City of Coachella



LAS LUNAS AVE. AND CALLE BOUGAINVILIA RETENTION BASIN - LANDSCAPE IMPROVEMENTS

LAS LUNAS RETENTION BASIN

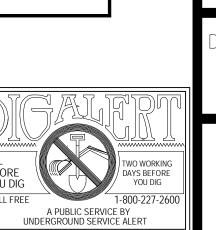


SITE MAP

BOUGAINVILIA RETENTION BASIN

SHEET INDEX

	SHEET NO.	SHEET DESCRIPTION
	L1.0	TITLE SHEET
<u> </u>	L1.1	IRRIGATION LAYOUT PLAN
	L2.1	IRRIGATION DETAILS
1	L3.1	PLANTING PLAN
	L4.1	PLANTING DETAILS
<u> </u>	L5.1	SPECIFICATIONS



3	PROJECT LINKS
	43955 Port Maria Road Bermuda Dunes, CA 92203 760.275.8700 tele www.projectlinks.net



City of Coachella

DE	:VIC	SIONS		
KI	VIS	SIONS		
Delta	Date	Sheets Affected	Ву	Description of Change
	6/6/2	23 CHANGE		
		AND ADD	DED S	SHEET L5.1

AND ADDED S	HEET L5.1

<u> </u>	 	

\wedge		

JOB #
PL-DR

DATE:

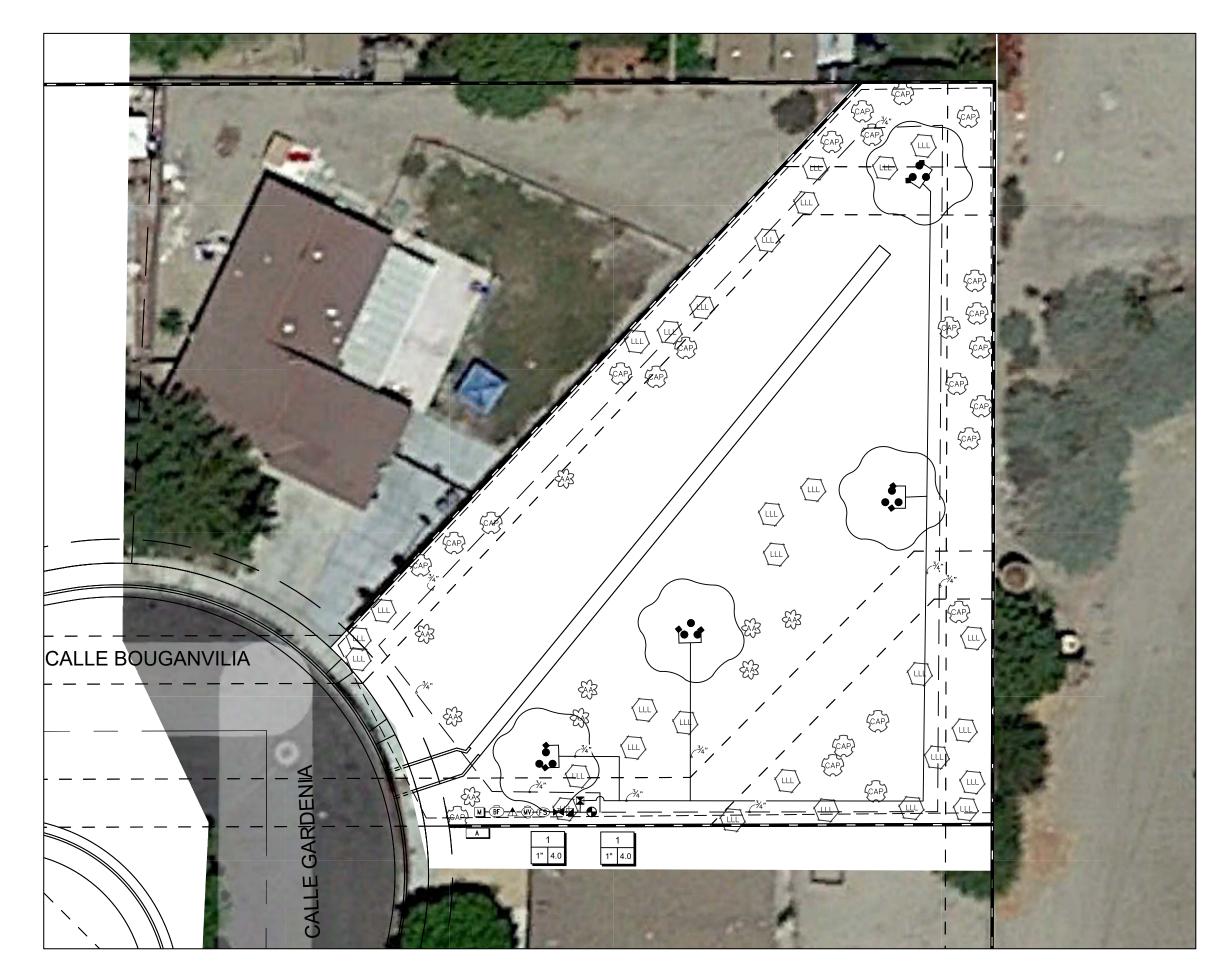
JUNE 6, 2023

TITLE SHEET

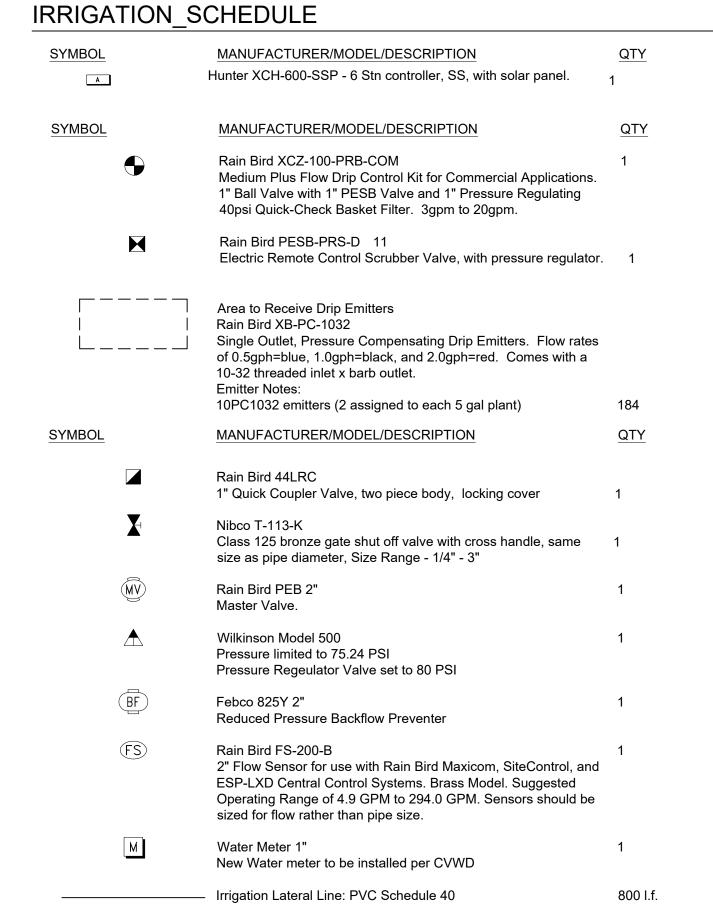


IRRIGATION_SCHEDULE SYMBOL MANUFACTURER/MODEL/DESCRIPTION Hunter XCH-600-SSP - 6 Stn controller, SS, with solar panel. Α SYMBOL MANUFACTURER/MODEL/DESCRIPTION QTY Rain Bird XCZ-100-PRB-COM Medium Plus Flow Drip Control Kit for Commercial Applications. 1" Ball Valve with 1" PESB Valve and 1" Pressure Regulating 40psi Quick-Check Basket Filter. 3gpm to 20gpm. Rain Bird PESB-PRS-D 11 Electric Remote Control Scrubber Valve, with pressure regulator. 1 Area to Receive Drip Emitters Rain Bird XB-PC-1032 Single Outlet, Pressure Compensating Drip Emitters. Flow rates of 0.5gph=blue, 1.0gph=black, and 2.0gph=red. Comes with a 10-32 threaded inlet x barb outlet. **Emitter Notes:** 192 10PC1032 emitters (2 assigned to each 5 gal plant) SYMBOL MANUFACTURER/MODEL/DESCRIPTION QTY Rain Bird 44LRC 1" Quick Coupler Valve, two piece body, locking cover Class 125 bronze gate shut off valve with cross handle, same 1 size as pipe diameter, Size Range - 1/4" - 3" Rain Bird PEB 2" Master Valve. Wilkinson Model 500 Pressure limited to 75.24 PSI Pressure Regeulator Valve set to 80 PSI Febco 825Y 2" Reduced Pressure Backflow Preventer Rain Bird FS-200-B 2" Flow Sensor for use with Rain Bird Maxicom, SiteControl, and ESP-LXD Central Control Systems. Brass Model. Suggested Operating Range of 4.9 GPM to 294.0 GPM. Sensors should be sized for flow rather than pipe size. М Water Meter 1" New Water meter to be installed per CVWD Irrigation Lateral Line: PVC Schedule 40 1,500 l.f. Valve Callout Valve Number

Valve Flow
Valve Size



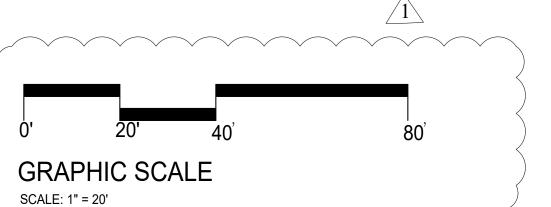
BOUGANVILIA RETENTION BASIN



CITY OF COACHELLA

APPROVED FOR CONSTRUCTION:

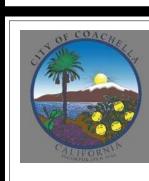
MARITZA MARTINEZ
PUBLIC WORKS DIRECTOR











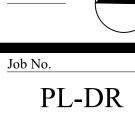
City of Coachella 53990 Enterprise Way

by	3			
date	6/5/2023			
revisions	Change scale to 1:20			
no.				
		~		

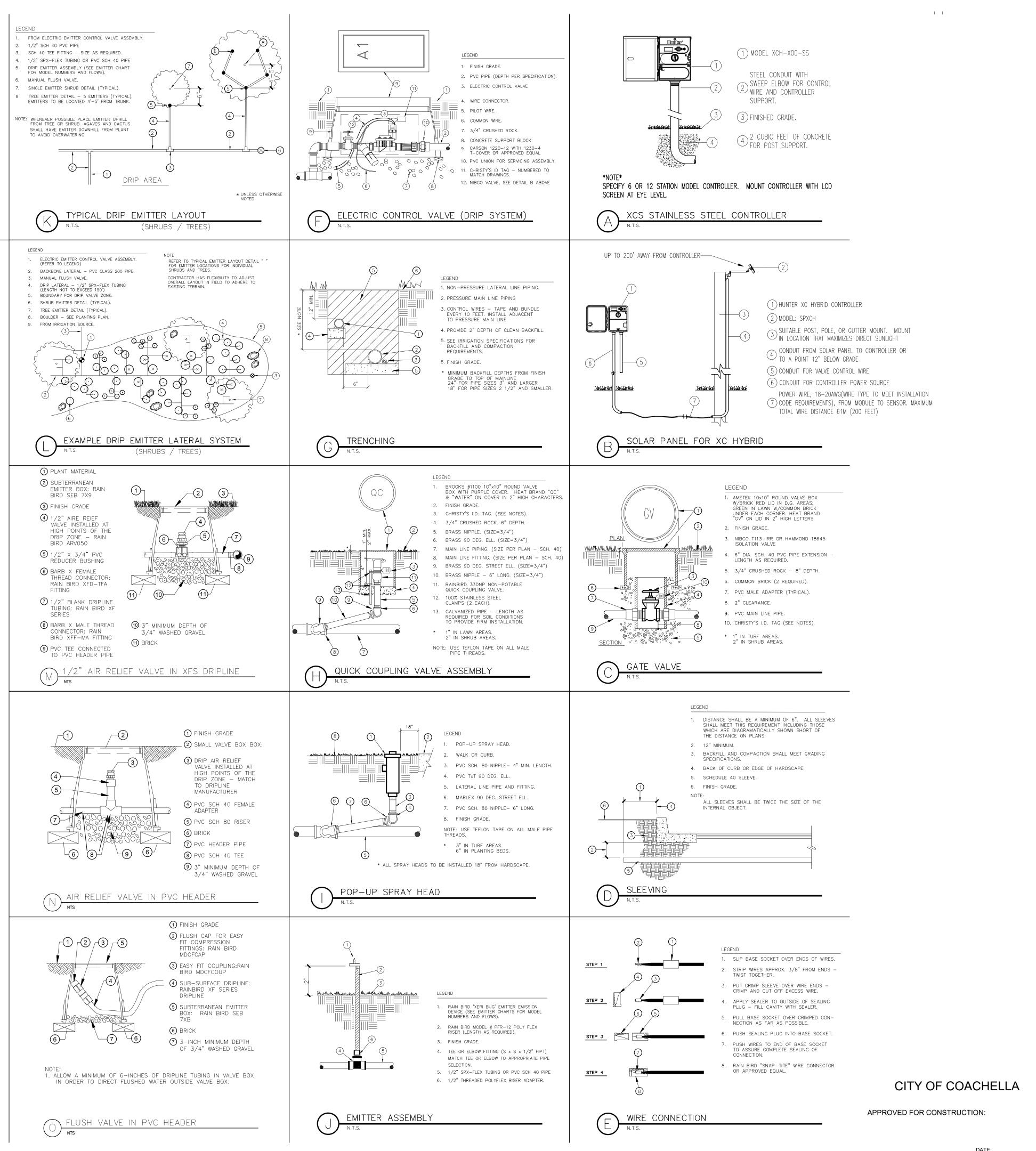
no.	Chan				1
Scale:	1" = 20'	Date:	May 2, 2023	Drawn By:	A margined Day
					V

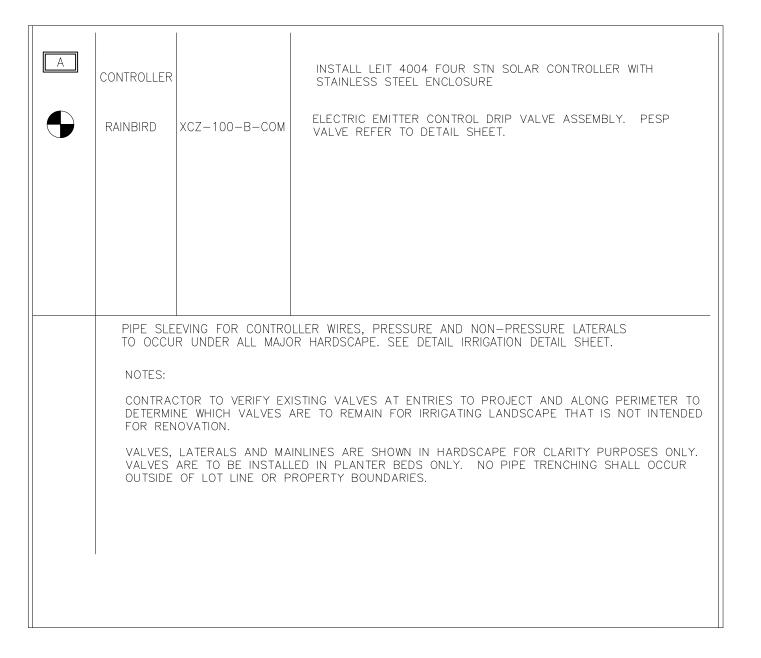
Coachella Retention Basins





Sheet No.
L1.1



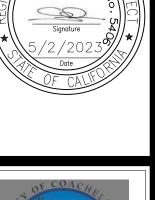


GENERAL IRRIGATION NOTES

- 1. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE DESIGNATED ON THE PLANS.
- 2. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE METER OR POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- 3. 120 VOLT ELECTRICAL POWER OUTLET AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL OULTLET TO THE AUTOMATIC CONTROLLER.
- 4. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.
- 5. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO ALLOW FOR NO OVERSPRAY ONTO WALKS, ROADWAYS AND/OR BUILDINGS. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
- 6. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICIATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- 7. INSTALL ALL PIPE MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL PVC MALE PIPE THREADS ON ALL SPRINKLER SWING JOINT AND VALVE ASSEMBLIES.
- 8. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, <u>RETAINING</u> WALLS, ETC. HE SHALL COORDINATE HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB—CONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC.
- 9. IN ADDITION TO THE CONTROL WIRE SLEEVES SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONTROL WIRE SLEEVES OF SUFFICIENT SIZE UNDER ALL OTHER PAVED AREAS.









