

PROJECT GENERAL NOTES

Cover Sheet General Notes:

- The work included under this contract consists of all labor, materials, transportation, tools and equipment necessary for the construction of the project leaving all work ready for use. All construction shall conform to the codes listed on this page. In the event of conflict, the most stringent requirements
- shall apply.
- All work shall be done in accordance with AIA General Conditions Document A-201, Current Edition 4. All wood in contact with concrete shall be pressure-treated.
- 5. All work described in the drawings shall be verified by the contractor for dimension, grade, extent and compatibility to the existing site. Any errors, omissions, conflicts, discrepancies or unexpected conditions which affect or change the work described in the contract documents shall be brought to the attention of the architect immediately. Do not proceed with the work in the area of discrepancy until all such discrepancies are resolved. If the contractor chooses to do so, he shall be proceeding at his own risk. Any revision to the approved set of plans must be submitted to and approved by the governing agency prior to the revision being completed.
- The general contractor shall verify and assume responsibility for all dimensions and site conditions. The general contractor shall inspect the existing conditions and take note of existing conditions prior to submitting prices. No claim shall be allowed for difficulties encountered which could have reasonably been inferred from such an examination. The general contractor shall maintain a current and complete set of the construction documents on the job site during
- all phases of construction for use of all trades. The general contractor shall provide all the subcontractors with current construction documents as appropriate. Written dimensions take precedence. Do not scale drawings. Contact the architect for any missing dimensions.
- All dimensions to and from new construction, when shown in plan, our to face of finish. Dimensions which indicate otherwise are noted as such.
- 0. All dimensions on reflected ceiling plans and elevations are from face of finish or centerline of column to centerline of fixture, group of fixtures or opening.
- 1. All vertical dimensions are to face of subfloor, unless noted otherwise.
- 12. All dimensions noted "verify" and "V.I.F." are to be confirmed by the contractor prior to construction. 13. Coordinate all work with existing conditions, including but not limited to: irrigation pipes, electrical conduit, water lines, gas lines, drainage lines, etc.
- 14. Protect all existing site conditions to remain including trees, shrubs, painting, etc.
- 15. Details shown are typical. Similar details apply in similar conditions and my not be called out at each instance. 16. Verify all architectural details with structural, civil and design/build drawings before ordering or installation of any work. 17. Where locations of windows and doors are not dimensioned, they shall be centered on the wall or placed 6" from finish surface of adjacent wall as shown on the drawings.
- 18. Omissions from these documents which are manifestly necessary to carry out the intent of the work, or that which is customarily performed, shall not relieve the contractor from performing such work as it is fully and completely set forth
- in described in the documents. 19. Install fixtures, equipment and materials per manufacturer's recommendations. 20. Verify clearances for flues, vents, chases, soffits, fixtures, etc. before any construction, ordering, or installation of any items of work
- 21. Sealant, caulking and flashing, etc. locations shown on drawings are not intended to be inclusive. Follow manufacturer's installation recommendations and standard industry and building practices.
- 22. The contractor shall remove all rubbish and waste materials on a weekly basis, and shall exercise a strict control over jobsite cleaning to prevent any direct debris or dust from affecting, in any way, finished areas in or around the jobsite. 23. Install smoke detectors in accordance with code requirements and in conformance with local fire marshal requirements.

ABBREVIA	TIONS AN	D SYMBOL	S		PROJECT IN	NFORMATION
A.B. ANCHOR BOLT ACOUS.ACOUSTICAL	GA. GAUGE GALV. GALVANIZED GFCI GROUND FAULT CIRCUIT	R. RADIUS OR RISER REF. REFERENCE REINF. REINFORCE	1	DOOR MARK	PROJECT DESCRIPTION	Minor ARB for renovation of existing two-story office building for new exterior finishes, window and door changes and parking lot updates. 003-02-048 APPLICABLE CODES: 2019 CBC
A.D. AREA DRAIN ADJ. ADJUSTABLE A.F.F. ABOVE FINISHED FLOOR AL. ALUMINUM BD. BOARD	INTERRUPTER GL. GLASS GR. GRADE G.S.M. GALVANIZED SHEET METAL	REQ'D. REQUIRED RESIL. RESILIENT R.O. ROUGH OPENING . R.O.W. RIGHT OF WAY	$\langle 1 \rangle$	WINDOW MARK	ZONING / COMP PLAN	RM-30 / MF 2019 CMC 2019 CMC 2019 CMC 2019 CMC 2019 CMC 2019 CEC 2019 CEC 2019 CPC
BLK. BLOCK BLKG. BLOCKING BM. BEAM	HB HOSE BIB	SCD. SEE CIVIL DRAWINGS SCHED.SCHEDULE	$\langle A \rangle$	APPLIANCE	PARKING	(27) EXISTING PARKING SPACES ON-SITE INCLUDING (1) NON-CONFORMING ACCESSIBLE STALL 2019 CFC 2019 CALIFORNIA Energy Code 2019 CALIFORNIA Energy Code
CAB. CABINET C.B. CARRIAGE BOLT OR CEILING BEAM OR CATCH BASIN	HD. HEAD HDWR HARDWARE	S.D. SMOKE DETECTOR SECT. SECTION SEL. SELECT	A	PLUMBING FIXT.	OCCUPANCY	B - PROFESSIONAL SERVICE, MEDICAL OFFICE 2019 California Green Building Code 2019 Energy Code
CEM. CEMENT C.J. CEILING JOIST OR CONTROL JOINT CLG. CEILING	I.D. INSIDE DIAMETER (DIM.) INCL. INCLUDE INSUL. INSULATION INT INTERIOD	SH. SHELF OK SHELVING SHT SHEET SIM. SIMILAR	4	DETAIL NUMBER	CONSTRUCTION TYPE	EXISTING STRUCTURE IS V-B
CLR. CLEAR C.O. CLEANOUT OR CASED OPENING COL. COLUMN	JAN. JANITOR	SL. SKEIGHT SLD. SEE LANDSCAPE DRAWINGS SPEC SPECIFICATION(S) SQ. SQUARE	A8.1/	SHEET NUMBER	BUILDING DESCRIPTION	2 LEVELS ABOVE GRADE WITH A PARTIAL BELOW GRADE MECHANICAL UTILITY SPACE. THE BUILDING HAS A CENTRAL COURTYARD PARTIALLY OPEN TO THE SKY
CONC. CONCRETE CONST.CONSTRUCTION CONT. CONTINUOUS	JT. JOINT KD. KILN-DRIED	SSD. SEE STRUCTURAL DRAWINGS SST. STAINLESS STEEL STD. STANDARD	4 A3.1	SECTION NUMBER SHEET NUMBER	FIRE SPRINKLERS	NO
DBL. DOUBLE DEPT. DEPARTMENT DET. DETAIL	LAM. LAMINATE(D)	STL. STEEL SURF. SURFACE SUSP. SUSPEND	OFFICE	ROOM NAME	AREA OF WORK	EXTERIOR IMPROVEMENTS
DIA. DIAMETER DIM. DIMENSION DN. DOWN DR. DOOR DS. DOWNSPOUT	MAX. MAXIMUM MECH. MECHANICAL MEMB. MEMBRANE MIN. MINIMUM MTD. MOUNTED MTL. METAL	SYM. SYMBOL OR SYMMETRICAL T. TREAD TOC. TOP OF CURB TOP. TOP OF PAVEMENT TOW. TOP OF WALL	4 A5.1	INTERIOR ELEVATION UNFOLDS CLOCKWISE	LOT AREA LOT COVERAGE GROSS FLOOR AREA	15,750 SF 5,455.2 / 15,750 = 0.35 (35%) - NO CHANGE PROPOSED (NOTE: THE SQUARE FOOTAGE FOR THE COVERED TRASH AREA IS EXEMPT FROM GFA PER "PAMC 18.04 (65)(B)(iv)(c)" SEE TABLE
E. EAST EA. EACH E EAST E.J. EXPANSION JOINT ELEC. ELECTRICAL FO FOLIAL	(N) NEW N.I.C. NOT IN CONTRACT NO. OR #NUMBER N.T.S. NOT TO SCALE	TYP. TYPICAL UON. UNLESS OTHERWISE NOTED VCT. VINYL COMPOSITION TILE VERT. VERTICAL		REVISION	PARKING	VEHICLE: 10,491.2 / 250 = 42.0 (42 REQUIRED, 28 EXISTING*) BICYCLE: 10,491.2 / 2500 = 4.2 (4 REQUIRED, 4 SHORT-TERM AND 2 LT LOCKERS PROVIDED) NOTE THERE IS NO PROPOSED CHANGE IN USE OR OCCUPANCY. THE EXISTING PARKING QUANTITY WILL REMAIN. THE SINGLE ACCESSIBLE PARKING STALL WILL BE REVISED TO COMPLY WITH VAN ACCESSIBLE DIMENSIONS AND SIGNAGE REQMTS
EQUIP. EQUIPMENT (E) EXISTING EXP. EXPOSED OR EXPANSION	O/ OVER OA. OVERALL O.C. ON CENTER O.D. OUTSIDE DIAMETER (DIM.)	VIF. VERIFY IN FIELD W/ WITH	-	WORK, CONTROL, DATUM POINT		
EXT. EXTERIOR FA. FIRE ALARM F.A.U. FORCED AIR UNIT	OFCI OWNER FURNISHED, CONTRACTOR INSTALLED OFOI OWNER FURNISHED,	WH WATER HEATER WP. WATERPROOF	P	PROPERTY LINE, TOP OF PLATE		PARKING TYPE EXAMINE THE FOLLOWING STD PARKING 26 26 26
FDN. FOUNDATION F.E. FIRE EXTINGUISHER F.E.C. FIRE EXTINGUISHER CABINET	OWNER INSTALLED OH OVERHEAD OPNG. OPENING		<u> </u>	CENTER LINE		VAN ADA PARKING 1x2*=2 1x2*=2 *Per PAMC 18.52.040(b)(8), A van-accessible STD ADA PARKING 0 0 parking space or accessible parking space with an example of the space of the spa
F.F. FINISH FLOOR FIN. FINISH FIXT FIXTURE	OPP. OPPOSITE PERF. PERFORATED PL. PLATE OR PROPERTY LINE			TO FOF UON.		EV STD PARKING 0 0 adjacent accessible path of travel shall count as at PRIVATE COVERED AREA 467.3 365.2 832.5 EV VAN ADA PARKING 0 0 least two standard automobile parking spaces for STAIR 145.8 145.8 291.6
FLSH. FLASHING FLR. FLOOR(ING)	P.LAM. PLASTIC LAMINATE PLAS. PLASTER PLYWD. PLYWOOD			SHADED PORTION IS SIDE		EV STD ADA PARKING 0 0 purposes of the parking requirements outlined in TOTAL PARKING 28 28 28
F.O.F. FACE OF FINISH F.O.H.C.FREE OF HEART CENTER F.O.S. FACE OF STUD	PR. PAIR PT. POINT			COLUMN LINE		
FTG. FOOTING			I			OPEN COURTYARD 328.2 328.2 656.4 TOTAL 467.5 4.896.7 5.783.4 11.147.6
					NO CHANGE IN B	SUILDING AREA OR LOT COVERAGE IS PROPOSED NOTE: THE SQUARE FOOTAGE FOR THE ACCESSIBLE LIFT IS EXEMPT FROM GFA PER "PAMC 18.04 (65)(B)(iv)(b

LOMA: no

HMP Request: no

SCCA* Eff. YR Built: 1956

003-02-048

Parcel Report for APN :

Net Lot Size: 15,750 sf Zone Dist RM-30

Historic Status: none

Near Creek: no

Flag Lot: **no**

np Plan Des: MF

od Zone: AH45.8

Parking District: none

SCCA* YR Built: 1956

affic Imp. Dist: **none** Easements: **no**

ubstandard: Cannot assess for this zone.

