to the Department. If the Contractor or his agent fail to make such repairs within the stipulated time, the Department 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.

GUARANTEE AGAINST SETTLEMENT

If, within one (1) calendar year from the date of acceptance, settlement occurs along mainlines, lateral lines, at valve boxes, or other irrigation related appurtenances, and adjustments in pipes valves and sprinkler heads are required to bring the system, sod, or paving to the level of the permanent grades, the Contractor/RAP Construction Staff shall make all adjustments. STEEL PIPELINE

Joints shall be made with Teflon tape applied to the male threads only, (308-5.2.2).

PLASTIC PIPELINE-SOLVENT WELDED OR THREADED ENDS

Prior to the application of the P.V.C. solvent cement, prepare all surfaces to be solvent welded with tetrahydrofuran primer tinted purple. Teflon tape shall be used on all plastic male pipe threads, (308-5.2.3).

BACKFLOW DEVICE INSTALLATION AND CERTIFICATION

The Contractor shall obtain certification of the backflow device and submit two copies of the certification to the Department of Recreation and Parks at the Operational Final. The backflow certification shall be made on the County Health Department standard form and filed with the County Health Department, Cross Connection Section, Room 150, 2525 Corporate Place, Monterey Park, CA, 91754. The contractor shall paint all backflow prevention devices above ground with two coats of forest green enamel. Mask all identification tags prior to painting, (308-5.3). After certification remove all test cocks, replace with threaded brass plugs, and deliver test cocks to the Department of Recreation and Parks.

6. CHAIN LINK FENCING AND MISCELLANEOUS METAL CONSTRUCTION

MATERIALS

 $\sqrt{\sqrt{}}$ CHAIN LINK FENCING Chain link fencing materials shall be as specified in details RP 500-506 and Section (206-6).

 $\sqrt{\sqrt{}}$ Pipes for posts, braces and rails shall be Class 1, Schedule 40, ASTM F 1083 or, Class 1A, with a minimum 50,000 psi yield strength. Class 1 pipe shall be galvanized as indicated in this section of the Notice to Contractors. Class 1A pipe shall have a minimum hot dipped zinc coating of 0.9 oz./Sq. Ft., 15 micrograms of chromate per square inch and a minimum or 3 mils of acrylic coating on the exterior of the pipe. The interior coating of Class 1A pipe shall be hot dipped galvanized with .9 oz/ Sq. Ft. Zinc. Materials for chain link fence posts, rails and braces shall be sized as

NOMINAL SIZE (inches)	ACTUAL O.D. (inches)	CLASS 1 PIPE Wall Thickness	CLASS 1 Weight LBS per lin. ft.	CLASS 1A PIPE Wall Thickness	CLASS 1A Weight LBS/L.F. (pounds)
1 1/4"	1 5/8"	.140	2.27	.110	1.82
1 1/2"	1 7/8"	.145	2.72	.120	2.28
2"	2 3/8"	.154	3.65	.130	3.12
2 1/2"	2 7/8"	.203	5.79	.160	4.64
3"	3 1/2"	.216	7.57	.160	5.71
3 1/2"	4"	.226	9.11	.160	6.56
4"	4 1/2"	.237	10.79	NA	NA
6"	6 5/8"	.280	18.97	NA	NA

CHAIN LINK FENCING AND MISCELLANEOUS METAL CONSTRUCTION cont.

CHAIN LINK FABRIC

STEEL SHAPES

All structural steel shapes shall be as specified in the applicable detail. $\sqrt{\sqrt{}}$ GALVANIZING

SSPWC.

 $\sqrt{\sqrt{}}$ MANUFACTURER'S CERTIFICATE OF COMPLIANCE The manufacturer of the Chain link fabric, fence posts, rails and braces shall provide the Contractor a Certificate of compliance for each shipment sent to the project site. The Certificate shall state that the materials delivered conform the specification for materials as indicated in Section 8 of these Notice to Contractors. The Certificate of Compliance shall be delivered to the Construction Manager before any fencing materials are installed at the project site.

REPAIRING OF DAMAGED GALVANIZED SURFACES metalizing process or zinc oxide, zinc dust paint per Section 210-3.5 of the Standard Specification.

TUBULAR STEEL SHAPES

fencing shall be 11 gauge.

$\sqrt{\sqrt{}}$ TUBULAR STEEL WELDING

Shall conform to the AWS code for procedures, appearance and quality. All welds shall be ground smooth. All fabricated metal fencing panels shall be shop assembled and welded.

 $\sqrt{\sqrt{}}$ PAINTING (TUBULAR STEEL AND CHAIN LINK FENCING WHEN REQUIRED) "Factory" coated tubular steel fencing or chain link fencing shall be exempted from this requirement. All other shop fabricated tubular steel fencing or fencing constructed on site shall be painted in accordance with the requirements for painting "Ferrous Metal (Non-galvanized) Surfaces" below. The two finish coats shall be black unless otherwise specified.

METHODS

CHAIN LINK FENCE Chain link fence shall be installed and stretched tight between posts.

All connection bolts shall not extend more than 1/4 inch past the end of the nut and be free from burrs.

TUBULAR STEEL PAINTING Prior to priming and painting, all steel shall be made free of loose mill scale, rust, oil and grease. Welds shall be smoothed by grinding. Damage to "factory" coated tubular steel or chain link fencing shall be repaired after installation by sanding damaged paint surfaces and by applying one coat of manufacturer specified primer and two new coats of specified color coat.

7. PAINTING

MATERIALS

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 Department of Recreation and Parks will judge equivalency. Equivalent materials from alternate manufacturers will be considered as an approved equal. Contractor's material submittal for proposed alternate 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.