City of Coachella 53990 Enterprise Way

Coachella Retention Basins IRRIGATION DETAILS

Torth

Job No.
PL-DR

Sheet No.
of 6 L2.1

BEFORE YOU DIG TOLL FREE

UNDERGROUND SERVICE ALERT

MARITZA MARTINEZ
PUBLIC WORKS DIRECTOR

GRAPHIC SCALE

SCALE: 1" = 50'

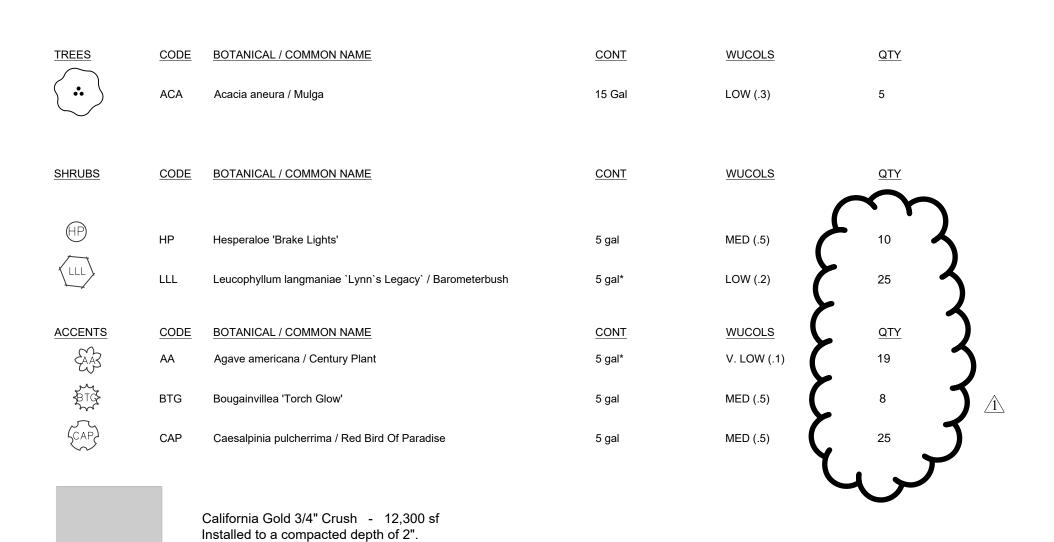
LAS LUNAS RETENTION BASIN

Apache Brown 3/4" Crush - 9,100 sf Installed to a compacted depth of 2".

Vista Gold 3" - 6" - 1,100 sf Installed to a depth of 8".

PLANT PALETTE

EXISTING TREE

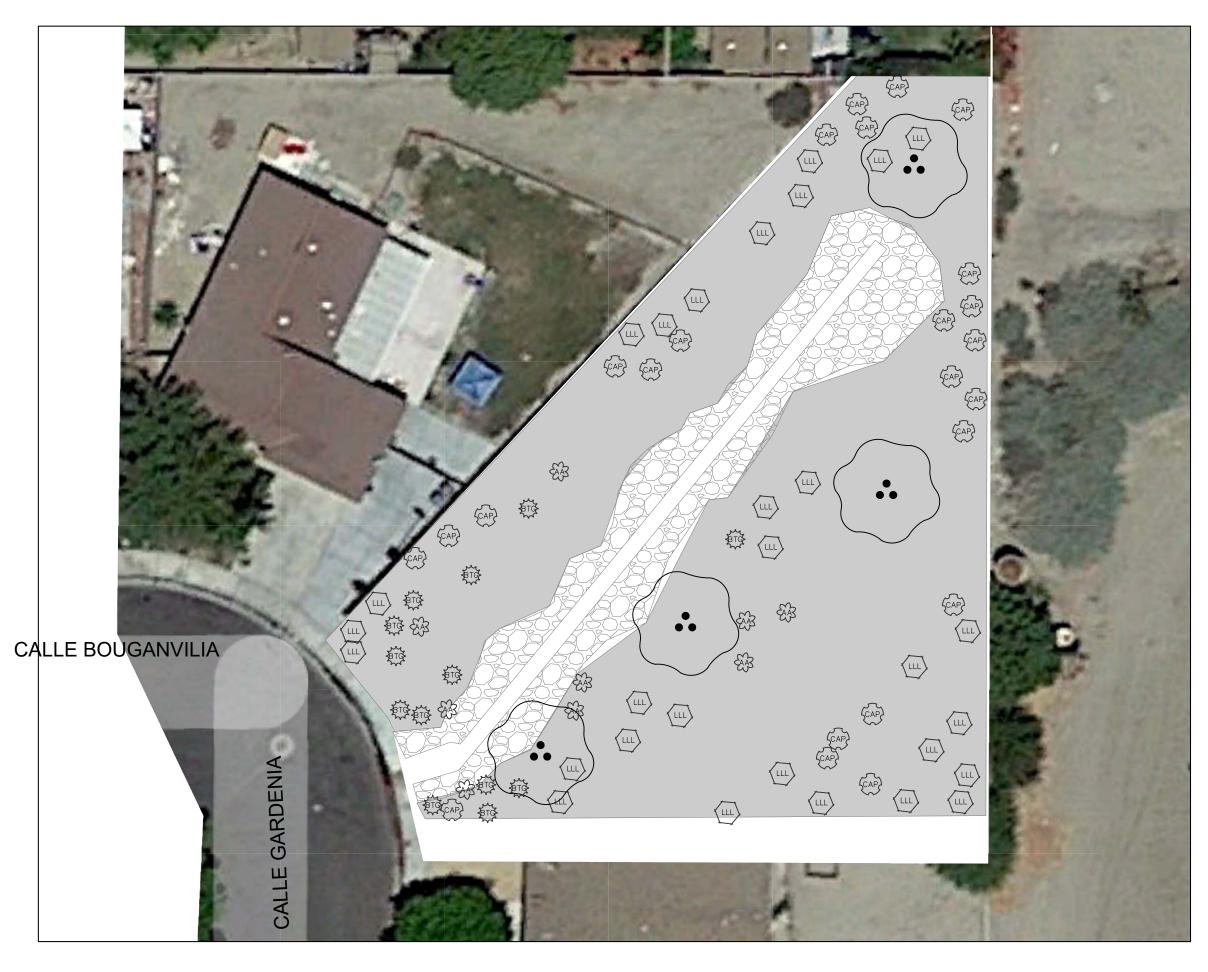


NOTE: RETENTION BASIN SOLAR LIGHTS

SOLAR LIGHTS FOR THE RETENTION BASINS SHALL BE EE800W-SHRC ADVANCE SOLAR HYBRID MICROGRID LED STREET LIGHT SERIES BY eLEDing. CONTACT eLEDing at 877.579.3889 OR AT SALES@EESGI.COM

LAS LUNAS BASIN TO RECEIVE 3 LIGHTS, BOUGANVILIA BASIN TO RECEIVE 2 LIGHTS.