DU/JADU: See Muni Code 18.42.040

pecial Setbacks: 24' along Middlefield Rd

Cannot assess for this zone.

Interior Side(s): Cannot assess for this zone.

* Source of year built data is the Santa Clara County Assessor Click below link for data details or navigate to

Street Side: Cannot assess for this zone.

Rear: Cannot assess for this zone.

Cannot assess for this zone.

Cannot assess for this zone. Max Lot Coverage:

Cannot assess for this zone.

Minimum Setbacks: Front:

Comments: **none**

IA Map Panel: 0010H

CITY OF PALO ALTO GIS PARCEL REPORT



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547 Middlefield Rd			
ap is a product of the f Palo Alto GIS			
40 Feet			
	-		



DRAWING

	LEGENI ■ Sheet - Sheet R Sheet D Sheet I Inform
ARCH	ITECTURA
A0.0	General Note
SU1	Civil Survey -
A0.1	Blueprint for a
A0.3	Green Buildir
A0.5	Block Area D
A1.0	Proposed Pla
A1.1	Proposed Site
A1.2	Streetscape I
A1.3	Building and
A1.4	Parking Layo
A3.0	Rendering
A3.1	Existing Exte
A3.2	Proposed Ex
A3.3	Directory Sig
A6.1	Photometric (
A8.2	Details
A8.2	Detalls
CIVIL	
C-1.0	Title Sheet
C-2.0	Grading and
C-3.0	Details
C-4.0	Grading Spec
LAND	SCAPE DR
L1.1	General Note
L1.2	Planting Pale
L2.1	Layout Plan
L2.1A	Layout Plan (
L3.1	Planting Plan
L4.1	Tree Disposit
L6.1	Landscape D
	PROTECT
I-1 T a	Special Tree
1-2 T o	Special Tree
1-3	Special Tree
1-4 T c	Special Tree
1-5 T 0	Special Tree
1-6	Special Tree
EI FC	TRICAL SF
E0.1	Codes Stand
E1.1	Electrical Sin
E1.2	Details
E1.3	Details
E2.1	Electrical Site
E7.1	Electrical Spe
VIC	INITY I



SUDDSWMDTT/AU

INDEX			
ncluded Not Included Revised Deleted ation Only	ARB Minor Submittal 5/10/ 2021		
-			
s, Project Info, Vicinity Map, Area Diagrams			
Existing Conditions			
Clean Bay Pollution Prevention			
g Compliance Form GB-1			
agrams, Existing/Demolition Plans			
ns, Site Demolition Plan, Mech/Roof Plans			
Plan, Trash Area Canopy			
hotomontage			
Site Photographs			
it, Exterior Lighting Plan			
or Elevations			
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Legend and Planting Notes			
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Protection Instruction Sheet			
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AGENCY STAMPS/NOTES









POLLUTION PREVENTION — IT'S PART OF THE PLAN Construction projects are required to implement year-round stormwater BMPs, as they apply to your project.

Runoff from streets and other paved areas is a major source of pollution to San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep construction dirt, debris, and other pollutants out of storm drains and local creeks. Following these guidelines will ensure your compliance with City of Palo Alto Ordinance requirements.



MATERIALS & WASTE MANAGEMENT

Non-Hazardous Materials

- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or when they are not in use.
- □ Use (but don't overuse) reclaimed water for dust control.
- □ Ensure dust control water doesn't leave site or discharge to storm drains.

Hazardous Materials

- □ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- □ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- □ Follow manufacturer's application instructions for hazardous materials and do not use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- □ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- □ Cover and maintain dumpsters. Check frequently for leaks. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. A plastic liner is recommended to prevent leaks. Never clean out a dumpster by hosing it down on the construction site.
- □ Place portable toilets away from storm drains. Make sure they are in good working order. Check frequently for leaks.
- □ Dispose of all wastes and demolition debris properly Recycle materials and wastes that can be recycled, including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and cleared vegetation.
- Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.
- □ Keep site clear of litter (e.g. lunch items, cigarette butts).
- □ Prevent litter from uncovered loads by covering loads that are being transported to and from site.

Construction Entrances and Perimeter

- □ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- □ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.



EQUIPMENT MANAGEMENT EARTHMOVING & SPILL CONTROL

Maintenance and Parking

- □ Designate an area of the construction site, well away from streams or storm drain inlets and fitted with appropriate BMPs, for auto and equipment parking, and storage.
- □ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- □ Wash down exposed aggregate concrete only when the □ Remove existing vegetation only when absolutely necessary, wash water can (1) flow onto a dirt area; (2) drain onto a □ If refueling or vehicle maintenance must be done onsite, plant temporary vegetation for erosion control on slopes or bermed surface from which it can be pumped and disposed where construction is not immediately planned. work in a bermed area away from storm drains and over a of properly; or (3) block any storm drain inlets and vacuum drip pan or drop cloths big enough to collect fluids. Recycle □ Prevent sediment from migrating offsite and protect storm washwater from the gutter. If possible, sweep first. or dispose of fluids as hazardous waste.
- □ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment, and do not use diesel oil to lubricate equipment or parts onsite.

Spill Prevention and Control

- □ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- □ Maintain all vehicles and heavy equipment. Inspect frequently for and repair leaks. Use drip pans to catch leaks until repairs are made.
- □ Clean up leaks, drips and other spills immediately and dispose of cleanup materials properly.
- □ Use dry cleanup methods whenever possible (absorbent materials, cat litter and/or rags).
- □ Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
- □ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- □ Report any hazardous materials spills immediately! Call Discontinue application of any erodible landscape material City of Palo Alto Communications, (650) 329-2413. If the within 2 days before a forecast rain event or during wet spill poses a significant hazard to human health and safety, weather. property or the environment, you must report it to the State Office of Emergency Services. (800) 852-7550 (24 hours).

Grading and Earthwork

- □ Schedule grading and excavation work during dry weather.
- □ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- drain inlets, drainage courses and streams by installing and maintaining appropriate BMPs (e.g., silt fences, gravel bags, fiber rolls, temporary swales, etc.).
- □ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- □ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
- Unusual soil conditions, discoloration, or odor.
- Abandoned underground tanks.
- Abandoned wells.
- Buried barrels, debris, or trash.
- □ If the above conditions are observed, document any signs of potential contamination and clearly mark them so they are not distrurbed by construction activities.

Landscaping

- □ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- □ Stack bagged material on pallets and under cover.

CONCRETE MANAGEMENT & DEWATERING

Concrete Management

- □ Store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Store materials off the ground, on pallets. Protect dry materials from wind.
- □ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and make sure wash water does not leach into the underlying soil. (See CASQA Construction BMP Handbook for properly designed concrete washouts.)

Dewatering

- □ Reuse water for dust control, irrigation or another on-site purpose to the greatest extent possible.
- Be sure to obtain a Permit for Construction in the Public Street from Public Works Engineering before discharging water to a street, gutter, or storm drain. Call the Regional Water Quality Control Plant (RWQCP) at (650) 329-2598 for an inspection prior to commencing discharge. Use filtration or diversion through a basin, tank, or sediment trap as required by the approved dewatering plan Dewatering is not permitted from October to April.
- □ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the City inspector to determine what testing to do and to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

STORM DRAIN POLLUTERS MAY BE LIABLE FOR FINES OF UP TO \$10,000 PER DAY!





PAVING/ASPHALT WORK

Paving

- □ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- □ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.

Sawcutting & Asphalt/Concrete Removal

- □ Protect storm drain inlets during saw cutting.
- □ If saw cut slurry enters a catch basin, clean it up immediately.
- □ Shovel or vacuum saw cut slurry deposits and remove from the site. When making saw cuts, use as little water as possible. Sweep up, and properly dispose of all residues.



PAINTING & PAINT REMOVAL

Painting Cleanup and Removal

- □ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- □ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- □ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- □ Sweep up or collect paint chips and dust from nonhazardous dry stripping and sand blasting into plastic drop cloths and dispose of as trash.
- □ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state certified contractor.