Ferrous Metal Tubular Shapes (Non-Galvanized), Semi-Gloss

Painting Sequence	Finishing Schedule	Recoat And Drying Time	Coverage At Required Wet Film Thickness	Required Wet Film/Dry Film Thickness
1 st coat: Synthetic alkyd white corrosion inhibiting primer	Corrobar (43-5)	Min. 24 hrs. Max. 72 hrs.	450 square feet per gallon	3.5 wet mils; 2.0 dry mils
2 nd coat: Semigloss enamel acrylic latex exterior enamel	Permashee n (W 901)	Dry to touch: 30 min.; Recoat: 4 hrs.	375 square feet per gallon	4.2 wet mils; 1.5 dry mils
3 rd coat: Semigloss enamel acrylic latex exterior enamel	Permashee n (W 901)	Dry to touch: 30 min.	375 square feet per gallon	4.2 wet mils; 1.5 dry mils

Painting Sequence	Finishing Schedule	Recoat And Drying Time	Coverage At Required Wet Film Thickness	Required Wet Film/Dry Film Thickness
Pre-coat: galvanized steel only. Acid etch*	Galva-etch (GE 123)	n/a	n/a	n/a
1 st coat: Alkyd primer	Galv-Alum (QD 43-7)	Dry to touch: 30 min.; recoat: 2 hrs. † Max. 48 hrs.	350 square feet per gallon	4.6 wet mils; 2.0 dry mils
2 nd coat: Synthetic alkyd white corrosion inhibiting primer	Permasheen (W 901)	Dry to touch: 30 min.; Recoat: 4 hrs.	375 square feet per gallon	3.5 wet mils; 2.0 dry mils
3 rd coat: Semigloss enamel acrylic latex exterior enamel	Permasheen (W 901)	Dry to touch: 30 min.	375 square feet per gallon	4.2 wet mils; 1.5 dry mils

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

Second coat must be applied within 48 hours

Primers, Sealer, and Undercoaters

Finite S _i Sealer, and C	Juder coaters			
Alkyd based	Block-it (QD 42-56) Quick-dry pigmented primer/sealer	Dry to touch: 30 min.; Recoat: 1 hr.	435 square feet per gallon	3.7 wet mils; 1.5 dry mils

Galvanized steel chain link fabric shall conform to ASTM A 392, Class 2, 1.20 0z./Sq.Ft. zinc. Fabric shall be 9 gauge and be woven in a 1 1/2" mesh unless otherwise indicated on the plan. Top and bottom selvages shall be knuckled.

PVC coated galvanized steel fabric, when specified, shall conform to ASTM F 668, Class 2b, "fused and adhered", and meet the galvanizing requirements contained in this section of the Notice to Contractors, (206-6.3).

Where called out, metal products shall be hot dipped galvanized in accordance with **TABLE 210-3.2(A)** of the

Galvanized surfaces which have been damaged in transport or during installation shall be re-coated using the

Cold formed shapes for tubular steel fencing shall conform to ASTM A 500, Grade B, in the size and wall thickness shown on the plans and details. Unless specified on the plans all post and rails shall be 3/16" thick. All pickets for

Non ferrous metals (Galvanized steel, Aluminum, Cor-Ten® Steel), Semi-Gloss

⁺ Recoat time for Galv-Alum is 2 hours if material is sprayed, 16 hours if brushed or rolled.

PAINTING cont.

METHODS

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

COLOR SPECIFIED

Colors shall be selected from color chip samples provided by manufacturer of paint system approved for use by the Department of Recreation and Parks.

CONDITION OF SURFACES TO BE PAINTED

Contractor shall verify condition of surfaces to be painted prior to commencement of painting work. Work of other trades that been left or installed in a condition that is not suitable to receive paint, stain, or other specified coatings shall be immediately called to the attention of the Department of Recreation and Parks. Painting of defective or unsuitable surface implies acceptance of the surfaces.

PROTECTION OF EXISTING WORK

The Contractor shall take all necessary precautions to protect previously installed work and materials which may be affected by work. Items to be protected include, but are not limited to, turfgrass, shrubs, trees, ground cover, prefinished surfaces, and adjacent surfaces. Contractor shall furnish at his expense sufficient drop cloths, shields, and other protective devices necessary to prevent spray or splatter from fouling surfaces not being painted. Contractor shall be responsible for protecting equipment and fixtures from damage resulting from use of fixed, movable and hanging scaffolding, planking and staging, (310-1.4)

PROTECTION Opan F NEW PAINTING

"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.

SURFACE PREPARATION, GENERAL The Contractor shall perform preparation and cleaning procedures in strict accordance with coating manufacturer's instructions for each substrate condition, (310-2)

√√ SURFACE PREPARATION FOR GALVANIZED SURFACES

Galvanized surfaces shall be prepared for painting in accordance with section 310-3 of the SSPWC.

V√ **SURFACE PREPARATION FOR WOOD SURFACES** Wood surfaces shall be prepared for painting in accordance with section 310-4 of the SSPWC.

APPLICATION

The Contractor shall apply painting and finishing materials in accordance with the manufacturer's printed instructions. Application methods and techniques that are best suited for the materials and surfaces to which coatings are being applied shall be used, (310-5)

The number of coats specified is the minimum that shall be applied. All undercoats shall be tinted to the approximate color of the finish coat. The Contractor shall apply additional coats when undercoats, stains, or other conditions show through the final paint coat, until paint film is of uniform finish, color and appearance.

Each material shall be applied at not less than the manufacturer's recommended spreading rate and mil thickness. The total dry-film thickness of coatings shall not be less than 1.2 mils for each required coat.

CLEANING, TOUCH-UP AND REFINISHING

The Contractor shall remove all spattering, spots and blemishes caused by work done throughout the work period. Upon completion of painting, the Contractor shall remove all rubbish, paint cans and accumulated materials resulting form work and dispose of off site. All areas of work shall be left in a clean, orderly condition. Runs, sags, misses, holidays, stains, or any other defects in the painted surfaces, including inadequate coverage and mil thickness, shall be satisfactorily touched up, refinished, or repaired a necessary to produce a result satisfactory to the Department of Recreation and Parks.

8. LANDSCAPE PLANTING

MATERIALS

AMMONIUM PHOSPHATE

Shall be a standard agricultural grade of ammonium phosphate having guaranteed analysis of 16-20-0.

GYPSUM

Shall be agricultural grade.

ESTABLISH - GENERAL PURPOSE FERTILIZER

Shall have a minimum analysis of 1-1.3-5,(N-P-K), derived from rock phosphate, peat moss, chicken manure, sand, sulfate of potash, gypsum, and EDDHA chelate. As manufactured by Earth Works Soil Amendment, Inc., (310) 322-9702, or an approved equal

HYDROSEED MULCH FIBER

Shall consist of virgin wood fiber of Aspen or Alder. It shall not contain any waste paper, newsprint or straw material. The mulch shall contain a green dye to facilitate application. Fiber shall be as manufactured by Conwed Co., (Green Tag), Silva-Fiber by Weyerhauser Co., or an approved equal, (212-1.2 (e)).