LOCATIONS TO BE DETERMINED IN FIELD BY CITY STAFF.



BOUGANVILIA RETENTION BASIN

PLANT PALETTE

TREES	CODE	BOTANICAL / COMMON NAME	CONT	WUCOLS	QTY
(<u>.</u>	ACA	Acacia aneura / Mulga	15 Gal	LOW (.3)	4
<u>SHRUBS</u>	CODE	BOTANICAL / COMMON NAME	CONT	WUCOLS	QTY
HP	HP	Hesperaloe 'Brake Lights'	5 gal	MED (.5)	20
LLL	LLL	Leucophyllum langmaniae `Lynn`s Legacy` / Barometerbush	5 gal*	LOW (.2)	29
<u>ACCENTS</u>	CODE	BOTANICAL / COMMON NAME	CONT	WUCOLS	QTY
	AA	Agave americana / Century Plant	5 gal*	V. LOW (.1)	9
ATC BTC	BTG	Bougainvillea 'Torch Glow'	5 gal	MED (.5)	13
CAP	CAP	Caesalpinia pulcherrima / Red Bird Of Paradise	5 gal	MED (.5)	24



California Gold 3/4" Crush - 11,500 sf Installed to a compacted depth of 2".

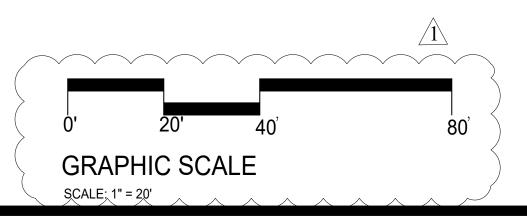


Vista Gold 3" - 6" Cobble - 2,300 sf Installed to a depth of 8"

CITY OF COACHELLA

APPROVED FOR CONSTRUCTION:

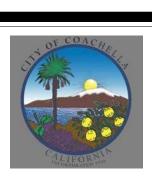
MARITZA MARTINEZ
PUBLIC WORKS DIRECTOR











ity of Coachella 53990 Enterprise Way Coachella, CA 92236

by	023			
date	6/5/2023			
revisions	Changed scale to 1:20	Updated Quantity		
no.				
		~		

Coachella Retention Basins	,
	Date:
	May 2,
	Drawn By:
Lunas - Bouganvilia Planting Plans	A norrowed B



Job No.
PL-DR

Sheet No.

L3.1

PLANTING NOTES & APPROVAL PROCEDURES

LANDSCAPE ARCHITECTWILL WORK WITH LANDSCAPE CONTRACTOR TO ESTABLISH DESIRED PLANTING CHARACTER OF EACH OF THE DIFFERENT LANDSCAPE TREATMENTS WHEN FIRST LAYED OUT. CONTINUED PLANTING WILL BE LAYED OUT BY LANDSCAPE CONTRACTOR AND APPROVAL OBTAINED BY PERIODIC SITE VISITS BY LANDSCAPE ARCHITECT.

LANDSCAPE CONTRACTOR SHALL BE WILLING TO WORK WITH THE LANDSCAPE ARCHITECT IF CHANGES TO THE PLANT PALETTE ARE NECESSARY TO ACHIEVE

GENERAL NOTES

THE LANDSCAPE CONTRACTOR IS TO PROVIDE A LIST OF SUPPLIERS FOR PLANT MATERIAL. ALL TREES AND PLANT MATERIALS TO BE APPROVED BY LANDSCAPE ARCHITECT AT TIME OF DELIVERY TO THE JOB SITE. THE CONTRACTOR IS TO NOTIFY THE

LANDSCAPE ARCHITECT 48 HOURS PROIR TO SHIPMENT ARRIVAL TO SCHEDULE THE MATERIAL REVIEW.

ALL TREE LOCATIONS ARE TO BE STAKED IN THE FIELD BY LANDSCAPE ARCHITECT. LANDSCAPE CONTRACTOR IS TO NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF 48 HOURS PRIOR TO STAKING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STAKES UNTIL ALL TREES ARE PLANTED AND VERIFIED BY LANDSCAPE ARCHITECT

ALL TREES AND PLANT MATERIAL ARE TO CONFORM TO THE DETAILS AND SPECIFICATIONS OUTLINED IN THE PLANTING DETAILS AND PLANTING SPECIFICATIONS OF THE CONSTRUCTION PACKAGE.

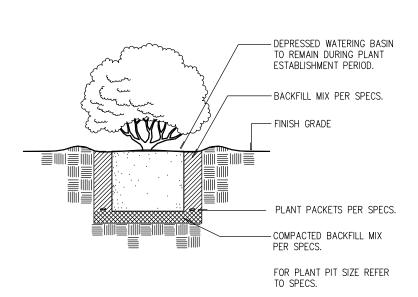
ALL TREES ARE TO BE SELECTED BY LANDSCAPE ARCHITECT. CALL TO OBTAIN A COPY OF THE TREE TAG LIST.

ANY PLANT MATERIAL THAT IS REJECTED SHALL BE REPLACED IMMEDIATELY AND THE REJECTED MATERIAL IS TO BE REMOVED FORM THE JOBSITE.

THE LANDSCAPE CONTRACTOR IS TO VERIFY SHRUB MATERIAL AND INERT MATERIAL QUANTITIES FOR EACH GOLF HOLE WITH THE LANDSCAPE ARCHITECT PRIOR TO PLACING DELIVERY ORDERS. THE ACTUAL QUANTITIES WILL BE BASED ON PLANTING AREAS STAKED IN THE FIELD.

LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING RECORDS OF QUANTITIES OF PLANT MATERIAL USED ON A HOLE BY HOLE BASIS. QUANTITY LISTS SHALL BE DISTRIBUTED TO LANDSCAPE ARCHITECT AS EACH HOLE IS COMPLETED.

SOIL STABILIZATION MAY BE REQUIRED IN VARIOUS LOCATIONS WITHIN THE WORK DISTURBANCE AREA. THE CONTRACTOR SHALL MAKE THE LANDSCAPE ARCHITECT AWARE OF SUCH CONDITIONS, AND A DECISION REGARDING USE OF STABILIZER SHALL BE MADE. SHOULD STABILIZATION BE REQUIRED, THE CONTRACTOR SHALL USE SOILTAC SOIL STABILIZER MANUFACTURED BY SOILWORKS, SCOTTSDALE AZ.



UNTANGLE MATTED ROOTS BY LOOSENING ALL ROOTS @ EDGE OF ROOT BALL w/ WATER FROM HOSE. DO NOT CRACK ROOTBALL.

1. Boulders are specified in tons, with a cubic yard being equal to 1.7 tons

2. Installer is to be responsible to prevent any severe chipping or

damage to boulders during the placement process.

3. Boulders are to be placed using cables from a Loader Boom or a Boulder Placement Boom.

6. All cavities and voids near the bottom of the boulder are to be

After setting, soil is to be cleared from boulder to a depth of 6" to allow for staining of boulder below finish grade.
 Boulder is to be washed clean of dirt, debris, and small chips and

Architect and tested on the same type of rock to achieve a standard mixture ratio.

10. Spraying of mixture is to be smooth and uniform on all boulders to

allowed to dry prior to staining.

9. Stain is to be a high quality agent approved by the Landscape

8"MIN¬

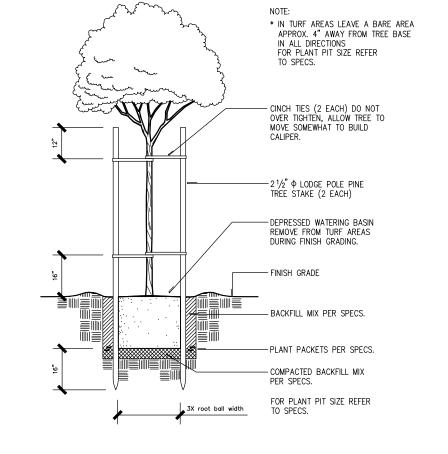
achieve consistency throughout project.