250 Hamilton Avenue Palo Alto, CA 94301 650.329.2211 cityofpaloalto.org





			C	ompliance Pat	th Verificati	tion		Compliance Path Verification	
			Plan Check	Rough GB Inspection	Final Inspe	ection IVR # 974	4	# 974 Plan Check Inspection Final Inspection	IVR # 974
		Plan Sheet, Spec or		IVR # 112	Part 1 Part	1 Part 2 Part	rt 2	Part 2 Plan Sheet, Spec or Attachment IVR # 112 Part 1 Part 1 Part 1	art 2 Part 2
5.1 Planning and Design	Code Section Y	N Attachment Reference	CORR INITIAL	CORR INITIAL	CORR INITIA	AL CORR INITI	ΠAL	INITIAL 5.5 Environmental Quality CORR INITIAL CORR INITI	ORR INITIAL
1 Mandatory Storm water pollution prevention	5.106.1 ×	A0.1	-					57 Mandatory Fireplaces 5.503.1 × NOT APPLICABLE	
2 Mandatory Local storm water pollution prevention	PAMC 16.14.290/ 5.106.1.1 ×	A0.1						58 Mandatory Temporary ventilation (MERV 8)	
3 Mandatory Best management practices	5.106.1.2 ×	A0.1						59 Mandatory Covering of duct openings and protection of mechanical equipment during construction 5.504.3 × CONTRACTOR'S RESPONSIBILITY	
4 Mandatory Bicycle parking	PAMC 18.54.060/ 5.106.4 ×	L1.0					-	60 Mandatory Adhesives, sealants and caulks: Comply with VOC limits (Table 5.504.4.1 and 5.504.4.2) 5.504.4.1 × CONTRACTOR'S RESPONSIBILITY	
5 Mandatory Short term bicycle parking	5.106.4.1.1 ×	L1.0			<u> </u>			61 Mandatory Paints and Coatings: Comply with VOC Limits (Table 5.504.4.3) 5.504.4.3 × CONTRACTOR'S RESPONSIBILITY	
6 Mandatory Long term bicycle parking	5.106.4.1.2 ×	L1.0	Ū.		Þ	D		62 Mandatory Carpet systems: Carpet cushion 5.504.4.4.1 X NOT APPLICABLE	
7 Mandatory (Bicycle) Parking stall markings	5.106.5.2.1 ×	L1.0						63 Mandatory Carpet systems: Carpet adhesive 5.504.4.4.2 X NOT APPLICABLE	
8 Mandatory Designated parking for clean air vehicles	5.106.5.2 ×	A1.1		1	۵.	O		64 Mandatory Composite wood products: Formaldehyde limits (Table 5.504.4.5) 5.504.4.5 X NOT APPLICABLE	
9 Mandatory Electric vehicle charging for non-residential structures [N]- New Construction	PAMC 16.14.430/ A5.106.5.3	× NOT APPLICABLE				D		65 Mandatory Composite wood products: Documentation 5.504.4.5.3 X NOT APPLICABLE	
10 Mandatory Grading and paving (exception for additions and alterations not altering the drainage path)	5.106.10	× NOT APPLICABLE - NO GRADING			۵			66 Mandatory Filters: Labeling (MERV 8) 5.504.5.3 X	
5.3 Water Efficiency and Conservation								67 Mandatory Environmental tobacco smoke (ETS) control	
11 Mandatory Meters	5.303.1 ×	A1.1	0		0			68 Mandatory Outside air delivery (For Indoor Air Quality) 5.506.1 X NOT APPLICABLE	
12 Mandatory Excess consumption (Submeters for additions that consume over 1,000 gal/ day)	5.303.1.2	× NOT APPLICABLE						69 Mandatory Carbon dioxide (CO2) monitoring (For Indoor Air Quality) 5.506.2 X NOT APPLICABLE	
13 Mandatory Indoor Water Use: Water closets (shall not exceed 1.28 gallons per flush)	5.303.3.1	× NOT APPLICABLE	Ō					70 Mandatory Acoustical control (STC Values per ASTM E90 and ASTM E413) 5.507.4 X NOT APPLICABLE	
14 Mandatory Indoor Water Use: Wall-mounted urinals (0.125gpf)	5.303.3.2.1	× NOT APPLICABLE						71 Mandatory Exterior noise transmission, prescriptive method 5.507.4.1 X NOT APPLICABLE	
15 Mandatory Indoor Water Use: Floor-mounted urinals (0.5 gpf)	5.303.3.2	× NOT APPLICABLE			<u>a</u>	0		72 Mandatory Exterior noise transmission, performance method 5.507.4.2 X NOT APPLICABLE	
16 Mandatory Indoor Water Use: Single showerhead (1.8 gpm at 80 psi)	5.303.3.3.1	× NOT APPLICABLE				D		73 Mandatory Interior sound transmission 5.507.4.3 X	
17 Mandatory Indoor Water Use: Multiple showerheads serving one shower (flow rate of 1.8 gpm at 80 psi)	5.303.3.3.2	× NOT APPLICABLE	0		0	o I		74 Mandatory Ozone depletion and greenhouse gas reductions 5.508.1 X NOT APPLICABLE Image: Control of the second	
18 Mandatory Indoor Water Use: Nonresidential lavatory faucets (0.5 gpm at 60 psi)	5.303.3.4.1	× NOT APPLICABLE						75 Mandatory Chlorofluorocarbons 5.508.1.1 X NOT APPLICABLE	
19 Mandatory Indoor Water Use: Kitchen faucets (1.8 gpm at 60 psi)	5.303.3.4.2	× NOT APPLICABLE						76 Mandatory Halons 5.508.1.2 X NOT APPLICABLE	
20 Mandatory Indoor Water Use: Wash fountains (1.8 gpm at 60 psi)	5.303.3.4.3	× NOT APPLICABLE						77 Mandatory Supermarket refrigerant leak reduction 5.508.2 X NOT APPLICABLE	
21 Mandatory Indoor Water Use: Metering faucets (0.2 gallons/ cycle)	5.303.3.4.4	× NOT APPLICABLE						78 Mandatory Refrigerant piping 5.508.2.1 X NOT APPLICABLE	
22 Mandatory Indoor Water Use: Metering faucets for wash fountains (0.2 gallons/ cycle)	5.303.3.4.5	× NOT APPLICABLE						79 Mandatory Refrigerant piping valves 5.508.2.2 X NOT APPLICABLE	
23 Mandatory Commercial kitchen equipment	5.303.4	× NOT APPLICABLE						80 Mandatory Refrigerant piping access valves 5,508,2.2,2 X NOT APPLICABLE	
24 Mandatory Food Waste Disposers	5 303 4 1							81 Mandatory Refrigerated service case	
	0.000.4.1								
25 Mandatory Indoor Water Use: Areas of additions or alteration	5.303.5	× NOT APPLICABLE			0	Ū.		82 Mandatory Refrigerant receivers 5.508.2.4 X	
26 Mandatory Indoor Water Use: Standards for plumbing fixtures and fittings (2016 Cal Plumbing Code)	5.303.6	× NOT APPLICABLE	Ū.		۵.	¢		83 Mandatory Pressure testing 5.508.2.5 X NOT APPLICABLE	
27 Mandatory Outdoor Water Use : Landscape areas ≥ 500 SF	Title 23, Chapter 2.7/ 5.304.1	× NOT APPLICABLE			0			84 Mandatory Evacuation (after pressure testing) 5.508.2.6 X	
28 Mandatory Outdoor Water Use : Rehabilitated landscape projects ≥ 2,500 SF	Title 23, Chapter 2.7/ 5.304.3	× NOT APPLICABLE			Ē				
29 Mandatory Outdoor Water Like: Landscape areas of ≤ 2.500 SE	5 304 4 X	SEE LANDSCAPE SHEETS			U.				
30 Mandatory Outdoor Water Use: Caluscape aleas of \$2,500 SF	5.304.4			1					
30 Mandatory Outdool Water Ose. Graywater of Railwater Ose. Landscape areas ≤ 2,500 SF	5.304.3			1				Legend:	
22 Mondatory New construction: required water upp for irrigation (See required water ordinance # 5002, of DAMC 16.12)	PAMC 16.12.020							 f - res, the measure is selected as mandatory No No: the measure is not coloridated on an elective 	
32 Mandatory New construction, recycled water use for imgation (see recycled water ordinance # 5002, or PANIC 16.12)	PANC 16.12.030							IN - NO; the measure is not selected as an elective	
Mandatory Invasive species prohibited	5.304.0 A			1	<u>þ</u>	Ω			
	PAMC 16.14.363/ 5.303.1			1					
5.4 Material Conservation and Resource Efficiency	5 407 4				_			Instructions:	
35 Mandatory Weather protection	5.407.1	ALL EXTERIOR WORK		See Foundation Ir	nspection che	ecklist.			
36 Mandatory Moisture control: Sprinklers	5 407 0 4 X								
37 Mandatory Moisture control: Exterior door protection	5.407.2.1							The Green Building Survey is a required project submittal. The survey can be found at the following link. The survey shall be completed on Survey Monkey	
38 Mandatory Moisture control: Elaching	5.407.2.2.1							and a screenshot shall be included on a separate page in this plan set. Please indicate the reference page here	
39 Mandatory Construction waste management	5.407.2.2.2								
40 Mandatory Construction waste management plan	5.408.1								
Imanualory Construction waste management plan 41 Mandatory Waste management company	5.408.1.1								
41 Mandatory Waste management company 42 Mandatory Waste stream reduction alternative	5.408.1.2 X							The Energy Star Benchmark Portfolio profile is a required project submittal. The profile can be found at the following link. The portfolio profile shall be	
42 Manuatory Waste stream reduction alternative 43 Manuatory Design station Construction waste stream reduction alternative	5.408.1.3 ×							opened and a screenshot shall be included on a separate page in this plan set. Please indicate the reference page here	
⁴³ Wandatory Documentation: Construction waste management plan, waste management company, waste stream reduction alternative	5.408.1.4	CONTRACTOR 3 RESPONSIBILITY							
44 Mandatory Universal waste (additions or alterations only)	5.408.2	× NOT APPLICABLE							
45 Mandatory Excavated soil and land clearing debris (100% reuse or recycle)	5.408.3	× NOT APPLICABLE							
46 Mandatory Enhanced construction waste reduction (80% diversion rate for projects ≥ \$25,000)	PAMC 16.14.370/ A5.408.3.1.1 X	CONTRACTOR'S RESPONSIBILITY	See www.greenha	alosystems.com					
47 Mandatory Recycling by occupants	5.410.1	× NOT APPLICABLE							
48 Mandatory Recycling by occupants: Additions	5.410.1.1	× NOT APPLICABLE							
49 Mandatory Testing and adjusting for [N] buildings < 10,000 SF or new systems that serve additions or alterations [AA]	5.410.4	× NOT APPLICABLE			0				
50 Mandatory Testing and adjusting for systems: HVAC, lighting, water heating, renewable energy, landscape irrigation, and water reuse	5.410.4.2	× NOT APPLICABLE	-		p l				
51 Mandatory Testing and adjusting: Procedures	5.410.4.3	× NOT APPLICABLE		1	<u></u>				
52 Mandatory Testing and adjusting: HVAC balancing	5.410.4.3.1	× NOT APPLICABLE			D.				
53 Mandatory Testing, adjusting and balancing: Reporting for HVAC balancing	5.410.4.4	× NOT APPLICABLE			0				
54 Mandatory Operation and maintenance (O&M) manual	5.410.4.5	× NOT APPLICABLE			<u></u>				
55 Mandatory Inspection and reports [AA] + [N] < 10,000 SF	5.410.4.5.1	× NOT APPLICABLE							
56 Mandatory Performance reviews- Water (sites > 1 acre)	PAMC 16.14.400/ 5.410.4.8	× NOT APPLICABLE				::::			
	-		 Pressource (Entropy of the second seco						



2016 NONRESIDENTIAL GREEN BUILDING APPLICATION CALGREEN MANDATORY Version 07/18

 Title 24, Part 11, California Green Building Code (CALGreen)
 http://www.bsc.ca.gov/Home/CALGreen.aspx

City of Palo Alto Green Building Ordinance 5393 (PAMC 16.14 Amendments)