HYDROSEED STABILIZER

Shall consist of natural muciloid materials supplied by Ecology Controls M-binder, (805) 684-0436, no equal.

HYDROBLEND SOIL ACTIVATOR

Shall have a minimum analysis of 1.2-1.4-5, (N-P-K), derived from rock phosphate, peat moss, chicken manure, sulfate of potash, gypsum. As manufactured by Earth Works Inc., (310) 322-9702, or an approved equal.

FEATHER MEAL

Shall have a minimum analysis of 12-0-0,(N-P-K), derived from feathermeal. As manufactured by Earth Works Inc., (310) 322-9702, or an approved equal.

NITROFORM UREAFORM

Shall be a standard commercial grade of nitroform having a guaranteed analysis of 38-0-0.

ORGANIC AMENDMENT

Shall be type I organic soil amendment, consisting of nitrolized fir shavings.

OVERSEED TOPDRESSING, EARTH WORKS ORGANIC TOPDRESSING

Shall be, derived from composted wood products, peat moss, chicken manure and a wetting agent. As manufactured by Earth Works Inc., (310) 322-9702, or an approved equal.

Potassium sulfate

Shall be a standard agricultural grade of potassium sulfate having guaranteed analysis of 0-0-50.

ROUNDUP

Shall be a water-soluble herbicide for non-selective control of weeds containing 480 grams per liter of the active ingredient Isopropylamine salt of N-(phosphonomethyl) Glycine (Glyphosate) per U.S. gallon, as manufactured by Monsanto Chemical Company, or approved equal.

PRE-EMERGENT HERBICIDE Shall be Balan Granular, by Elanco, or an approved equal. All pre-emergent herbicides, when required, shall be specified and applied by a licensed Pest Control Advisor.

FERTILIZER TABLETS

Shall be fertilizer tablets shall be Agriform 21 gram, 20-10-5, available from Western Farm Service, (805) 487-4961. MULCH

Shall be seasoned tree chip mulch, free all foreign matter including weed and tree seeds. Mulch chip size shall be minimum one (1) inch in diameter and not more than two (2) inches in diameter. Submit sample of mulch and source to the Project Landscape Architect/ The Department of Recreation and Parks for approval prior to application.

WATER HOLDING POLYMER

Shall be "Broadleaf P-4" METHODS

TOPSOIL PREPARATION - GENERAL

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. Remove all stones over 1 inch in greatest dimension, to a depth of 6 inches below finish grade, (308-2.3.1).

Prior to planting, the top six 6) inches of all areas (including slopes) shall be free of weeds, stones, and other deleterious matter one (1) inch in diameter and larger.

RAP STAFF/ CONTRACTOR TO: Provide agricultural suitability tests from a approved Lab for all areas that are to be planted. Depth of test to coincide with size of material to be planted, ie: bore depth for turf 6, 12" for shrubs and

for trees

watered, (308-2.3.1).

TOPSOIL PREPARATION If not otherwise specified, all lawn and ground cover areas shall receive the following soil preparation:

- 3 cubic yards, Type I organic soil amendment per 1,000 sq. ft., (.003 CY/Sq.Ft.) 75 lbs of Establish per 1,000 sq.ft., (.075 Lbs./Sq.Ft.)
- 5 lbs. of Feathermeal, 12-0-0, per 1,000 sq. ft., (.005 Lbs./Sq.Ft.) NO AMENDMENT TO BE USE IN PLANT PITS FOR NATIVES.

The soil preparation materials shall be cultivated into the soil to a depth of 6 inches minimum and thoroughly

The sod shall be machine cut to between 1/4" and 5/8" thick, not including top growth or thatch. Sod shall be laid on a grade which has been amended and finish graded in accordance with the topsoil preparation and finish lawn grading specifications of the Notice To Contractors. The sod strips shall be laid tight against the adjacent strip with adjacent ends forming a running bond pattern. After laying the sod, roll with a minimum 300 lb. water ballast roller and irrigate.

LANDSCAPE PLANTING cont.

FINISH GRADING (FOR LAWN AREAS)

Finish grading of lawn 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. 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 heavy objects shall be taken over the areas at any time. The final finish grade shall be uniform, without abrupt changes in grade, within one-tenth of a foot of the grades shown on the plan, and approved by the Department of Recreation and Parks prior to seeding, (308-2.4).

WEED ABATEMENT ("GROW AND KILL")

Weed abatement shall apply to all turf and planting areas. The abatement 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. NO PLANTING SHALL COMMENCE UNTIL APPROVAL OF WEED ABATEMENT BY THE PROJECT LANDSCAPE ARCHITECT.

NOTE: It is required that herbicides be applied by a licensed **PEST CONTROL APPLICATOR.**

CONTRACTOR RESPONSIBILITY DURING WEED ABATEMENT OPERATION AND **APPLICATION PRECAUTIONS**

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 which includes 72 hour notice to employees and patrons, submittal of a "Pest Control Recommendation Form" to Recreation and Parks, and a completed and accurate MSDS (Material Safety Data Sheet) to be at the site of application. The area of application shall be posted as such and barricaded for public safety and information. On sites over ½ acre in size the contractor shall utilize a Department of Recreation and Parks approved plan of phasing the application.

The Contractor is responsible or any and all damage done to plant materials outside of the treatment area. Contractor shall replace, in kind and size, any plant material damaged or killed through the application of herbicide.

Any Contractor, who is obligated under contract with the Department for the construction or refurbishment of a park facility that involves the intended use of herbicides or other pesticides, must first notify the pest management supervisor of the Forestry Division. Prior to any approved pesticide applications at any recreation/child care center, the contractor is also required to notify the recreation director-in-charge at least 72 hours in advance of the date/s of application. This is to conform to the State of California Healthy Schools Act of 2000(AB2260). Also, all pest control work performed at any facility should fall within the guidelines of the Department's IPM programs. In addition, each individual project will require a written recommendation by a licensed Pest Control Advisor for any pesticide application.

Any questions regarding pesticide application and procedures at Recreation and Parks facilities shall be directed to the Department of Recreation and Parks and the Department's Forestry group, Vegetative Management (213) 485-4826.