NOTE: BOULDERS IN CLUSTERS ARE TO BE SET AT VARIED HEIGHTS

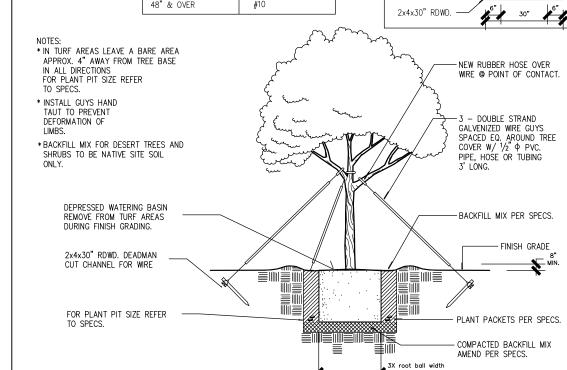
set below finish grade.

4. Installer is to pay particular attention to how boulder is lifted to allow boulder to be spun in order to set boulder in its most desirable position

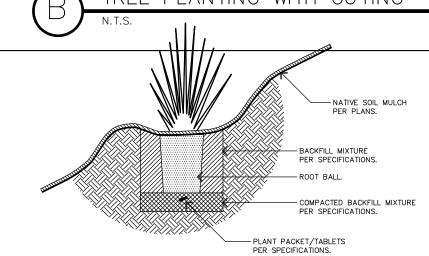
5. Boulder is to ultimately be set to a minimum of 1/3 buried (See Detail).

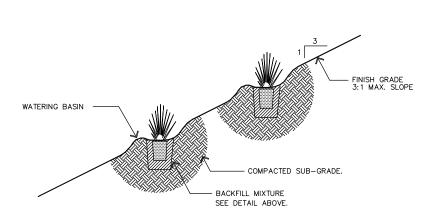


DEADMAN DETAIL BOX SIZE WIRE SIZE GUY WIRE -2x2x18" RDWD.—— STAKES 36"-48" 48" & OVER

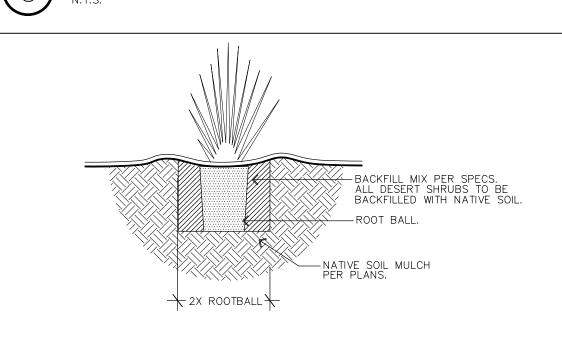


TREE PLANTING WITH GUYING





SHRUB PLANTING ON SLOPE

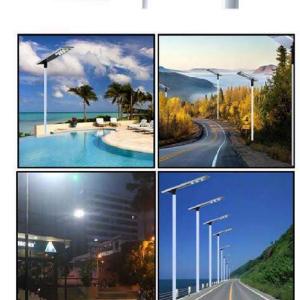


AGAVE PLANTING

Solar Powered HRF-Sensor, RF-Control Ultra Brightness LED Area Light EE880W-SHRC100

100W/16000Lm





Technical Specifications					
CREE LED	(6000-6500K) 100W 160LM/W >50000H				
LED Quantity	10 COB				
Battery Type	586WH, Li-ion, 5000 hrs. Normal Operating Cycles				
Solar Panel	80W Monocrystalline Silicon Laminated Plate, Built with Tempered Glass 25+ Years Lifespan				
Charging Method	Solar Power-18Vmpp AUX DC Input: 15-18VDC/-5/				
Solar Charging Time	6-8 hrs with Direct Sunlight				
Lighting Time	3-5 Nights After Full Charge				
Sensor	HRF Sensor + Photocell Sensor				
Lighting Mode	32 Lighting Mode with Remote Control (MOD1+MC				
Housing Material	Aluminum Alloy Housing, Lifespan: 25+ years				
Product Size & Weight	80" x 13" x 2" 53 lbs				
IP Level	65 (Water Resistant and Dust Tight)				
Working Temperature	-13°F ~ 149°F (-25℃ ~ 65℃)				
Warranty	2 Years Full Warranty				
Patented and Pending	US 8194061B2; & International				
Certification	CE, ROHS, FCC, ISO9001:2015				
Pole Diameter	3-1/2"				
Installation Height	20 - 38 Feet				
Suggested Spacing Distance	79 - 92 Feet Apart				
Package Size & Weight	84° × 16° × 8° 56 lbs				

vww.eleding.com info@eesai.com Tel: 1-877-579-3889 Mon,-Fri. 10am-5pm PST



CITY OF COACHELLA

6" BELOW FINISH GRADE

#3 HOOP TIES

3"CLR. (TYP.)

6 #6 VERTICAL (60 KSI)

LEVEL GRADE

LIGHT FOUNDATION: 3250 PSI @ 28 DAYS MIN., SULFATE RESISTANT, TYPE V CONCRETE **SECTION A-A**

NOT TO SCALE

FINISHED SURFACE

6 #6 VERTICAL TYPE V CONCRETE

J-BOLTS ENGINEER

BY POLE SUPPLIER

SOLAR LIGHT FOUNDATION

#3 TIES @ 9" O.C. TYP U.O.N.

UNDISTURBED SOIL TYP. OR COMPACTED FILL INSPECTED BY A SOILS

LIGHT FOUNDATION:

3250 PSI @ 28 DAYS MIN., SULFATE RESISTANT,

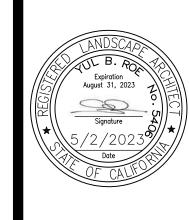
SOLAR LIGHT POLE



MARITZA MARTINEZ PUBLIC WORKS DIRECTOR **GRAPHIC SCALE** SCALE: 1" = 50'









Coachella

Retention Basins DETAILS Coachella

PL-DR

L-4.1

A. Stockpiled Native Soil

1. Stockpiles native soil may be available from Owner's stockpile for use in planting areas. Soils for turf beds are classified as "3/8 inch minus"; soils for general mounding are classified as "2 inch minus". See Contract Documents for

2. Composition 3/8 inch minus: Fertile, friable, well-drained soil of uniform quality, free of material larger than 3/8" diameter, sticks, plaster, concrete, oils, chemicals, and other deleterious materials.

3. Composition 2 inch minus: Fertile, friable, well-drained soil of uniform quality; free of material larger that 2" diameter, sticks, plaster, concrete, oils, chemicals, and other deleterious materials.

4. Analysis: If soil has not been tested, obtain an agricultural suitability and chemical analysis of the proposed soil from Horticulture Consultants, Inc. or other consultant approved by Owner. Cost of testing will be paid for by the Owner.

a. Element Analysis: Nitrate Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulfur, Sodium, Zinc, Iron, Copper, Manganese, Boron, free

b. Other: pH factor, % base saturation, electrical conductivity, mechanical analysis, % of organic content, cation exchange capacity (C.E.C). c. Recommendations: Type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring topsoil to

5. If required, the Owner's stockpiled soil will be amended; this work is not in the contract and the Contractor will not be compensated for it on a Time and Materials basis. Rates for labor and equipment will be charged according to the Construction Agreement.

satisfactory level for planting.

1. Composition: To match or exceed in quality the 3/8" minus native soil, as determined by analysis described. Submit test results to Owner's Representative and Landscape Architect prior to ordering material.

2. Sample: Deliver one half cubic foot sample of proposed import soil to Landscape Architect for approval. Owner reserves the right to reject soil delivered to the site that does not meet the approved test results and/or the Specifications.

1. Deliver products in manufacturer's standard packaging. When bulk materials are made, provide Owner's Representative with Bill of Ladening for each delivery. Transport organic amendments directly from the source to the staging area and stockpile as directed

2. Store products to protect them from damage and contamination and comply with

manufacturer's storage instructions. 3. Coordinate work with other site work.