City of Palo Alto Development Center Green Building Requirements

https://www.cityofpaloalto.org/civicax/filebank/documents/54976

http://www.cityofpaloalto.org/gov/depts/ds/green_building/default.asp

Updated Model Water Efficient Landscape Ordinance- Effective February 1, 2016 http://www.water.ca.gov/wateruseefficiency/landscapeordinance/docs/Title%2023%20extract%20-%200fficial%20CCR%20pages.pdf

SCHEDULE A GREEN BUILDING **INCREMENTAL VERIFICATION (IVR#152)** DURING ROUGH INSPECTION Schedule a Green Building Incremental Verification (IVR#152) if any of the following CALGreen provisions or PAMC Sections are marked with an "X" under the "Y" column of this sheet. - CALGreen 5.303.1.1 Separate Meters - CALGreen 5.303.1.2 Separate Meters - PAMC 16.14.190 Recycled Water Interior Infrastructure - PAMC 16.14.230 Recycled Water for Irrigation - CALGreen 5.504.1.3 Temporary Ventilation - CALGreen 5.504.3 Duct & HVAC Protection CALGreen A5.504.1 IAQ During Construction SECTION TO BE COMPLETED AFTER CONSTRUCTION In order to schedule a final building inspection with the Building Department, follow the procedures below. Schedule a <u>two-part</u> Final Green Building Inspection with the City Green Building Personnel in accordance with the Palo Alto Non-Residential Green Building Inspection Guideline. At Part 1 of the Final Green Building Inspection prepare all submittals and supporting documentation for the items identified with an "X" under the "Y" column of this sheet in accordance with the Green Building Inspection Guideline. At Part 2 of the Final Green Building Inspection prepare for a field inspection for the items identified with an "X" under the "Y" column of this sheet in accordance with the Green Building Inspection Guideline. I certify that: There have been no alterations that have impacted the energy report for the project, unless the new report is provided. All mandatory CALGreen measures and required electives noted in the checklist have been implemented, unless a new checklist is provided along with support for alternative electives claimed. Within six months (6) from the date of final inspection I will provide the City with the project's Commissioning Report (only required for new projects over 10,000 SF) and execute compliance with landscaping measures, unless completed at the time of final increation Signature (Owner) Signature (Contractor) Sign only after construction is completed. Print Name Print Name Date

ddress: A Project

Application: This sheet shall be used for nonresidential projects that meet one of the following AND does not trigger Tier 1 or Tier 2 requirements: 1) Tenant improvements, renovations or alterations less than 5,000 SF with a permit value of \$200,000 or more.

MANDATORY









EXISTING SECOND LEVEL PLAN 1/8" = 1'-0" 6 OFFICE COUNT: 22 (NO INTERIOR WORK PROPOSED

ENCLOSED AREA PRIVATE COVERED AREA 365.2 SF 2ND LEVEL FLOOR AREA STAIR 145.8 SF ACCESSIBLE LIFT 23.3 SF OPEN COURTYARD 328.2 SF

5,445.2 SF

NOTE: THE SQUARE FOOTAGE FOR THE ACCESSIBLE LIFT IS EXEMPT FROM GFA PER "PAMC 18.04 (65)(B)(iv)(b)" (NOT INCLUDED IN FAR)

2ND LEVEL TOTAL AREA 5,783.4 SF

PROPOSED SECOND LEVEL PLAN 1/8" = 1'-0" 3



AREA SUMMARY	BASEMENT	1ST LEVEL	2ND LEVEL
ENCLOSED AREA	467.5	3,932.1	4,920.9
PRIVATE COVERED AREA		467.3	365.2
STAIR		145.8	145.8
ACCESSIBLE LIFT		23.3	23.3
SUBTOTAL	467.5	4,568.5	5,455.2
OPEN COURTYARD		328.2	328.2
TOTAL	. 467.5	4,896.7	5,783.4



NO CHANGE IN BUILDING AREA OR LOT COVERAGE IS PROPOSED





ENCLOSED AREA

IS EXEMPT FROM GFA PER "PAMC 18.04 (65)(B)(iv)(b)" (NOT INCLUDED IN FAR)

4,896.7 SF

1ST LEVEL TOTAL AREA

NOTE: THE SQUARE FOOTAGE FOR THE ACCESSIBLE LIFT

1ST LEVEL FLOOR AREA 4,568.5 SF

467.5 SF

ENCLOSED AREA BASEMENT FLOOR AREA 467.5 SF

BASEMENT TOTAL AREA

467.5 SF

PROPOSED BASEMENT PLAN 1/8" = 1'-0"











PROPOSED SECOND LEVEL PLAN 1/8" = 1'-0" 3



PROPOSED FIRST LEVEL PLAN 1/8" = 1'-0" 2 PROPOSED BASEMENT PLAN 1/8" = 1'-0"











WEST SIDE



LINE OF SIGHT FROM OPPOSITE SIDE OF MIDDLEFIELD

PAINTED WOOD TRIM, TYP. -----/

EXPOSED MASONRY UNIT BLOCK



SOUTHEAST CORNER

EAST SIDE





TYPICAL CANTILEVER SOFFIT



NORTH (REAR) ENTRY CORRIDOR GATE





NORTHWEST CORNER

SOUTHWEST CORNER

SOUTH SIDE - FACING MIDDLEFIELD ROAD



NORTH (REAR) ENTRY CORRIDOR GATE/TRENCH GRATE











IRONWORK GATE - PAINTED -----

<image/> <image/> <image/>		-IXIURE T	YPE	XA					
<image/>	ALED4T50YRG					R	AB		
<image/>			Project	:	Туре:				
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<section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>			Driver Inf Type	o Constant Current	LED Info Watts	50W			
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	Color: Gray	Weight: 32.0 lbs	120V 208V 240V 277V	0.46A 0.27A 0.23A 0.20A	Color Temp Color Accura L70 Lifespan	3000K (W cy 71 CRI 100,000 F 7.127	arm) Iours		
<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>			Input Watts	54.81W	Efficacy	130 lm/W			
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<text><text><text><section-header><section-header><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></section-header></section-header></text></text></text>	Compliance UL Listed:	Construction IES Classification:		Thermal Mar Superior therm external Air-Flo	agement: al management o w fins provides r	design with naximum			
<text><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></text>	Suitable for wet locations as a downlight IESNA LM-79 & IESNA LM-80 Testing: RAB LED luminaires and LED components have	The Type IV distribution (also kno Forward Throw) is especially suite mounting on the sides of building and for illuminating the perimete	own as a ed for gs and walls, r of parking	operational life temperature er Housing:	even in high am vironments	nbient			
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80. Dark Sky Conformance:	areas. It produces a semiCircular with essentially the same candle angles from 90° to 270°.	distribution power at lateral	Die-cast alumir mounting arm Mounting:	um housing, len:	s frame and			
<text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text></text>	Conforms to (allows for conformance to) the requirements for the IDA's "Fixture Seal of Approval" as of March 1, 2016.	Effective Projected Area: EPA = 0.75 IP Rating:		Universal mour spacing patterr center. Round I	ting arm compa s from 1" to 5 1/ Pole Adaptor plat	tible for hole '2" center to e included as	s a		
<text><text><text><text><text><text></text></text></text></text></text></text>	DLC Listed: This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for	Ingress Protection rating of IP66 f water Ambient Temperature:	for dust and	standard. Easy with ease. Rour mount fixtures	slide and lock to nd pole diameter at 90° orientatio	mount fixtur must be >4' n.	e ' to		
<form></form>	Performance	Suitable for use in up to 40°C (10 Cold Weather Starting:)4°F)	Specular vacuu	m-metallized pol	lycarbonate			
<page-header></page-header>	Lifespan: 100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations	Minimum starting temperature is	-40°C (-40°F)						
<page-header></page-header>									
<page-header></page-header>									
<page-header></page-header>									
<text><text><section-header><section-header></section-header></section-header></text></text>	leed help? Tech help line: (888) 722-1000 Email: Copyright © 2021 RAB Lighting All Rights Reserved	custserv@rablighting.com Websit Note: Specifications are subject to	te: www.rabligh change at anv ti	ting.com me without notice					
<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><form><section-header><form><section-header><form></form></section-header></form></section-header></form></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>			, "			F	Page 1 of 3		
<section-header><section-header></section-header></section-header>	F	IXTURF T	YPF	XB					
	Example: FM-W57806-35-S5 For custom requests please contact customs DESCRIPTION Optimal diffuser amplifies the rightness on flush mount. FEATURES • Lightweight, injection-molded, UV-rated actor brightness, safety lock prevents slippage • 277V option available for 9", 12" & 15" size • ACLED driverless technology • 277V option available for 9", 12" & 15" size • ACLED driverless technology • 5 year warranty SPECIFICATIONS Color Temp: 3500K,3000K Input: 120 VAC,50/60Hz CRI: 90 Dimming: ELV: 100-10% Rated Life: 50000 Hours Mounting: Can be mounted on Standards: ETL, CETL,IP65,Title 2 2.0 Wet Location Listed Construction: Weather-resistant 3 acrylic shade	s@waclighting.com this durable waterproof outdoor rylic diffuser enhances s (special order) ceiling or wall in all orientations 24 JA8-2019 Compliant,Energy Star 16 stainless steel body with thick	FINISHES: Black Sta S LINE DRAW	ING:	·				