In addition to the afore listed responsibilities the following precautions shall be observed in handling and applying herbicide

- 1. Before applying, Contractor shall read and understand all instructions provided by the manufacturer. 2. Product shall not be used when winds are gusty or in excess of 3 miles per hour, or when any other conditions exist, which would result in drift
- 3. Avoid combinations of pressure and nozzle type or adjustment that result in mist.
- 4.Do not apply during rain, or if rain is forecast within twelve hours. If rain occurs within twelve hour period, material must be reapplied after plant growth has dried out.
- 5. Contractor shall observe extreme care not to allow spray to contact desirable plant material. Use cardboard, plywood, or other appropriate material to shield plant materials outside of the treatment area from overspray.
- 6.Do not apply to bare ground. 7.Do not add any other products to any herbicide mix, including spreader stickers or surfactants, unless required by the label directions and approved by the Department's Pest Control Advisor (PCA).

WEED ABATEMENT: GROW AND KILL METHOD Contractor shall follow the "grow and kill" steps set forth below:

- Step 1. Clear site of all dead or living vegetative growth by hand or mechanical means.
- Step 2. Thoroughly water all turf and planting areas daily to keep soil evenly moist for a period of at least two
- Step 3. At the conclusion of the growth period, treat all plants within the treatment area with Roundup at an application rate of five (5) quarts of Roundup mixed in 50 gallons of clean water per acre applied by spraying. Thoroughly moisten all plant material with herbicide.
- Step 4. Do not water or otherwise disturb treated areas for a period of two (2) weeks. Step 5. After two week kill period, remove all dead plant growth. If any living plants are observed, entire plant,
- including roots, shall be removed by hand. Minimize physical disturbance of the soil. WEED SUPPRESSION (NON-HERBICIDE WEED REMOVAL)

Weed suppression, 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. Contractor shall thoroughly water all turf and planting areas for a period of two weeks minimum prior to commencing removal. Contractor shall clear site of all dead vegetation and living weeds by hand or mechanical means. All removed vegetation shall be properly disposed of off site.

TREE AND SHRUB PLANTING

Plant pits for all 1 gallon, 5 gallon, 15 gallon, and all boxed size trees, shall be twice the width and equal to the depth of the container rootball. Note that this requirement differs from the SSPWC (308-4.5).

All plant pit backfill mix to be amended per Agricultural Suitability test recommendations that had been performed by approved Lab. NOTE: backfill plant pits for native plants with native soil only.

Unless otherwise specified, the backfill mix for all plants shall be 60% percent on site soil and 40% percent Type I organic soil amendment and 1 lb. of "Establish," general purpose fertilizer per gallon of container, or 1 lb. per each 4" of box size. "Broadleaf P-4" water holding poylmer shall also be added to the backfill mix at the rate of 1 oz. per foot of rootball diameter.

Each plant pit shall also receive "Agriform" slow release fertilizer tablets, 21 gram, 20-10-5, as shown in the relevant planting details, and as follows: 1 gallon - 1 tablet

5 gallon - 2 tablets

15 gallon - 6 tablets Larger than 15 gallon size - 2 tablets per half inch of trunk diameter

Space tablets evenly around the perimeter of the rootball, approximately 3 inches below finish surface. After shrub or tree has been planted, water by hand to hydrate polymer. NO fertilizer tablets for Native Plants.

Remove all watering basins around trees planted in lawn areas at the end of the maintenance period. All trees planted in lawn areas shall have a 36 inch diameter unplanted area around each tree.

METHOD "A" LAWN PLANTING - REPAIR, SEEDING

Irrigation trenches shall be fully compacted and the grade brought flush with the adjacent undisturbed finish grade. Irrigation trench areas and areas where equipment has damaged the existing lawn shall be seeded per this section.

Sow seed at a rate of three (3) pounds of common Bermuda per 1,000 sq. ft. and six (6) pounds of perennial ryegrass per 1,000 sq. ft. Mulch all seed with 1/4"(or 3/4 cubic yard per 1,000 sq. ft.) of Bio-organic Finale.

Alternate method: Existing sod may be carefully cut, removed and reused to sod trenches after backfilling and densification.

SOD LAWN

MULCHING

All planting areas except lawn shall receive three (3) inch deep layer of tree chip mulch per the Planting Details and this Notice to Contractor Materials list. Mulch shall be spread evenly throughout planting beds and tree watering basins. Do not bury ground cover.

PARK PROUDLA



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LANDSCAPE PLANTING cont.

MAINTENANCE AND PLANT ESTABLISHMENT

The Contractor/RAP Construction staff shall be responsible for maintenance within the area of work throughout the period of construction and the plant establishment period. The maintenance shall include continuous operations of watering, the removal of all weeds in planting areas and all broad leaf weeds in lawn areas, mowing, rolling, trimming, edging, cultivation, fertilization, spraying, control of pests, insects and rodents, reseeding, plant replacement (irrespective of cause), or any other operations necessary to assure normal plant growth and the collection and removal of all trash daily. Any malfunctions of, or damage to, the irrigation system caused by the Contractor or RAP staff in the prosecution of his work shall be repaired within 24 hours.

The plant establishment period shall be for a period of 90 days unless extended as described in this section. The plant establishment period shall be started when all planting and related work has been completed, in accordance with the contract documents. The beginning of the plant establishment period shall be determined by an on site review by the Department of Recreation and Parks Project Landscape Architect. Trees and shrubs shall be healthy and vigorous at the completion of the maintenance period. Broken or vandalized tree stakes shall be repaired to a condition as initially installed within seven (7) days of damage.

All lawn areas shall have 95 percent coverage with bare areas not exceeding three square inches. All lawns shall be of the grass specified and be free from all broad leaf weeds.

RAP Staff shall maintain the area of work at maximum seven (7) day intervals and perform any needed tasks to keep the plants in a optimum growing condition.

Five weeks after lawn seeding the RAP staff shall apply a slow release fertilizer at per soils test recommendations. The fertilizer shall be applied in the presence of the Department of Recreation and Parks.

The RAP staff shall immediately replace any and all plant materials and/or grass which, for any reason dies or is damaged while under the Contractors care. Replacement shall be made with seed and/or plants as indicated or specified for the original planting.

All shrubs and ground covers shall be guaranteed for a period of ninety (90) days from the end of the plant establishment period. All trees and shrubs 15 gallon size or larger shall be guaranteed for a period of one (1) year from the end of the plant establishment period.