4. Inspect job for conditions which would prevent execution of this work as specified. Do not proceed until such conditions are corrected.

5. Trucks and vehicles shall not be permitted to pass over curbs, paving, etc., unless adequately protected against damage.

6. Landscape Architect reserves the right to take and analyze sample of materials for conformity to specifications at any time. Furnish samples upon request by Landscape

7. Immediately remove rejected materials from the site, at Contractor's expense. Cost of testing of materials not meeting specifications shall be paid by Contractor.

8. Back fill (for plant holes -4" around shrubs and 12" around trees):

Back Fill Mix

6 parts by volume on—site soil

4 parts by volume Compost approved by Landscape Architect

1lb. 16-20-0 per cubic yard of mix

2lbs. iron sulfate per cubic yard of mix

The above materials should by thoroughly blended prior to use for backfill purposes. Also, the iron sulfate should not contact cement surfaces since severe staining could

If the 16—20—0 is incorporated preplant as recommended, the postplant maintenance can consist primarily of a nitrogen—only fertilizer program. Beginning approximately 30 days after planting, ammonium sulfate, which will have an acidifying effect on the soil, should by applied at the rate of 5 lbs. per 1,000 square feet on a monthly basis. However, in order to ensure continuing adequate soil phosphorus and potassium nutrition Best Fertilizer Company 16-6-8 or equal should be substituted for the ammonium sulfate in early spring and again in late fall at the rate of 6lbs. Per 1,000 square feet. Also, when plants have been well established the frequency of fertilizer applications can be decreased.

10. Plant Packet fertilizer:

Use BEST PAKS 20-10-5 commercial fertilizer packets placed equally around the plant 6 - 8 inches deep near, but not direct contact with roots.

For trees, shrubs and vines in the following amounts:

Plant Size	No. of packets
1 gallon 5 gallon 15 gallon 24" box 30" box 36" box 42" box 48" box	1 2 3 4 5 6 7 8

For palm trees in the following amounts:

Plant Size No. of packets 30" box 36" box 42" box Bare Root

D. Sand Backfill for Palm Trees

1. Clean washed concrete sand from a source approved by the Owner's Representative.

2. Chemical Properties (by Saturation Extract Method):

a. Soluble Salts/Salinity: Maximum 3.5 millimhos/centimeter at 25 degrees

b. Boron: Maximum concentration of 1.0 ppm.

c. Sodium Absorption Rate (SAR): Maximum 6.0.

1.02 CHEMICAL COMPONENTS:

The following additives may be used depending on the outcome of the soils report: A. Ground Limestone: Agricultural limestone containing not less than 85% of total carbonates, ground to such fineness that 50% will pass #100 sieve and 90% will pass #20

B. Dolomite Lime: Agricultural grade mineral soil conditioner containing 35% minimum magnesium carbonate and 49% minimum calcium carbonate, 100% passing #65 seive. "Kaiser Dolomite 65AG" as manufactured by Kaiser, Inc. Mineral Products Dept. or

C. Gypsum: Agricultural grade product containing 80% minimum calcium sulfate. D. Iron Sulfate (Ferric or Ferrous): Supplied by a commercial fertilizer, containing 20% to 30% iron and 35% to 40% sulfur.

E. Sulfate or Potash: Agricultural grade containing 50% to 53% of water-soluble potash. F. Single Superphosphate: Commercial product containing 20% to 25% available phosphoric

G. Ammonium Sulfate: Commercial product containing approximately 21% ammonia nitrogen.

H. Ammonium Formaldehyde: Granular commercial product containing 34% ammonia

I. Urea Formaldehyde: Granular Commercial product containing 38% nitrogen.

J. I.B.D.U. (Iso Butyldiene Diurea): Commercial product containing 31% nitrogen. K. Soil Sulfur: Agricultural grade sulfur containing a minimum of 96% sulfur.

L. Iron Sequestrene: Geigy Iron Sequestrene 138 Fe, or approved equal. 1.03 TOP SOIL APPLICATION

A. General: Spread topsoil over accepted subgrades in designated areas prior to incorporating amendments.

3. Restrictions: Do not commence spreading topsoil prior to acceptance of soil cultivation. Do not place soil under muddy conditions.

C. Soil Depth: Topsoil depth indicated in the Construction Documents is after natural settlement and light rolling. Conform to finished grades on the Drawings.

PLANTING SPECIFICATIONS GENERAL FOR TREES, SHRUBS AND

2.01 QUALITY ASSURANCE

A. Comply with federal, state and local laws requiring inspection for plant disease and infestations. Inspection certificates required by state law shall accompany each shipment of plants and deliver certificates to the Owner. Inspections are to be performed in the

B. Transport plant materials in enclosed or tarped vehicles to minimize damage from wind. C. All plants shall be true to name and one of each lot shall be tagged with the name and size of the plants in accordance with the standards of practice recommended by the American

D. Shipments of plants will be carefully inspected by the Owner and/or Landscape Architect at the site at the time of off-loading trucks to verify compliance with the above shipping

E. Substitutions of plant materials will not by permitted unless authorized in writing by Landscape Architect. If proof is submitted that plant specified is not obtainable, a proposal will be considered for use of the nearest equivalent size or variety with corresponding adjustment of Contract Price.

Special care shall be taken to insure that plants in containers are adequately watered. Water for soil preparation, planting and irrigation will be furnished by owner. G. Plants in containers specified for shade locations are to be protected from sun prior to planting.

H. Personnel: Employ only qualified personnel familiar with required work.

2.02 INSPECTIONS AND SUBMITTALS

A. The Owner's Representative reserves the right to inspect plant materials at the nursery or growing ground prior to loading and transporting. If Owner's Representative selects to nspect at the nursery, tag all trees and representative samples of shrubs and groundcover prior to the inspection and arrange with the Owner's Representative ten (10) days in advance for the inspection. Such approval shall not impair the right of inspection and rejection during progress of the work.

B. If trees are not hand selected by Landscape Architect then three representative samples of each size of tree and shrub species are to be delivered to the project site for the Owner's Representative to review and approve, prior to ordering any plants. Accepted samples are to be maintained in good condition by the Contractor at the Contractor's storage yard during the construction period, and installed as the last plants on the project. Rejected plants are to be immediately replaced with acceptable samples. All plants delivered to the project will meet the standards of these representative samples.

C. File Certificates in inspection of plant materials by County, State and Federal authorities with Owner's Representative. All plants are to have a certificate of origin.

D. Submit within 30 days after Notice to Proceed a complete list of materials to be furnished and confirmed sources for same. Owner reserves the right to approve or reject suppliers

E. Gravel Mulch: Submit within 30 days after Notice to Proceed a one cubic foot sample of specified gravel mulch to the Owner's Representative. 2.03 PRODUCT DELIVERY, STORAGE AND HANDLING

1. Balled and Burlapped (B & B) Plants: Dig and prepare shipment according to the accepted industry standards and in a manner that will not damage roots, branches, shape, short and long term health, and future development. Size of rootball shall be as defined in the American Standard for Nursery Stock (American Association of Nursarymen; latest edition). B & B plants may only be used if specified in the Contract Documents or if authorized in writing by the Landscape

2. Container Grown Plants: Deliver plants in container sufficiently rigid to hold

3. At Contractor's option, spray evergreen plants and deciduous plants in full leaf with anti-dessicant immediately prior to shipment.

4. Pre-Delivery Inspection: Notify Owner's Representative minimum of two weeks prior to shipping to allow for Pre-Delivery inspection of plant materials at

storage and watering facilities are available on project site.

1. Deliver only plant materials that can be planted in one day unless adequate

2. Protect B & B root balls during shipping by proper handling techniques; cracked or crumbling rootballs will be rejected. Protect at the site by maintaining a thoroughly moist rootball; heel in with sawdust (or comparable material) if not planted within 24 hours of delivery. Maintain rootball in a moist condition and do not allow to dry out.

3. Notify Owner's Representative of delivery schedule a minimum of 48 hours in advance so plant material can be inspected prior to unloading from trucks.