				LAN	DS OF	=										L. T <i>I</i>	ANDS	S OF HANI						
	[†] 0.0	* 0.0	\ [†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0	⁺0.0	[†] 0.0	₹0.0	[†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0	\	[†] 0.0	¢.0	[†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0	[†] 0.0 [†] 0.1
	*0.0 *0.0 *0.0	⁺ 0.0 ⁺ 0.0 ⁺ 0.0	†0.0 †0.0 †0.1	⁺ 0.0 ⁺ 0.0 ⁺ 0.1	[†] 0.0 [†] 0.0 _ [†] 0.1	⁺ 0.0 ⁺ 0.0 ⁺ 0.1	[†] 0.0 [†] 0.0 [†] 0.1	⁺ 0.0 ⁺ 0.0 ⁺ 0.1	[†] 0.0 [†] 0.0 [†] 0.1	€.0 €.0 €.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	⁺ 0.0 ⁺ 0.0 ⁺ 0.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	[†] 0.0 [†] 0.0 [†] 0.1	⁺0.0 ⁺0.0 ⁺0.1	⁺ 0.0 ⁺ 0.0 ⁺ 0.1	⁺ 0.0 ⁺ 0.0 ⁺ 0.1	†0.0 †0.2 †0.0 †0.2 †0.1 †0.3
	⁺ 0.1 ⁺ 0.1 ⁺ 0.1	° ⁺ 0.1 ⁺ 0.2 ⁺ 0.4 ⁺ 0.4	0.2 0.4 0.8	[†] 0.2 [†] 0.5 [−] [†] 1.2 [−] [†] 1.4	⁺0.2 ⁺0.4 ⁻0.7	[†] 0.1 [†] 0.2 [†] 0.4	[†] 0.1 [†] 0.3 [†] 0.4	[†] 0.2 [†] 0.4 [†] 0.8	[†] 0.2 [†] 0.5 [–] [†] 1.2 –	[†] 0.2 [†] 0.4 [–] [†] 0.7 [–]	[†] 0.1 [†] 0.3 [†] 0.4	[†] 0.1 [†] 0.3 – [†] 0.4	[†] 0.2 [†] 0.4 [†] 0.8	[†] 0.2 [†] 0.5 [†] 1.2 □ ⁺ 1.2	[†] 0.2 [†] 0.4 <u>[†]0.8</u>	[†] 0.1 [†] 0.3 [–] [†] 0.4	[†] 0.1 [†] 0.3 [–] [†] 0.4	[†] 0.2 [†] 0.4 [–] [†] 0.8	[†] 0.2 [†] 0.5 ⁺ 1.2 [−] 1.4	[†] 0.2 [†] 0.4 <u>[†]0.8</u>	[†] 0.1 [†] 0.3 [†] 0.4	[†] 0.1 [†] 0.2 [†] 0.4	[†] 0.2 [†] 0.4 [†] 0.7	0.2 $0.60.5$ $1.11.2$ $1.91.2$ 5.7
	[†] 0.1 [†] 0.1 [†] 0.1	⁺ 0.3 ⁺ 0.2 ⁺ 0.2	†0.5 †0.3 †0.3	+0.7 +0.7 +0.4 +0.4	0.0	0.4	0.0	0.9	1.4	0.0	0.0	0.0	0.9	1.4	0.9	0.5	0.5	0.9	1.4	0.9	0.5	0.3	0.0	^{1.4} 2.7 ⁵ 0.7 ⁵ 3.3 ⁵ 0.4 ⁴ .0 HO ⁵ 0.4 ⁴ .2
	[†] 0.1 [†] 0.2 [†] 0.1	⁺ 0.3 ⁺ 0.4 ⁺ 0.3	⁺0.7 ⁺1.0 ⁺0.7	¹ 0.9 □ 1.5 ¹ 1.0																			-	⁺ 0.9 ⁺ 3.8 ⁺ 1.5 ⁺ 3.2 ⁺ 1.0 ⁺ 2.1
	[†] 0.1 [†] 0.1 [†] 0.1 [†] 0.2	[•] 0.2 [•] 0.2 [•] 0.3 [•] 0.4	[•] 0.4 [•] 0.3 [•] 0.5 [•] 0.9	0.5 0.4 0.7 -1.3																				0.5 1.3 0.4 1.0 0.7 1.1 -1.3 1.5
	[†] 0.2 [†] 0.1 [†] 0.1	⁺ 0.4 ⁺ 0.3 ⁺ 0.2	[†] 0.9 [†] 0.5 [†] 0.3	[−] 1.3 [†] 0.7 [†] 0.4																			-	L [†] 1.3 [†] 1.7 [†] 0.7 [†] 2.0 [†] 0.4 [†] 2.4
	[†] 0.1 [†] 0.1 [†] 0.2 [†] 0.2	⁺ 0.2 ⁺ 0.3 ⁺ 0.4	†0.4 †0.7 †1.0	[†] 0.5 [†] 1.0 1.5	- ⁺ 0.9	±0.5	⁺ 0.5	- ⁺ 1.0-	1.5 †0.0	±0.9		- [†] 0.5	+10	1.5 to c	+1.0	- [†] 0.5	⁺ 0.5	+0.9	1.5 to 0	- ⁺ 1.0	- [†] 0.5	t0.5	±0.9	^{+0,5} 0 ^{+3.3} ^{+1.0} ^{+3.6} ^{−1.5} ^{+3.0}
	^{0.1} [†] 0.1 [†] 0.0 [†] 0.0	0.3 [†] 0.2 [†] 0.1 [†] 0.0	0.0 [†] 0.3 [†] 0.1 [†] 0.1	0.9 [†] 0.4 [†] 0.1 [†] 0.1	0.5 [†] 0.3 [†] 0.1 [†] 0.1	0.3 [†] 0.2 [†] 0.1 [†] 0.0	[†] 0.2 [†] 0.1 [†] 0.1	0.0 0.3 0.1 0.1	0.9 ⁺ 0.4 ⁺ 0.2 ⁺ 0.1	0.0 [†] 0.3 [†] 0.1 [†] 0.1	0.3 †0.2 †0.1 †0.1	⁺ 0.2 ⁺ 0.1 ⁺ 0.1	0.0 †0.3 †0.1 †0.1	⁺ 0.4 ⁺ 0.2 ⁺ 0.1	⁺ 0.3 ⁺ 0.1 ⁺ 0.1	⁺ 0.2 ⁺ 0.1 ⁺ 0.1	⁺ 0.2 ⁺ 0.1 ⁺ 0.1	0.0 ⁺ 0.3 ⁺ 0.1 ⁺ 0.1	⁺ 0.4 ⁺ 0.2 ⁺ 0.1	0.0 [†] 0.3 [†] 0.1 [†] 0.1	0.4 [†] 0.2 [†] 0.1 [†] 0.1	0.3 [†] 0.2 [†] 0.1 [†] 0.0	0.0 0.3 0.1 0.1	⁰ .9 1.9 ¹ 0.4 ¹ 0.9 ¹ 0.1 ¹ 0.5 ¹ 0.1 ¹ 0.3
16" () TREE	7					0								26" TREE										

MIDDLEFIELD ROAD MIDDLEFIELD ROAD (65')

12"VCP

LIGHT FIXT	URE SCHEDUL	E					
Symbol	Label	Quantity	Manufacturer	Catalog Number	Lumens Per Lamp	Light Loss Factor	Wa
Ŷ	XA	2	RAB LIGHTING INC.	ALED4T50Y - RWLED4T50Y - RWLED4T50SFY - WPLED4T50Y (TYPE IV)	1134	0.89	
	ХВ	14	WAC Lighting	FM-W5786	572	0.89	

STATISTICS					
Description	Symbol	Avg	Max	Min	Max/Min
Building Exterior	+	1.0 fc	6.3 fc	0.1 fc	63.0:1

SCALE: 1"=10'-0"

NORTH

(N) SHEATHING AT CRICKET ------SLOPE VALLEY AT 1/4":12" MIN

2x FRAMING AT 16" O.C.-

Λ 3

ADA-ACCESSIBLE PARKING STALL

"UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT OWNER'S EXPENSE, TOWED VEHICLES MAY BE RECLAIMED AT . ACCESSIBILITY SIGN

TOW AWAY SIGNAGE MIN 17" X 22" W/ 1" TALL LETTERS STATING:

1. ALL ACCESSIBLE PARKING SPACES & ACCESS AISLES SHALL NOT EXCEED 2% SLOPE IN ANY

2. INSTALL AN ADDITIONAL SIGN OR ADDITIONAL LANGUAGE BELOW THE SYMBOL OF ACCESSIBILITY

OR BY

ACCESSIBLE PARKING NOTES:

SHALL STATING "MINIMUM FINE \$250."

DIRECTION.

DESCRIPTION

CONCRETE VALLEY GUTTER

EARTHEN SWALE

CATCH BASIN

JUNCTION BOX

AREA DRAIN

CURB INLET

STORM DRAIN MANHOLE FIRE HYDRANT

SANITARY SEWER MANHOLE

STREET SIGN

SPOT ELEVATION

FLOW DIRECTION

DEMOLISH/REMOVE BENCHMARK

CONTOURS

TREE TO BE REMOVED

TREE PROTECTION FENCING

LINEAR FEET MAXIMUM MANHOLE MINIMUM MONUMENT METERED RELEASE OUTLET NEW NUMBER NOT TO SCALE ON CENTER OVER PLANTING AREA PEDESTRIAN POST INDICATOR VALVE PUBLIC SERVICES EASEMENT PROPERTY LINE POWER POLE PUBLIC UTILITY EASEMENT POLYVINYL CHLORIDE RADIUS REINFORCED CONCRETE PIPE RIM ELEVATION RAINWATER RIGHT OF WAY SLOPE SEE ARCHITECTURAL DRAWINGS SANITARY STORM DRAIN STORM DRAIN MANHOLE SHEET SEE LANDSCAPE DRAWNGS SPECIFICATION SANITARY SEWER SANITARY SEWER CLEANOUT SANITARY SEWER MANHOLE STREET STATION STANDARD STRUCTURAL TELEPHONE TOP OF CURB TOP OF WALL TEMPORARY TOP OF PAVEMENT TOP OF WALL/FINISH GRADE TYPICAL VERTICAL CURVE VITRIFIED CLAY PIPE VERTICAL WITH

WATER LINE WATER METER WELDED WIRE FABRIC

WHEATLEY PROF 555 MIDDLEFIE PALO ALTO, CA

BENCHMARK

CITY OF PALO ALTO BENCHMARK "2061" LOCATED AT THE INTERSECTION OF WEBSTER STREET AND HOMER AVE. C/S N. CORNER N.E. RETURN. ELEVATION = 41.43'(ADJUSTED TO NAVD 88 DATUM)

✤ SITE BENCHMARK

SURVEY CONTROL POINT MAG AND SHINER SET IN ASPHALT ELEVATION = 44.69'(NAVD 88 DATUM)

ESTIMATED EARTHWORK QUANTITIES

CUBIC YARDS	WITHIN BUILDING FOOTPRINT	OUTSIDE BUILDING FOOTPRINT	TOTAL CUBIC YARDS
сит	0	2	0
ill	0	2	0
EXPORT / IMPORT			0
<u>IOTE:</u>			
RADING QUANTITIES REP	PRESENT BANK YARI	DAGE. IT DOES NOT	

ANY SWELLING OR SHRINKAGE FACTORS AND IS INTENDED TO REPRESENT IN-SITU CONDITIONS. QUANTITIES DO NOT INCLUDE OVER-EXCAVATION, TRENCHING, STRUCTURAL FOUNDATIONS OR PIERS, OR POOL EXCAVATION (IF ANY). NOTE ADDITIONAL EARTHWORKS, SUCH AS KEYWAYS OR BENCHING MAY BE REQUIRED BY THE GEOTECHNICAL ENGINEER IN THE FIELD AT TIME OF CONSTRUCTION. CONTRACTOR TO VERIFY QUANTITIES.