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 .

GENERAL ELECTRICAL REQUIREMENTS

<u>GENERAL</u>

DESCRIPTION

- A. Comply with all provisions of the General Conditions, Supplementary Conditions and General Requirements as applicable to work of all Sections of Division 16 (CSI) concerning definitions, guarantees, submittals, as-builts, clean-up, etc.
- B. ALL WORK TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) UNLESS OTHERWISE SPECIFIED.
- **C.** All work of this Division shall be coordinated with work of other trades.

SCOPE

- Required: Provide all labor, materials, equipment, tools and appliances required to furnish and install all electrical work as required for the project. Submit drawings of intended system. Drawings should include but are not limited to the following:
- 1. All construction power and lighting and power for testing equipment and systems through final acceptance of test. 2. Power and lighting service raceway(s) underground from the property line to (an on-site padmount transformer) (an on-site transformer vault) the main service switchboard(s). A ()ampere, ()volts, ()phase, ()wire
- underground supply from the transformer(s) to) (the main service switchboard(s)). Note: Parenthesis with double underlining indicate choices to be made by the specifie
- 3. Complete lighting and power system(s) including branch circuits, fixtures, outlets, lamps, switches, controllers, and auxiliary equipment
- 4. Complete distribution system(s) including switchboards, panelboards, transformers, feeders, and auxiliary equipment.
- 5. Complete system of exterior (vandal resistant) lighting.
- 6. Underground service conduits from property line to _____
- 7. Complete Grounding System.
- 8. Complete Intercom System(s)
 - Telephone system, including service raceways, cabinets, backboards, grounding, and ac power provisions. b. Television antenna and coaxial cable distribution system.
- 9. Distribution for emergency power system including but not limited to a central battery inverter, lighting panelboard and branded circuit wiring.
- 10. Conduit System including backboards, pullboxes, wiring devices, grounding, etc. for the following as applicable:
- c. Telephone System d. Television antenna and coaxial cable distribution.
- 11. Control wiring and devices for equipment specified in Sections of Division 16 and other Technical Sections, except where specifically indicated.
- 12. Complete and Operable Fire Alarm System.
- 13. Connection and testing of electrical equipment and controls specified in Division 16 and other technical sections, except where specifically indicated or noted elsewhere on the Contract Drawing or in the Specifications. 14. Applicable excavating, trenching and backfilling.

WORK NOT INCLUDED

- E. Furnishing all electrical or partially electrically devices related uniquely to mechanical equipment and only as specified in the Mechanical Division 15.
- **F.** Furnishing and installing of all motors.

LEGAL REQUIREMENTS AND STANDARDS

- G. Required: Comply with the latest, as applicable and effective, during the progress of Contracted Work.
- 14. Latest Los Angeles City Electrical, Fire and Building Codes and U.B.C. Supplement.
- 15. California State Administrative Code, Title 24, State Building Standard.
- 16. (CAL/OSHA) California State Occupational Safety and Health Act.
- 17. California State Fire Marshal Standards.
- 18. Los Angeles City Department of Water and Power.
- 19. U.L. Underwriters Laboratories Inc.
- 20. NEC National Electric Code.

Telephone System d. Television antenna and coaxial cable distribution. where specifically indicated. 12. Complete and Operable Fire Alarm System. 14. Applicable excavating, trenching and backfilling. WORK NOT INCLUDED the Mechanical Division 15. F. Furnishing and installing of all motors. LEGAL REQUIREMENTS AND STANDARDS 14. Latest Los Angeles City Electrical, Fire and Building Codes and U.B.C. Supplement. 15. California State Administrative Code, Title 24, State Building Standard. 16. (CAL/OSHA) California State Occupational Safety and Health Act. 17. California State Fire Marshal Standards. 18. Los Angeles City Department of Water and Power. 19. U.L. - Underwriters Laboratories Inc. 20. NEC - National Electric Code. 21. ASTM - American Society of Testing and Materials. 22. Current publications of the National Fire Protection Association. 23. National and American Standards Association. Н. General Compliance As Applicable 24. Drawings and specification requirements shall govern where they exceed Code requirements. requirements. GENERAL REQUIREMENTS Permits and Inspections authorities City Department of Building and Safety. Site Inspections: Verification of Dimensions: All dimensions (scaled, figured or noted) are approximate, given for estimating purposes. Κ. L. Examination of the Contract Drawings: M. Substitutions: standard of quality and required functional performance. N. Submittals: the overall Construction schedule.

- installed in the allocated spaces".

include the following as applicable:

- h. Motor control centers
- i. Central battery inverter.
- j. Lighting panelboards
- k. Dry type transformers.
- I. Conduits.
- m. Conductors.
- housekeeping pads.
- p. Lighting fixtures.
- q. Fire alarm and detection system.

- u. All fabricated equipment.

10. Conduit System including backboards, pullboxes, wiring devices, grounding, etc. for the following as applicable:

11. Control wiring and devices for equipment specified in Sections of Division 16 and other Technical Sections, except

13. Connection and testing of electrical equipment and controls specified in Division 16 and other technical sections, except where specifically indicated or noted elsewhere on the Contract Drawing or in the Specifications.

E. Furnishing all electrical or partially electrically devices related uniquely to mechanical equipment and only as specified in

G. <u>Required</u>: Comply with the latest, as applicable and effective, during the progress of Contracted Work.

25. Where requirements between governing Codes and Regulations vary, the more restrictive provision shall apply

26. Nothing contained in Contract Documents shall be construed as authority or permission to disregard or violate legal

27. Apply and pay for all required electrical work (construction and installation) prescribed by legally constituted public

28. Arrange and pay for all required inspections or examinations and shall deliver "certifications" of such inspections to the Architect or City Engineer prior to acceptance of the electrical work. Obtain approved plans from the Los Angeles

29. Carefully examine the job-site and existing facilities and prepare the Contract Drawings for work coordination.

30. By act of submitting bid, it will be deemed the Contractor has made required inspections and has accepted such iob-site conditions and has made allowances thereof in the preparation of "Bid" figures.

Before proceeding with work Contractor shall carefully check and verify all dimensions, sizes, etc. and shall assume full responsibility for proper fitting in and attachment of all materials and equipment to other equipment and to the structure.