4. Remove rejected material immediately from site.

5. Do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems. (See paragraph 3.06 in this Section for special handling directions for

2.04 PLANT STANDARDS

A. Use the following publications for qualifying plant material acceptable for installation: 1. "American Standard for Nursery Stock"; Edition approved 1985 by American

National Standards Institute, Inc. (Z60.1) Plant materials. 2. "Hortus Third", 1976; Cornell University plant nomenclature. 3. Arizona Nursery Association Grower's Committee "Recommended Specifications", 1988, Arizona Nursery Association.

4. Refer to Section 02920, Soil Preparation and soil mixes, for portion of work required in this section.

B. Plants, other than palms, shall be nursery grown in accordance with good horticultural practices under climatic conditions similar to those of project for at least two years unless specifically noted otherwise. Plants shall be exceptionally heavy, symmetrical, tightly knit, so trained or favored in development and appearance as to by superior in form, number of branches, compactness and symmetry.

C. Plants shall be sound, heavy and vigorous, well branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs or larvae, and shall have healthy, well developed root systems. They shall be free from physical damage or adverse conditions that would prevent thriving growth. Soil in the containers shall be free of disease and pathogens.

Plants shall be true to species and variety and shall conform to measurements specified, except that plants larger that specified may be used if approved by Landscape Architect. Use of such plants shall not increase Contract price. If larger plants are approved, the ball of earth shall by increased in proportion to the size of the plant. Plants shall be measured when branches are in their normal position. Height and spread dimensions specified refer to main body of plant and not branch to tip. Caliper measurement shall be taken at a point on the trunk 6" above natural ground line. For trees over 4" in caliper, this measurement should be taken from a point 12" above the natural ground line. If a range of size is given, no plant shall be less than the minimum range of size and not less that 40% of the plants shall be as large as the maximum size specified. The measurements specified are the minimum size acceptable and are the measurements after pruning, where pruning is required. Plants not conforming to the requirements specified will be considered defective. Such plants, whether in place or not, will be marked as rejected and shall be immediately removed from the premises. These will be replaced with new acceptable plants.

Special care shall be taken to insure that plants in containers are adequately watered. Water for soil preparation, planting and irrigation will be furnished by owner.

F. Under no conditions will there be any substitution of plants or sizes for those listed on the accompanying plans, except with the express written consent on the Landscape Architect. G. Container stock shall have grown in the containers in which delivered for at least six months, but not over two years. Samples must prove no rootbound condition exist. N

H. Field dug plants may be used only if specifically approved in writing by the Landscape Architect prior to ordering. Unless otherwise authorized, field dug plants will be harvested with a two step method, in which the four sides are cut and box sides installed for a minimum of four (4) months during the growth season prior to digging and boxing the bottom.. Spray field dug trees immediately prior to boxing the bottom with antidessicant. Ensure adequate coverage to trunks, branches and foliage.

container plants that have cracked or broken balls of earth when taken from container shall

be planted except upon special approval by Landscape Architect.

I. Plants shall not be pruned before delivery. Trees which have damaged or crooked leaders, or multiple leaders, unless specified, will be rejected. Trees with abrasions of the bark, sunscalds, disfiguring knots, or fresh cuts of limbs over 3/4" which have not completely

Palms: Shall conform to the following guidelines unless specifically approved in writing by

1. Straight-trunked with maximum variation of 6". Curvatures will be reviewed on an individual basis; gradual curvatures over the length of trunk are in general

?. When specified, uniformly skinned with the same skinning tool prior to planting to a height of 5' below the base of the petiole of the green frond that is locate, as near as possible, to a 45 degree angle from the top center of the tree. Palms that have lost their residual petioles higher than the 5' mark may not be accepted.

3. Free of scarring on trunks.

4. Freshly collected; palms that have browned out fronds will not be accepted.

5. Rootballs conforming to industry standard size and capable of supporting trees without additional bracing; free of noxious or invasive weeds. 2.05 PREPLANTING

1. Examine subgrade and verify conditions under which work will be performed. Notify Owner's Representative if there is a discrepancy between site conditions and Contract

2. Do not begin soil preparation and planting until all work such as header installation, walks, paving, concrete work, electrical except for fixture location, fencing except where access is necessary, drainage work, gas line installation, irrigation work, and any other work required under plans and specifications around planting areas is completed and approved. Specimen trees twenty (20) inch, and larger box sizes or palm trees are exempt from this rule where access might be restricted by construction phases of landscaping or building. All plants and planting shall be continually maintained by the Landscape Subcontractor.

4. Soil Preparation: Do not commence planting work prior to completion and acceptance

5. Irrigation: Do not commence planting work prior to installation and acceptance of irrigation system, unless approved in writing by Owner's Representative. 6. Weed before and during preliminary grading and finish grading. All weed and grasses shall be dug out by the roots and removed from site. Site shall be maintained and remain

7. Layout and Staking: Lay out plants at locations shown on Drawings. Use steel sired flags, color coded for each species of plants, or set plants in containers on grade. Stake

weed free until turnover to the Owner's Authorized Representative.

10. Containerized Plant Pits: Excavate square plant pits as follows:

8. Right is reserved to refuse on site review at any time if, in the opinion of the Landscape Architect, an insufficient quantity of plants is provided. Landscape Architect reserves the right to interchange or adjust the locations of plants prior to planting.

9. Equipment for digging plant pits: Use backhoe or hand work to dig tree pits. Scarify sides of the tree pit after excavation (see below). Do not use an auger or tree spade.

> Min. Width Rootball + 18" B & B Rootball + 12 Rootball + 24" Rootball + 12" Can + 12" Can Deep + 6

Remove excavated soil from project site and/or dispose of as directed by Owner's

B. Drainage Test of Plant Pits/Obstructions

1. Pre-wetting of tree plant pits: Fill tree plant pits to the top with water within 72 hours of planting. Plant pits can be planted as soon as water is completely drained. If water is not 90% gone within 24 hours, do not plant and bring to the immediate attention of the Owner and Landscape Architect. Contractor may be required to either dig a substitute plant pit or to mitigate the existing plant pit with a drainage sump. Substitute plant pits and drainage sumps are not part of the basic services and compensation will be awarded to

2. Documentation: Submit written documentation of test pit drainage results, with locations, date and signature of tester.

3. Obstructions: If rock, caliche, underground construction work, tree roots or other obstructions are encountered in the excavation of plant pits, acceptable alternate locations may be used as directed by the Landscape Architect. Excavation of caliche is not part of the Contract price, and if authorized by the Owner's Representative, Contractor will be compensated for excavation pursuant to the Schedule of Labor and Equipment Rates.

2.06 PLANTING OPERATIONS - TREES, SHRUBS AND VINES A. Handling and De—Potting

1. Moisture Level: Thoroughly moisten rootballs prior to planting to ensure soil

2. Carefully remove plant from the container. Cut tin containers, other than knock-out cans, on two sides with the proper type of can cutter to facilitate removal of plants with a minimum of rootball disturbance. Support rootball during

3. Pry off bottom boards of boxed trees rather than hammering boards off. Boxed plants may not be planted with the bottom or sides of the box in place, unless authorized in writing by the Landscape Architect.

B. Scarification 1. Plant Pit: Scarify sides of plant pit thoroughly breaking up surface and

2. Plant Rootball: After removing plant from container, scarify the sides of the rootball to a depth of 1 inch at four to six equally spaced intervals around the perimeter of the ball or at 12 inch intervals o the sides of boxed material. Cut and remove circling roots over 3/8 inch diameter. Scarification should be performed with a sharp soil knife.

1. For trees, backfill plant pit to allow crown of rootball to settle to a position even with finished grade. Thoroughly tamp backfill under rootball to reduce settling, and on sides of rootball. Prepare a raised basin as wide as the rootball at each tree for watering prior to shrub and ground cover planting. Refer to detail.

2. Place fertilizer tablets evenly in plant pits when backfilled « full.

above finished grade. Provide basin, refer to detail. 4. When plant pits have been backfilled approximately 2/3 full, water thoroughly and saturate rootball, before installing remainder of the backfill mix on top of pit, eliminating air pockets.