<u>NOTES</u>

AT GROUND LEVEL. FINISH FLOOR ELEVATIONS ARE TAK

EASEMENT NOTE NO EASEMENTS ARE LISTED IN TITLE

REPORT PREPARED BY FIRST AMERICAN TITLE. CO., ORDER NCS-965450-CC, DATED JUNE 7, 2019.

FEMA NOTE

FLOOD ZONE: AH

100-YEAR BASE FLOOD ELEVATION (BFE): 45.8 (NAVD88 DATUM) PER CURRENT FLOOD INSURANCE RATE MAP (FIRM)

FEMA FLOOD INSURANCE RATE MAP NO.: 06085C0010H EFFECTIVE DATE: MAY 18, 2009

PROP DEFIEL OTH ALOOST IN	ERTIES LL DROAD LIFORNIA	
		OWNER'S INFORMATI OWNER: WHEATLEY PROPERTES, LLC ATTN: CHRISTIAN HANSEN 755 PAGE MILL ROAD SUITE BT PALO ALTO, CA, 94304 APN: 022-54-002 REFERENCES THIS GRADING AND DRAINAGE PLAN IS SU 1. TOPOGRAPHIC SURVEY" 555 MIDDLEFIELD ROAD PALO ALTO, CA, 94304 DATE: JOB# 2190997 SU 2. SITE PLAN BY RANDY POPP ENTITLED: "EXTERIOR IMPROVEMENTS" 555 MIDDLEFIELD ROAD PALO ALTO, CA, 94304 DATE: JOB# 2190997 SU 3. LANDSCAPE PLANS BY GUZZARDO PAR ENTITLED: "EXTERIOR IMPROVEMENTS" 555 MIDDLEFIELD ROAD PALO ALTO, CA, 94304 DATE: JAN 2021 3. LANDSCAPE PLANS BY GUZZARDO PAR ENTITLED: "EXTERIOR IMPROVEMENTS" 555 MIDDLEFIELD ROAD PALO ALTO, CA, 94304 DATE: JAN 2021 3. LANDSCAPE PLANS BY GUZZARDO PAR ENTITLED: "EXTERIOR IMPROVEMENTS" 555 MIDDLEFIELD ROAD PALO ALTO, CA, 94304 DATED APRIL 2021 THE CONTRACTOR SHALL REFER TO THE J SURVEY AND PLAN, AND SHALL VERIFY B
INCIES ILL DISTANCES AND DIMENSIONS ARE IN FEET AND DECIMALS OF A FOOT. UNDERGROUND UTILITY LOCATION IS BASED ON SURFACE EVIDENCE. UILDING FOOTPRINTS ARE SHOWN TO TINISHED MATERIAL (STUCCO/SIDING) AT GROUND LEVEL. INISH FLOOR ELEVATIONS ARE TAKEN AT DOOR THRESHOLD (EXTERIOR) EASEMENT NOTE	NOTE: ALL TREE PROTECTION AND INSPECTION SCHEDULE MEASURES, DESIGN RECOMMENDATIONS, WATERING AND CONSTRUCTION SCHEDULING SHALL BE IMPLEMENTED IN FULL BY OWNER AND CONTRACTOR, AS STATED IN THE TREE PROTECTION REPORT ON SHEET T-1 AND THE APPROVED PLANS.	PERMIT FOR CONSTRUCTION IN THE STREET REQUIRED CONSTRUCTION CONDUCTED IN THE CITY RIGHT-OF-WAY MUST HAVE A "PERMIT FOR CONSTRUCTION IN THE STREET" THAT MUST BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT PRIOR TO COMMENCEMENT OF WORK. ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY, EASEMENTS, OR OTHER PROPERTY CONTROLLED BY THE CITY OF PALO ALTO MUST CONFORM TO STANDARDS ESTABLISHED IN THE CITY OF PALO ALTO STANDARD SPECIFICATIONS FOR THE UTILITIES DEPT. AND THE PUBLIC WORKS DEPT. ANY/ALL PUBLIC IMPROVEMENTS THAT ARE DAMAGED BY THE OWNER OR HIS/HER CONTRACTOR WHILE WORKING ON THIS PROJECT WILL BE THE RESPONSIBILITY OF THE OWNER TO REPAIR, RESTORE, OR REPLACE IN KIND. REPLACEMENT, REPAIR, OR RESTORATION WORK MUST BE IN COMPLIANCE WITH THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY.

STORM WATER POLLUTION PREVENTION

PERMIT FOR INFORMATION ONLY.

NOTE:

REFER TO THE SHEET ENTITLED "POLLUTION PREVENTION - IT'S

ANY CONSTRUCTION WITHIN THE CITY RIGHT-OF-WAY MUST HAVE AN

APPROVAL PERMIT FOR CONSTRUCTION IN THE PUBLIC STREET PRIOR TO

COMMENCEMENT OF THIS WORK. THE PERFORMANCE OF THIS WORK IS NO

AUTHORIZED BY THE BUILDING PERMIT ISSUANCE BUT SHOWN ON THE BUILDING

MANAGEMENT PRACTICES" FOR THIS CONSTRUCTION ACTIVITY.

PART OF THE PLAN". THIS SHEET CONTAINS THE "BEST

FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS **PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING** (510)887-4086 EXT 116. aabaya@leabraze.com

NOTE:

SHEET INDEX C-1.0 TITLE SHEET C-2.0 GRADING & DRAINAGE PLAN DETAILS C-3.0 GRADING SPECIFICATIONS C-4.0

- FINISHED GRADES AT BUILDING PERIMETER SHALL BE SLOPED AT A MINIMUM OF 2% FOR THE FIRST 10' AWAY FROM THE BUILDING.
- PROVIDE 1% MIN. SLOPE ACROSS FLAT WORK AND/OR PAVING SLOPE TOWARDS

- (N) REPAIR / REPLACE (E) CONCRETE SIDEWALK AS NECESSARY ELECTRICAL TRENCHING FOR THE PROPOSED ON-SITE TRANSFORMER PER CPA ELECTRICAL DEPT STANDARDS. ANY WORK WITHIN THE CITY RIGHT OF WAY WOULD
- INSTALL (N) ADA STRIPING / STENCILING AND SIGNAGE AS REQUIRED FOR THE ADA PARKIGN SPACE PER CITY STANDARDS.

- PROVIDE REMOVABLE BOLLARDS AS NECESSARY TO SERVICE THE PROPOSED TRANSFORMER.
- INSTALL (N) UNDERGROUND TRENCH FOR (N) ELECTRICAL SERVICE FROM THE CITY SERVICE IN THE RIGHT OF WAY TO THE PROPOSED TRANSFORMER. APPLICANT TO OBTAIN THE NECESSARY ENCROACHMENT PERMIT AS REQUIRED

PERMIT FOR CONSTRUCTION IN THE STREET REQUIRED CONSTRUCTION CONDUCTED IN THE CITY RIGHT-OF-WAY MUST HAVE A "PERMIT FOR CONSTRUCTION IN THE CITT RIGHT-OF-WAT MOST HAVE A "PERMIT FOR CONSTRUCTION IN THE STREET" THAT MUST BE OBTAINED FROM THE PUBLIC WORKS DEPARTMENT PRIOR TO COMMENCEMENT OF WORK. ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY, EASEMENTS, OR OTHER PROPERTY CONTROLLED BY THE CITY OF PALO ALTO MUST CONFORM TO STANDARDS ESTABLISHED IN THE CITY OF PALO ALTO STANDARD

ANY/ALL PUBLIC IMPROVEMENTS THAT ARE DAMAGED BY THE OWNER OR HIS/HER CONTRACTOR WHILE WORKING ON THIS PROJECT WILL BE THE RESPONSIBILITY OF THE OWNER TO REPAIR, RESTORE, OR REPLACE IN KIND. REPLACEMENT, REPAIR, OR RESTORATION WORK MUST BE IN COMPLIANCE WITH THE CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY.

REFER TO THE SHEET ENTITLED "POLLUTION PREVENTION - IT'S PART OF THE PLAN". THIS SHEET CONTAINS THE "BEST MANAGEMENT PRACTICES" FOR THIS CONSTRUCTION ACTIVITY.

~3" ASPHALTIC CONCRETE 8" CALTRANS CLASS II AGGREGATE BASE ROCK

12" SUBGRADE COMPACTED TO 92% (IN ACCORDANCE WITH THE GEOTECHNICAL REPORT IF AVAILABLE).

NOTE; PAVEMENT SECTION IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

NOTES:

- 1. CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACE THE ENTIRE RAMP TRAVEL.
- 2. THE DETECTABLE WARNING BORDER SHALL BE A CONTRASTING SURFACE WITH THE ADJOINING SURFACE. ONLY ADA ACCESSIBLE PRODUCTS APPROVED BY THE DIVISION OF THE STATE ARCHITECT OF CALIFORNIA SHALL BE USED.
- 3. DOME ORIENTATION SHALL CONFORM TO THE LATEST ADA/TITLE 24 REGULATIONS.
- 4. IF PRECAST CONCRETE DETECTABLE WARNING DOMES PAVERS ARE USED, THE WILL NEED TO BE INSTALLED ON TOP OF A 4" THICK CONCRETE SURFACE. PAVERS SHALL BE LAID SUCH THAT JOINTS ARE LEVEL WITH ADJOINING SURFACE, TO PROVIDE A SMOOTH TRANSITION FROM PAVER TO PAVER AND FROM PAVER TO CONCRETE.
- 5. IF PLASTIC MAT DETECTABLE WARNING DOMES ARE USED, THE MAT NEEDS TO BE FLUSH WITH THE ADJOINING CONCRETE SURFACE. WHERE THE MAT IS INSTALLED, THE CONCRETE SURFACE WILL NEED TO BE HELD DOWN THE THICKNESS OF THE MAT.