31. No contract drawings are provided. Contractor to provide all relative documentation required successfully install electrical system. Plans shall be stamped by a licensed, by the state of California, Electrical Engineer.

32. Items, articles or products named on the Contract Drawings and in the Specifications are intended to establish a

33. Prepare, review and coordinate schedule of submittals, determining necessary lead time for preparation, submitting checking, and ordering and delivering materials and equipment to the job-site for timely arrival and conformance with

34. All submittals will be checked for general compliance with Specifications only.

35. Shop drawings shall be submitted in completed groups of materials (i.e., all lighting fixtures or all switchgear, etc.). The Contractor shall add and sign the following paragraph on all equipment and materials submitted for review.

e. "It is hereby certified that the (equipment) (material) shown and marked in this submittal is that proposed to be incorporated into the project; is in compliance with the Contract Drawings and Specifications and can be

f. Failure to add the above written statement for compliance will result in return of submittals to be reviewed.

36. All required submittals on electrical items and equipment shall include complete catalog information such as construction ratings, insulation systems, including manufacturer's certification that items or equipment meet or exceed U.L. and Trade Standards, and the Specifications.

37. Equipment Floor Plans: Submit after approval of material and/or equipment is secured. Prepare for each electrical equipment room drawn to 2" = 1'0" scale. Layout drawing shall be to exact scale.

6. Materials list of items and equipment proposed to be provided for the work of this Division 16 and shall g. Service and distribution switchgear.

n. Electrical equipment layout at 2" = 1'-0" scale indicating exact dimensions of equipment, clearances,

o. Disconnect switches, pull boxes and fuses

r. Control devices, standard and special receptacles, switches and finish device plates.

s. Cabinets for signal and telephone systems, special terminals and cabinets

t. Vibration isolators, including lateral and vertical seismic restraints

u.Clock and program system.

v.Time clocks, contactors, control switches, etc. including wiring diagrams and sequence of operation

Special Submissions

38. Test Reports For The Following: w.Ground fault devices

- x. Megger Readings: Ground system, motors, feeders and switchgear.
- y. Voltage Readings: Distribution, service and motors.
- z. Fire alarm system.

39. Maintenance service and operating manuals for all equipment.

40. Items as outlined in other Sections.

"No Exceptions Taken": Be responsible for equipment ordered and/or installed prior to receipt of shop drawings returned Architect bearing the Electrical Engineer's stamp of "No Exceptions Taken". Corrections or modifications to equipment as shop drawings shall be performed or equipment removed from the job site at request of Architect without additional comper

Disapprovals: Any article or equipment supplied by the Contractor disapproved by the Architect or City Engineer as not Q. to the Specifications or not of proper quality or grade or suitability shall be deleted and suitable article or equipment be pro thereof in conformance with the Specifications at no added cost to the City.

R. Terminology:

*Note: Specifier should name at least two manufacturers plus the words "or equal".

Contract Drawings: Make such drawings sufficiently complete for the proper installation and operation of the proposed S. equipment, and for construction by all of the involved trades of the proposed revisions.

The cost of the drawings and any revisions to them do to review process comments shall be borne by the Contractor.

Record Drawings: Provide as-built record drawings for all work done. See also applicable provisions of THE GENERAL REQUIREMENTS

Operation and Maintenance Manuals: Prior to final acceptance of Contracted Work by the City, furnish 4 bound copies and maintenance manuals for each electrical equipment, as required in this Section. The contents shall include descriptio equipment, names of manufacturers, parts lists, model numbers, maintenance schedules, location of nearest facility for re parts or service, wiring and connection diagrams, internal schematic drawings, and other electrical/mechanical data neces operation and maintenance.

(END OF SECTION)

General Grading Notes:

- 1) All trees to be planted in either an elevated berm or elevated planter. There shall be a minimum of 3' of clean soil betweer the non permeable soil slab and the area where with the trees are to be planted.
- Contractor will provide all necessary agronomic suitability soil testing on site.
- 3) Contractor to provide licensed hazardous waste hauler and provide manifest copies to the City prior to completion of the pr
- 4) Contractor to pay and process a City of Los Angeles Department of Building and Safety grading and haul route permit.
- 5) If any abandoned oil wells are encountered, the contractor shall contact the State Division of Oil, Gas and Geothermal Res inspection and direction. All work within an approximate radius of 50 feet, and or any work that is requiring a access throug as indicated above, of any unforeseen oil well shall stop until appropriate direction is received from the City.
- 6) Contractor shall have identified an area for stockpiling of soil while contamination soil results are being assembled. Stockp covered with Visqueen and secured until a appropriate site for disposal and or reuse is identifie
- 7) Site shall be secured with 6 foot temporary chain link fencing for the duration of the contract. During site grading and exca onsite, unarmed security officer is required.
- 8) Any railroad tracks encountered shall be recycled. Railroad ties shall be disposed of at appropriate landfill.
- 9) All grading & drainage plans and sportsfield lighting foundations shall be designed, approved, wet stamped, and signed by licensed civil engineer
- 10. Complete 3 grow and kill cycles on the site prior to commencement of construction. Grow and Kills to utilized a RAP approv Verify herbicide with RAP Forestry Division prior to use.
- 11. All debris and deleterious material to be removed and disposed of at a Los Angeles City approved facility for such. 12. Dust to be control via site watering .Contractor to adhere to BMP practices applicable to this site and project.

TREE PROTECTION SPECIFICATIONS

1.01 TREE PROTECTION

(a) All trees that occur within the area of work, as shown on the plans, and NOT specifically for removal, shall be protected by the following means:

- 1. ANY FAILURE BY THE CONTRACTOR TO ADHERE TO THE REQUIREMENTS SPECIFIED BE RESULT IN THE SUSPENSION OF ALL CONSTRUCTION ACTIVITIES, TO BE DONE AT THE CON EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF OR PAYMENT TREES DAMAGED THROUGH NON-COMPLIANCE WITH THESE SPECIFICATIONS. THE MON REPLACEMENT VALUE OF IMPACTED TREES WILL BE DETERMINED BY A RECREATION AND PAR ARBORIST OR BY A RAP APPROVED ARBORIST.
- 2. Defining the Tree Protection Zone (TPZ) The radius (not the diameter) of the TPZ, from the outside of the tree trunk, shall be calculated according to the following: (a) Single trunk trees - multiply the trunk diameter in inches, measured 4.5' above grade, by
- (b) Multi trunk trees multiply the sum of the diameters of all trunks in inches, measured grade, by 1.5 feet. (c) Palm trees -5' from the base of the trunk.
- 3. Beyond the TPZ, the contractor shall also be responsible for protecting all trees boundaries of the construction zone, including vehicular access areas, lay down areas, other areas impacted by construction activities. Any damage to trees in these areas sha subject to the same monetary or replacement requirements specified in #1 above. Any root cutting in this area must be confirmed with either the RAP or other approved arbor also the General Conditions for any damage done by the contractor to landscaping or amenities that fall outside the boundaries of the construction zone.
- 4. Within the boundaries of the construction zone (including the TPZ), the contractor responsible for mitigating construction-related dust accumulation on all trees by sp trunks, limbs, and foliage with water to a maximum height of 30 feet during the month through November, at monthly intervals.
- 5. Within the TPZ, the contractor shall adhere to the following requirements, including, but
- (a) No stockpiling or storage of any material, debris, or soil.
- (b) No storage of any construction equipment. (c) No vehicular access.
- (d) No cutting of roots.
- (e) No disturbance of soil or grade changes.
- (f) No objects of any kind to be attached to tree trunks.
- 6. The contractor shall install a 5' temporary chain link fence with one pedestrian access the boundary of the TPZ. See detail for temporary chain link fence on detail sheet.
- 7. The contractor shall provide one sign per each 20 lineal ft. of fence bordering the TPZ that fencing shall not be removed. See sign detail that is included as part of the temp link detail.

n.	8. No work is permitted within the TPZ without the approval of: 1) the project landscape architect, 2) the project manager, and 3) RAP Forestry staff. Any work authorized within the TPZ must be done in accordance with the recommendations of a PAP attorned under the	CITY OF LOS ANGEIRS DE DESCRIPTION ANGEIRS PARK PROUD LA
ed from the s noted on pensation. conforming rovided in lieu materials or - s of operation on of eplacement ssary for	 an ISA Certified Arborist or a Registered Consulting Arborist must be: 1) an ISA Certified Arborist or a Registered Consulting Arborist, with verifiable experience in protecting trees during construction; 2) approved by RAP Forestry. The Monitoring Arborist shall be hired and paid by the contractor. 9. Irrigation to all trees NOT specifically designated for removal shall be kept in operation for the duration of the project. Contractor shall be responsible for hand watering all impacted trees if necessitated by temporary shutdowns to existing irrigation systems. Trees are to be irrigated deeply and infrequently so that soil moisture is detectable at a minimum depth of 18" using a soil probe. 10. Upon job completion, contractor shall remove all items installed to protect trees during the construction process. 11. Any of the following Southern California native tree species fall under Ordinance No. 177404 of the Los Angeles Municipal Code: (a) Oaks, including Valley Oak (Quercus lobata), California Live Oak (Quercus agrifolia), or any other tree of the oak genus indigenous to California but excluding Scrub Oak (Quercus dumosa); (b) Southern California Black Walnut (Jugians californica var. californica); (c) Western Sycamore (Platanus racemoso); (d) California Bay (Umbellularia californica). Contractor shall camply with the requirements of the ordinance found at: http://cityplanning.lacity.org/Code_Studies/Other/ProtectedTreeOrd.pdf. S:\Tree Protection\Tree Protection Specifications – April 3 2014	THIE GITTY OF LOS ANGELES DEPARTMENT OF RECREATION AND PARKS GENERAL MAGER: Michael Shull ASSISTANT GEN. MANAGER: Ramon Barajas PROJECT LANDSCAFE ARCHITECT: CRAG RANES ASSISTAND N: UC. NO. AS-BULTS DRAWN BY: DATE
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PLANTING AREAS WHERE POSSIBLE UNLESS OTHER WISE NOTED. LOCATE ALL IRRIGATION HEADS A MINIMUM OF 3" FROM THE EDGE OF CURBS, WALLS, FENCES, AND/ OR OTHER HARDSCAPE AREAS AND 12" FROM BUILDING WALL.

2. <u>VERIFY CONDITIONS</u>

THE CONTRACTOR SHALL VERIFY EXISTING LOCATIONS OF ALL UTILITY SERVICE LINES AND SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE INCURRED DURING HIS/HER WORK. VERIFY THE STATIC PSI AND THE GPM AT THE POINT OF CONNECTION. NOTIFY THE PROJECT ENGINEER LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO THE START OF WORK.

3. BACKFLOW DEVICE CERTIFICATION

THE CONTRACTOR SHALL OBTAIN CERTIFICATION OF THE BACKFLOW DEVICE(S) FROM THE LOS ANGELES COUNTY HEALTH DEPARTMENT. SUBMIT THE CERTIFICATE OF APPROVAL FOR BACK FLOW DEVICE PLUS (2) TWO COPIES TO THE PROJECT ENGINEER AT THE TIME OF OPERATIONAL TESTING OF THE IRRIGATION SYSTEM.

4. <u>VALVE BOXES</u>

UNLESS OTHERWISE SHOWN OR NOTED, STANDARD PLAN S-655-0 IS MODIFIED AS FOLLOWS: ALL VALVE/PULL BOXES SHALL BE 9 1/2" x 16" x 12" AND 12" x 22" x 12" SIZES, MADE OF CONCRETE WITH CAST IRON, DOUBLE TOGGLE LOCKING TRAFFIC LID. ALL VALVE/PULL BOX LIDS SHALL BE EMBOSSED WITH THE FOLLOWING IDENTIFICATION IN 2" HIGH INITIALS:

SHUT – OFF VALVE	SOV
REMOTE CONTROL VALVE	RCV
QUICK COUPLER VALVE	QCV
ELECTRICAL PULL BOX	ELECTRICAL

CAST IRON LIDS SHALL BE COMPLETELY REMOVABLE FROM THE CONCRETE VALVE BOX (TRAFFIC RATED TYPE). HINGED CAST IRON LIDS ARE UNACCEPTABLE AND ARE NOT TO BE INSTALLED.

SCH. 40 PVC. ALL THREADED FITTINGS SHALL BE NEW SCH. 80 PVC., UNLESS OTHERWISE NOTED.