3. All shrubs and vines shall be set so that when settled the rootballs are « inch

5. Remove nursery type plant labels from plants.

6. For trees in lawn areas, keep a 2' diameter circle centered on the tree trunk free of turf and weeds. Use a precise template covering the area outside of the 2' circle if applying herbicide to prevent overspray dieback.

D. Staking and Guying

1. Trees shall be able to stand upright without support, and shall return to the vertical after their tops have been deflected horizontally and released. Immediately stake trees which do not meet this qualification, as well as plants that are subject to breakage as a

2. Trees shall remain plumb and straight from installation throughout the maintenance and

3. Refer to standard details for staking and guying requirements.

Owner's Representative.; this work is part of the Contract Price.

4. Auxiliary Tree Stakes: Some trees may require an auxiliary or leader tree stake in

addition to the stakes shown in the standard details. This will be determined by the

5. Multi-Trunk Trees: At the option of the Owner's Representative, an alternate form of staking on multi—trunk trees will consist of three tree stakes placed adjacent to the main trunks and at a similar angle. Existing nursery leader stakes or auxiliary tree stakes may or may not be required. An encircling tree tie may or may not be required. This alternate

staking method is part of the Contract Price. 6. Staking Mock—Up: Prior to proceeding with staking, prepare for approval by the Owner's Representative one sample of each type of staking to be used on the project. These mock—ups will represent the standard that staking will be compared to. The

Contractor will have his employees become thoroughly familiar with the mock-up prior to

general staking operations. 2.07 PLANTING OPERATIONS PALMS

A. Planting

1. Arrange delivery time so a minimum amount of time elapses between delivery site and installation (maximum of 3 days). Use necessary precautions to protect palms from weather or other conditions that would damage or impair vigor. Crowns and rootballs should be protected from sun and reflected heat; avoid storing on paved surfaces. Covering material, such as 90% shade cloth or burlap, should permit air movement; do not use plastic or rubberized tarpaulins. Water rootballs lightly as required during hot weather. Do not stack palms.

2. Measure and record brown trunk height on a tag firmly attached to each tree. These tags are to remain on the tree until approved by the Owner's Representative to remove

3. Segregate palms by height as they are delivered to the site.

4. Do not bind or lift palms with rope, wire or chains, use only nylon or fabric sling/straps a minimum of 4" wide. Scarring caused by inappropriate handling and judged unacceptable by the Landscape Architect will cause rejection of the palms. Replacement will be at the expense of the Contractor.

5. Prepare proper size plant pit and test for drainage as described previously.

6. Backfilling: Tamp moistened sand backfill at bottom of hole to compact. Insert tree and backfill palm pit with clean washed concrete sand as shown on the Drawings. Continuously adjust palm to ensure a plumb and securely planted condition. Solidly compact sand around the upper ball and portions of buried trunk while backfilling. Jet sand backfill as required to remove air pockets. Leave basins around each tree unless otherwise directed by Landscape Architect. Coordinate installation of irrigation sleeves, etc. with planting operations.

7. Water immediately and continuously as required to ensure optimum soil moisture levels. Soil moisture levels below grade to be checked regularly with soil probe or other

8. Staking of palms is not permitted without authorization of the Owner's Representative. If staking is permitted, stakes will be of similar size and stained in a color approved by Owner's Representative; cost of staking palms is not part of the Work and will be covered

9. Untying Fronds: The string tying the fronds should, in general, be cut 45—60 days after planting during the hot months and after 90 days during the winter months. Coordinate with Owner's Representative and palm supplier prior to untying fronds. Do not trim the palms for 30 days after untying them.

10. Exercise extreme caution when pruning, if any, is performed to prevent spread of vascular diseases. Dip pruning tools in a sterilizing agent before pruning and before moving from one palm to another.

11. Contractor is to carefully coordinate with Owner's Representative to locate palms within palm groves so that variation in brown trunk height is graduated across the groves or lines of palms. In a grove with similar height palms, the maximum brown trunk height variation in adjacent palms is 12". Coordinate with Owner's Representative to adjust palms with acceptable trunk curvature so that visual impact is minimized.

12. Initial and on-going disease prevention is required; this may include drenching the crown with a fungicide such as "Benlate" and/or soil application of a fungicide such as Subdue". Contractor is responsible for coordinating these treatments with palm suppliers and Owner's Representative, and for the cost of disease prevention techniques.

13. Apply 4 to 6 lbs. Of fertilizer 45 days after planting. Do not fertilize at initial planting. Inject fertilizer below root zone of surrounding lawn area.

2.08 GROUNDCOVER

A. Planting

1. Ground cover plants shall have been grown in flats and shall remain in those flats until time for transplanting. At time of transplanting, the flat soil shall contain sufficient moisture so that the soil does not fall apart when lifting plants from the flat. Each plant shall be planted with it's proportionate amount of the flat soil in a manner that will insure a minimum of disturbance to the root system.

2. Ground cover plants shall not be allowed to dry out before or while being planted.

3. Ground covers shall be planted sufficiently deep to cover all roots and spaced as specified in ground cover list on landscape plan.

4. Install in neat, evenly spaced rows in triangular layout, or as shown in the Drawings. 5. Top—dress Fertilizer (N—P—K ratio of 3:3:1): Apply at the rate of 1lb. Nitrogen per 1,000 sq. ft. immediately after completion of planting.

6. Watering: Immediately water groundcover areas after fertilizer application to wash

3.01 WATERING: Plantings shall be watered immediately after planting. After first watering, water shall be applied to plants as conditions may require to keep the plants in a healthy

and vigorous growing condition until completion of the contract. 3.02 PRUNING: Prune plants only at time of planting and according to standard horticultural practice to preserve the natural character of the plant. Pruning is to be done with the approval and under supervision of the Owner's Representative. Remove dead wood, suckers, broken or badly bruised branches or to develop a uniform appearance. Use only clean, sharp tools. Paint cuts over 3/4" diameter with tree paint, covering exposed, living tissue, if required by Owner's Representative. Do not prune evergreen trees and shrubs after October 1st, except to remove dead or diseased tissue; wait until late winter or early

spring after danger of significant freezing is past.

fertilizer off leaves

3.03 PROTECTION OF PROJECT A. Do not store materials or equipment, permit burning, or operate or park equipment under

the branches of existing plants to remain. B. Provide barricades, fences or other barriers as necessary at the drip line to protect existing plants to remain from damage during construction.

C. Protect pavement and other hard surfaces from staining by equipment or chemicals during storage and application.

D. The Contractor shall carefully and continuously protect and maintain all areas included in the contract, including lawn areas, plant materials, etc. until final acceptance of the work by Owner's Authorized Representative.

E. The maintenance foreman on the job shall be a competent English speaking supervisor, experienced in landscape maintenance and capable of discussing matters on the job site. F. Workman shall present a neat appearance at all times and shall conduct all work

operations and dealings with the public in a courteous manner. Workman shall by fully

A final inspection shall be called at the end of planting operations and the maintenance period for the purpose of determining compliance with plan and specification intent, workmanship and clean-up. Owner's Authorized Representatives shall receive written verification of inspection

dates, any corrections required to work and limits of inspected area before acceptance of

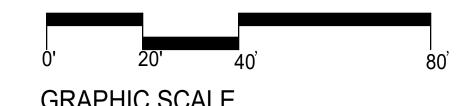
corrective work. CITY OF COACHELLA

clothed at all times.

APPROVED FOR CONSTRUCTION:

MARITZA MARTINEZ

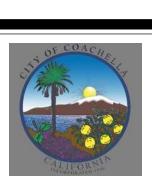
PUBLIC WORKS DIRECTOR



SCALE: 1" = 20'







el ch 92 0

Scale:	no.	revisions	date	
1" = 20'		Added Sheet to plan set.		
Date: Inne 6 2023				
Drawn By:				
A second Dy.				
Apployed Dy.				L

L-5.1