- NOTES 1. OFF-STREET PARKING FACILITIES TO HAVE SIGN AT STREET ENTRANCE NOT LESS
- THAN 17" x 22" IN SIZE. SIGN TEXT TO STATE THE FOLLOWING: "UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACE NOT DISPLAYING DISTINGUISHING PLACARDS OR LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES MAY BE TOWED AWAY AT OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT _____ OR BY TELEPHONING _____." CONTRACTOR TO OBTAIN APPROPRIATE LOCAL NUMBER AND FILL IN BLANKS PRIOR TO MANUFACTURING SIGN.
- 2. ACCESSIBLE PARKING SPACE SIGN TO HAVE ACCESSIBLE SYMBOL, AS SHOWN. SIZE TO BE 70 SQ. IN. MINIMUM.
- PROVIDE SIGN AT VAN STALL WITH ADD'L SIGN STATING "VAN ACCESSIBLE"

ACCESSIBLE PARKING SIGNAGE

R99R CALTRANS

TWO SIGN TYPES

(SEE NOTES)

(NO SYMBOL)

-SEE NOTE 3

-FINISH GRADE

 $-2\frac{1}{2}$ Ø GALV. PIPE

10"ø x 24" DEEP. _CONC. FOOTING STOP

PIPE 3" CLR. FROM FOOTING BOTTOM

REGULATORY SIGNS

SIGN TYPE 1 TO HAVE

- TEXT IN THIS AREA

GENERAL NOTES

ALL GENERAL NOTES, SHEET NOTES, AND LEGEND NOTES FOUND IN THESE DOCUMENTS SHALL APPLY TYPICALLY THROUGHOUT. IF INCONSISTENCIES ARE FOUND IN THE VARIOUS NOTATIONS, NOTIFY THE ENGINEER IMMEDIATELY IN WRITING REQUESTING CLARIFICATION.

THESE DRAWINGS AND THEIR CONTENT ARE AND SHALL REMAIN THE PROPERTY OF LEA AND BRAZE ENGINEERING, INC. WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY ANY PERSONS ON OTHER PROJECTS OR EXTENSIONS OF THE PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ENGINEER.

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND TRADE STANDARDS WHICH GOVERN EACH PHASE OF WORK INCLUDING, BUT NOT LIMITED TO, CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, CALTRANS STANDARDS AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES AND/OR LEGISLATION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, LINES AND LEVELS INDICATED. PROPER FIT AND ATTACHMENT OF ALL PARTS IS REQUIRED. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY NOTIFY THE ENGINEER FOR CORRECTION OR ADJUSTMENT THE EVENT OF FAILURE TO DO SO, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERROR.

ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED ON THE JOB BY EACH SUBCONTRACTOR BEFORE HE/SHE BEGINS HIS/HER WORK. ANY ERRORS, OMISSION, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/CONTRACTOR BEFORE CONSTRUCTION BEGINS.

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS, OR EXISTING ON SITE, WHICH COULD AFFECT THEIR WORK.

WORK SEQUENCE

IN THE EVENT ANY SPECIAL SEQUENCING OF THE WORK IS REQUIRED BY THE OWNER OR THE CONTRACTOR, THE CONTRACTOR SHALL ARRANGE A CONFERENCE BEFORE ANY SUCH WORK IS BEGUN.

SITE AND FAMILIARIZE HIM/HERSELF WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS/HER WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTIONS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS/HER NEGLECT TO EXAMINE, OR FAILURE TO DISCOVER, CONDITIONS WHICH AFFECT HIS/HER WORK.

LEA AND BRAZE ENGINEERING. INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF LEA AND BRAZE ENGINEERING, INC. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD HARMLESS LEA AND BRAZE ENGINEERING, INC.

CONSTRUCTION IS ALWAYS LESS THAN PERFECT SINCE PROJECTS REQUIRE THE COORDINATION AND INSTALLATION OF MANY INDIVIDUAL COMPONENTS BY VARIOUS CONSTRUCTION INDUSTRY TRADES. THESE DOCUMENTS CANNOT PORTRAY ALL COMPONENTS OR ASSEMBLIES EXACTLY. IT IS THE INTENTION OF THESE ENGINEERING DOCUMENTS THAT THEY REPRESENT A REASONABLE STANDARD OF CARE IN THEIR CONTENT. IT IS ALSO PRESUMED BY THESE DOCUMENTS THAT CONSTRUCTION REVIEW SERVICES WILL BE PROVIDED BY THE ENGINEER. SHOULD THE OWNER NOT RETAIN THE ENGINEER TO PROVIDE SUCH SERVICES, OR SHOULD HE/SHE RETAIN THE ENGINEER TO PROVIDE ONLY PARTIAL OR LIMITED SERVICES, THEN IT SHALL BE THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO FULLY RECOGNIZE AND PROVIDE THAT STANDARD OF CARE.

IF THE OWNER OR CONTRACTOR OBSERVES OR OTHERWISE BECOMES AWARE OF ANY FAULT OR DEFECT IN THE PROJECT OR NONCONFORMANCE WITH THE CONTRACT DOCUMENTS, PROMPT WRITTEN NOTICE THEREOF SHALL BE GIVEN BY THE OWNER AND/OR CONTRACTOR TO THE ENGINEER.

THE ENGINEER SHALL NOT HAVE CONTROL OF OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR. SUBCONTRACTORS. OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK. OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

SITE PROTECTION

PROTECT ALL LANDSCAPING THAT IS TO REMAIN. ANY DAMAGE OR LOSS RESULTING FROM EXCAVATION, GRADING, OR CONSTRUCTION WORK SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SITE UTILITIES AND SHALL COORDINATE THEIR REMOVAL OR MODIFICATIONS (IF ANY) TO AVOID ANY INTERRUPTION OF SERVICE TO ADJACENT AREAS. THE GENERAL CONTRACTOR SHALL INFORM HIM/HERSELF OF MUNICIPAL REGULATIONS AND CARRY OUT HIS/HER WORK IN COMPLIANCE WITH ALL FEDERAL AND STATE REQUIREMENTS TO REDUCE FIRE HAZARDS AND INJURIES TO THE PUBLIC.

STORMWATER POLLUTION PREVENTION NOTES

1) STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

2) CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING SOLID WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENT, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATER COURSES.

3) USE SEDIMENT CONTROL OR FILTRATION TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

RUNOFF IS CONTAINED AND TREATED.

AND DISCHARGE COURSE WITH FIELD MARKERS.

BUFFER STRIPS. SEDIMENT BARRIERS OF FILTERS. DIKES. MULCHING. OR OTHER MEASURES AS APPROPRIATE.

PRACTICAL.

8) LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF. 9) LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.

10) AVOID TRACKING DIRT OR MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY

SWEEPING METHODS TO THE MAXIMUM EXTENT PRACTICAL. SUPPLEMENTAL MEASURES

A. THE PHRASE "NO DUMPING - DRAINS TO BAY" OR EQUALLY EFFECTIVE PHRASE MUST BE LABELED ON STORM DRAIN INLETS (BY STENCILING, BRANDING, OR PLAQUES) TO ALERT THE PUBLIC TO THE DESTINATION OF STORM WATER AND TO PREVENT DIRECT DISCHARGE OF POLLUTANTS INTO THE STORM DRAIN.

C. STABILIZING ALL DENUDED AREAS AND MAINTAINING EROSION CONTROL MEASURES CONTINUOUSLY FROM

OCTOBER 15 AND APRIL 15.

D. REMOVING SPOILS PROMPTLY, AND AVOID STOCKPILING OF FILL MATERIALS, WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH A TARP OR OTHER WATERPROOF MATERIAL.

E. STORING, HANDLING, AND DISPOSING OF CONSTRUCTION MATERIALS AND WASTES SO AS TO AVOID THEIR ENTRY TO THE STORM DRAIN SYSTEMS OR WATER BODY.

F. AVOIDING CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN AN AREA DESIGNATED TO CONTAIN AND TREAT RUNOFF.

- SITE EXAMINATION: THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY EXAMINE THE

- 4) AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA IN WHICH
- 5) DELINEATE CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES
- 6) PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE 7) PERFORM CLEARING AND EARTH MOVING ACTIVITIES DURING DRY WEATHER TO THE MAXIMUM EXTENT

B. USING FILTRATION MATERIALS ON STORM DRAIN COVERS TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

GRADING & DRAINAGE NOTES:

SCOPE OF WORK

THESE SPECIFICATIONS AND APPLICABLE PLANS PERTAIN TO AND INCLUDE ALL SITE GRADING AND EARTHWORK ASSOCIATED WITH THE PROJECT INCLUDING, BUT NOT LIMITED TO THE FURNISHING OF ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR SITE CLEARING AND GRUBBING, SITE PREPARATION, DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL, STRIPPING, KEYING, EXCAVATION, OVER EXCAVATION, RECOMPACTION PREPARATION FOR SOIL RECEIVING FILL, PAVEMENT, FOUNDATION OF SLABS, EXCAVATION, IMPORTATION OF ANY REQUIRED FILL MATERIAL, PROCESSING, PLACEMENT AND COMPACTION OF FILL AND SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING AND SLOPE SHOWN ON THE PROJECT GRADING PLANS.

2. <u>GENERAL</u>

- A. ALL SITE GRADING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THESE SPECIFICATIONS, THE SOILS REPORT (IF AVAILABLE) AND THE CITY OF PALO ALTO
- B. ALL FILL MATERIALS SHALL BE DENSIFIED SO AS TO PRODUCE A DENSITY NOT LESS THAN 90% RELATIVE COMPACTION BASED UPON ASTM TEST DESIGNATION D1557. FIELD DENSITY TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST DESIGNATION 2922 AND 3017. THE LOCATION AND FREQUENCY OF THE FIELD DENSITY TEST WILL BE AS DETERMINED BY THE SOIL ENGINEER. THE RESULTS OF THESE TEST AND COMPLIANCE WITH THE SPECIFICATIONS WILL BE THE BASIS UPON WHICH SATISFACTORY COMPLETION OF THE WORK WILL BE JUDGED BY THE SOIL ENGINEER. ALL CUT AND FILL SLOPES SHALL BE CONSTRUCTED AS SHOWN ON PLANS, BUT NO STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL THE EARTHWORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. NO DEVIATION FROM THESE SPECIFICATIONS SHALL BE MADE EXCEPT UPON WRITTEN APPROVAL BY THE SOILS ENGINEER. BOTH CUT AND FILL AREAS SHALL BE SURFACE COMPLETED TO THE SATISFACTION OF THE SOILS ENGINEER AT THE CONCLUSION OF ALL GRADING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO DOING ANY SITE GRADING AND EARTHWORK INCLUDING CLEARING.