6. <u>SWING JOINTS</u>

ALL SWING JOINTS AND RISERS SHALL BE CONSTRUCTED OF EITHER SCHEDULE 80 PVC. OR SCHEDULE 40 GALVANIZED STEEL THREADED FITTINGS (SEE CONSTRUCTION DETAILS FOR CONSTRUCTION AND INSTALLATION SWING JOINTS). STREET ELLS WILL NOT BE PERMITTED. CONTRACTOR TO SUBMIT A SWING JOINT FOR APPROVAL PRIOR TO I INSTALLATION.

7. <u>TRENCHING/EXCAVATION</u>

THE CONTRACTOR SHALL NOT TRENCH OR EXCAVATE FOR IRRIGATION PIPING, CONDUIT, WALL FOOTINGS, ETC. WITHIN THE DRIP LINE OF ANY EXISTING TREE. ALLOWANCES CAN BE MADE ONLY IF THE CONTRACTOR SUBMITS A WRITTEN REQUEST TO THE PROJECT ENGINEER/LANDSCAPE ARCHITECT STATING WAYS AND MEANS AS TO HOW THE CONTRACTOR WILL PROCEED WITH MINIMUM DISTURBANCE TO THE TREE.

8. <u>PIPE BEDDING AND BACKFILL</u>

BEDDING SHALL SURROUND THE PIPE TO ONE FOOT ABOVE THE TOP OF THE PIPE. BEDDING SHALL BE PLACED IN 6" LIFTS. ALL BEDDING SHALL BE DENSIFIED BY WATER JETTING. WATER JETTING SHALL BE SUFFICIENT TO THOROUGHLY WET BEDDING MATERIAL AROUND THE PIPE (SSPWC 306-1.2.1). THERE SHALL BE NO ROCKS OVER 1/2" IN GREATEST DIMENSION AND NO ORGANIĆ MATTER PLACED IN THE BEDDING MATERÍAL. BACKFILL SHALL BE THE MATERIAL PLACED ABOVE THE BEDDING. BACKFILL SHALL BE PLACED IN ONE-FOOT LIFTS AND DENSIFIED BY WATER JETTING. JETTING SHALL BE CONTINUED UNTIL BACKFILL COLLAPSES AND WATER IS FORCED TO THE SURFACE (SSPWC 306–1.3.1. .). PIPE TRENCHES THOROUGHLY DENSIFIED BY WATER SETTLING SHALL HAVE A MINIMUM RELATIVE COMPACTION OF 85%. THERE ARE NO ROCKS OVER 2" IN GREATEST DIMENSION OR ORGANIC MATTER IN THE BACKFILL. TRENCH AREAS WHICH EXHIBIT IN- SUFFICIENT IDENTIFICATION SHALL BE SUBJECT TO COMPACTION TESTS AS REQUESTED BY THE INSPECTOR OR THE PROJECT ENGINEER. ALL SUCH COMPACTION TEST SHALL BE AT EXPENSE OF THE CONTRACTOR, UNTIL THE 85% COMPACTION IS ACHIEVED. FINISHED TRENCHES SHALL MEET AND MATCH ADJACENT FINISH GRADE FLUSH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE TRENCHES FLUSH AND SMOOTH UNTIL FINAL ACCEPTANCE OF THE PROJECT. TRENCHES IN EXISTING LAWN SHALL BE REPAIRED PER METHOD 'A' LAWN REPAIR PER THE SSPWC 308-4.8.2.

9. <u>Electrical control wires</u>

CONTROL WIRING SHALL BE DIRECT BURIAL TYPE MINIMUM 10 GA. (AWG). SEE IRRIGATION CONTROLLER DETAIL FOR WIRE SIZE. PROVIDE WIRING TO ALL REMOTE CONTROL VALUES INCLUDING A SPARE CONTROL WIRE TO THE FURTHEST REMOTE CONTROL VALVE. IN THE EVENT THAT ONE CONTROLLER HAS SEVERAL DIRECTIONS OF CONTROL WIRE RUNS, ALL DIRECTIONS SHALL HAVE AN EXTRA CONTROL WIRE. ALL SPARE CONTROL WIRES SHALL BE IDENTIFIED WITH LABELS AT BOTH ENDS. WIRING SHALL BE IDENTIFIED BY INTEGRAL WIRE COLOR CODING AS FOLLOWS:

COMMON WIRE WHITE CONTROL WIRE RED (FIRST CONTROLLER) ORANGE (SECOND CONTROLLER) YELLOW (THIRD CONTROLLER IF APPLICABLE) SPARE WIRE GREEN

10. ELECTRICAL CONTROL WIRE CONNECTIONS

CONTROL WIRE CONNECTIONS SHALL BE MADE USING AN APPROVED, WATERTIGHT CONNECTOR SYSTEM. WIRES SHALL BE CONNECTED USING A COPPER CRIMP SLEEVE. THE CONNECTION SHALL BE PLACED IN A TWO PIECE (MALE-FEMALE) MALLEABLE PLASTIC CASING FILLED WATERPROOF SEALANT.

11. <u>Low head drainage</u>

THE CONTRACTOR SHALL INSTALL IN-LINE LOW HEAD DRAINAGE VALVES AT IRRIGATION HEADS OR AS INDICATED ON THE PLAN (S) WHERE NECESSARY TO PREVENT LOW HEAD DRAINAGE AT NO ADDITION COST TO THE CITY.

12. CONTROLLER CHARTS

THE CONTRACTOR SHALL PROVIDE TWO SETS OF THE CONTROLLER CHARTS SHOWING THE APPROVED AS-BUILT IRRIGATION PLANS. THE CHARTS SHALL BE DONE ON HALF SIZE PHOTOGRAPHICREPRODUCTION OF THE APPROVED IRRIGATION AS-BUILT PLANS AND SHALL REFLECT ALL AS-BUILT DATA. EACH STATION SHALL BE SHOWN IN A DIFFERENT COLOR AND CONTROL WIRE LOCATIONS SHALL BE INDICATED. THE COMPLETE PLAN(S) SHALL BE LAMINATED ON EACH SIDE WITH 20 MIL. ACRYLIC PLASTIC SHEET. A 3/4 " BRASS GROMMET SHALL BE PLACED IN EACH TOP CORNER. THE CONTRACTOR SHALL OBTAIN APPROVAL OF THE AS- BUILT PLANS PRIOR TO PROCEEDING WITH THE PLASTIC LAMINATION.

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