CLEARING AND GRUBBING

- A. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION. ALL EXISTING PUBLIC IMPROVEMENTS SHALL BE PROTECTED. ANY IMPROVEMENTS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE LOCAL JURISDICTION WITH NO EXTRA COMPENSATION.
- B. ALL ABANDONED BUILDINGS AND FOUNDATIONS. TREE (EXCEPT THOSE SPECIFIED TO REMAIN FOR LANDSCAPING PURPOSES), FENCES, VEGETATION AND ANY SURFACE DEBRIS SHALL BE REMOVED AND DISPOSED OF OFF THE SITE BY THE CONTRACTOR.
- C. ALL ABANDONED SEPTIC TANKS AND ANY OTHER SUBSURFACE STRUCTURES EXISTING IN PROPOSED DEVELOPMENT AREAS SHALL BE REMOVED PRIOR TO ANY GRADING OR FILL OPERATION. ALL APPURTENANT DRAIN FIELDS AND OTHER CONNECTING LINES MUST ALSO BE TOTALLY REMOVED.
- D. ALL ABANDONED UNDERGROUND IRRIGATION OR UTILITY LINES SHALL BE REMOVED OR DEMOLISHED. THE APPROPRIATE FINAL DISPOSITION OF SUCH LINES DEPEND UPON THEIR DEPTH AND LOCATION AND THE METHOD OF REMOVAL OR DEMOLITION SHALL BE DETERMINED BY THE SOILS ENGINEER. ONE OF THE FOLLOWING METHODS WILL BE USED:
- (1) EXCAVATE AND TOTALLY REMOVE THE UTILITY LINE FROM THE TRENCH.
- (2) EXCAVATE AND CRUSH THE UTILITY LINE IN THE TRENCH.
- (3) CAP THE ENDS OF THE UTILITY LINE WITH CONCRETE TO PREVENT THE ENTRANCE OF WATER. THE LOCATIONS AT WHICH THE UTILITY LINE WILL BE CAPPED WILL BE DETERMINED BY THE UTILITY DISTRICT ENGINEER. THE LENGTH OF THE CAP SHALL NOT BE LESS THAN FIVE FEET, AND THE CONCRETED MIX EMPLOYED SHALL HAVE MINIMUM SHRINKAGE.
- 4. <u>SITE PREPARATION AND STRIPPING</u>
- A. ALL SURFACE ORGANICS SHALL BE STRIPPED AND REMOVED FROM BUILDING PADS, AREAS TO RECEIVE COMPACTED FILL AND PAVEMENT AREAS.
- B. UPON THE COMPLETION OF THE ORGANIC STRIPPING OPERATION, THE GROUND SURFACE (NATIVE SOIL SUBGRADE) OVER THE ENTIRE AREA OF ALL BUILDING PADS, STREET AND PAVEMENT AREAS AND ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE PLOWED OR SCARIFIED UNTIL THE SURFACE IS FREE O RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH MAY INHIBIT UNIFORM SOIL COMPACTION. THE GROUND SURFACE SHALL THEN BE DISCED OR BLADED TO A DEPTH OF AT LEAST 6 INCHES. UPON ENGINEER'S SATISFACTION, THE NEW SURFACE SHALL BE WATER CONDITIONED AND RECOMPACTED PER REQUIREMENTS FOR COMPACTING FILL MATERIAL.

EXCAVATION

- A. UPON COMPLETION OF THE CLEARING AND GRUBBING, SITE PREPARATION AND STRIPPING, THE CONTRACTOR SHALL MAKE EXCAVATIONS TO LINES AND GRADES NOTED ON THE PLAN. WHERE REQUIRED BY THE SOILS ENGINEER, UNACCEPTABLE NATIVE SOILS OR UNENGINEERED FILL SHALL BE OVER EXCAVATED BELOW THE DESIGN GRADE. SEE PROJECT SOILS REPORT FOR DISCUSSION OF OVER excavation of the unacceptable material. Resulting ground line shall be scarified. MOISTURE-CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE.
- B. EXCAVATED MATERIALS SUITABLE FOR COMPACTED FILL MATERIAL SHALL BE UTILIZED IN MAKING THE REQUIRED COMPACTED FILLS. THOSE NATIVE MATERIALS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

6. PLACING. SPREADING AND COMPACTING FILL MATERIAL A. FILL MATERIALS

THE MATERIALS PROPOSED FOR USE AS COMPACTED FILL SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE COMMENCEMENT OF GRADING OPERATIONS. THE NATIVE MATERIAL IS CONSIDERED SUITABLE FOR FILL: HOWEVER. ANY NATIVE MATERIAL DESIGNATED UNSUITABLE BY THE SOILS ENGINEER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ANY IMPORTED MATERIAL SHALL BE APPROVED FOR use by the soils engineer, in writing, before being imported to the site and shall possess SUFFICIENT FINES TO PROVIDE A COMPETENT SOIL MATRIX AND SHALL BE FREE OF VEGETATIVE AND ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. ALL FILL VOIDS SHALL BE FILLED AND PROPERLY COMPACTED. NO ROCKS LARGER THAN THREE INCHES IN DIAMETER SHALL BE PERMITTED.

B. FILL CONSTRUCTION

THE SOILS ENGINEER SHALL APPROVE THE NATIVE SOIL SUBGRADE BEFORE PLACEMENT OF ANY COMPACTED FILL MATERIAL. UNACCEPTABLE NATIVE SOIL SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER. THE RESULTING GROUND LINE SHALL BE SCARIFIED MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE. GROUND PREPARATION SHALL BE FOLLOWED CLOSELY BY FILL PLACEMENT TO PREVENT DRYING OUT OF THE SUBSOIL BEFORE PLACEMENT of the fill.

THE APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM HORIZONTAL LAYERS NO THICKER THAN 8" IN LOOSE THICKNESS. LAYERS SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY BLADE MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. THE SCARIFIED SUBGRADE AND FILL MATERIAL SHALL BE MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE. WHEN THE MOISTURE CONTENT OF THE FILL IS BELOW THAT SPECIFIED, WATER SHALL BE ADDED UNTIL THE MOISTURE DURING THE COMPACTION PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL IS ABOVE THAT SPECIFIED, THE FILL MATERIAL SHALL BE AERATED BY BLADING OR OTHER SATISFACTORY METHODS UNTIL THE MOISTURE CONTENT IS AS SPECIFIED.

HAS BEEN OBTAINED. <u>CUT OR FILL SLOPES</u>

ALL CONSTRUCTED SLOPES, BOTH CUT AND FILL, SHALL BE NO STEEPER THAN 2 TO 1 (HORIZONTAL TO VERTICAL). DURING THE GRADING OPERATION. COMPACTED FILL SLOPES SHALL BE OVERFILLED BY AT LEAST ONE FOOT HORIZONTALLY AT THE COMPLETION OF THE GRADING OPERATIONS, THE EXCESS FILL EXISTING ON THE SLOPES SHALL BE BLADED OFF TO CREATE THE FINISHED SLOPE EMBANKMENT ALL CUT AND FILL SLOPES SHALL BE TRACK WALKED AFTER BEING BROUGHT TO FINISH GRADE AND THEN BE PLANTED WITH EROSION CONTROL SLOPE PLANTING. THE SOILS ENGINEER SHALL REVIEW ALL CUT SLOPES TO DETERMINE IF ANY ADVERSE GEOLOGIC CONDITIONS ARE EXPOSED. IF SUCH CONDITION DO OCCUR, THE SOILS ENGINEER SHALL RECOMMEND THE APPROPRIATE MITIGATION MEASURES AT THE TIME OF THEIR DETECTION.

SEASONAL LIMITS AND DRAINAGE CONTROL

FILL MATERIALS SHALL NOT BE PLACED, SPREAD OR COMPACTED WHILE IT IS AT AN UNSUITABLY HIGH MOISTURE CONTENT OR DURING OTHERWISE UNFAVORABLE CONDITIONS. WHEN THE WORK IS INTERRUPTED FOR ANY REASON THE FILL OPERATIONS SHALL NOT BE RESUMED UNTIL FIELD TEST PERFORMED BY THE SOILS ENGINEER INDICATE THAT THE MOISTURE CONDITIONS IN AREAS TO BE FILLED ARE AS PREVIOUSLY SPECIFIED. ALL EARTH MOVING AND WORKING OPERATIONS SHALL BE CONTROLLED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. ALL EXCESS WATER SHALL BE PROMPTLY REMOVED AND THE SITE KEPT DRY.

DUST CONTROL

10. INDEMNITY THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE ENGINEER, THE OWNER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGE ARISING OR ALLEGED TO HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, THE ARCHITECT, THE ENGINEER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS.

SAFETY

11

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

AFTER EACH LAYER HAS BEEN PLACED, MIXED, SPREAD EVENLY AND MOISTURE CONDITIONED, IT SHALL BE COMPACTED TO AT LEAST THE SPECIFIED DENSITY. THE FILL OPERATION SHALL BE CONTINUED IN COMPACTED LAYERS AS SPECIFIED ABOVE UNTIL THE

FILL HAS BEEN BROUGHT TO THE FINISHED SLOPES AND GRADES AS SHOWN ON THE PLANS. NO LAYER SHALL BE ALLOWED TO DRY OUT BEFORE SUBSEQUENT LAYERS ARE PLACED. COMPACTION EQUIPMENT SHALL BE OF SUCH DESIGN THAT IT WILL BE ABLE TO COMPACT THE FILL TO

THE SPECIFIED MINIMUM COMPACTION WITHIN THE SPECIFIED MOISTURE CONTENT RANGE. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA UNTIL THE REQUIRED MINIMUM DENSITY

THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY FOR THE ALLEVIATION OR PREVENTION OF ANY DUST NUISANCE ON OR ABOUT THE SITE CAUSED BY THE CONTRACTOR'S OPERATION EITHER DURING THE PERFORMANCE OF THE GRADING OR RESULTING FROM THE CONDITION IN WHICH THE CONTRACTOR LEAVES THE SITE. THE CONTRACTOR SHALL ASSUME ALL LIABILITY INCLUDING COURT COST OF CO-DEFENDANTS FOR ALL CLAIMS RELATED TO DUST OR WIND-BLOWN MATERIALS ATTRIBUTABLE TO HIS WORK. COST FOR THIS ITEM OF WORK IS TO BE INCLUDED IN THE EXCAVATION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

12. GUARANTEE

NEITHER THE FINAL PAYMENT, NOR THE PROVISIONS IN THE CONTRACT, NOR PARTIAL, NOR ENTIRE USE OR OCCUPANCY OF THE PREMISES BY THE OWNER SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK NOT DONE IN ACCORDANCE WITH THE CONTRACT OR RELIEVES THE CONTRACTOR OF LIABILITY IN RESPECT TO ANY EXPRESS WARRANTIES OR RESPONSIBILITY FOR FAULTY MATERIAL OR WORKMANSHIP

THE CONTRACTOR SHALL REMEDY ANY DEFECTS IN WORK AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) CALENDAR YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

13. TRENCH BACKFILL

> EITHER THE ON-SITE INORGANIC SOIL OR APPROVED IMPORTED SOIL MAY BE USED AS TRENCH BACKFILL. THE BACKFILL MATERIAL SHALL BE MOISTURE CONDITIONED PER THESE SPECIFICATIONS AND SHALL BE PLACED IN LIFTS OF NOT MORE THAN SIX INCHES IN HORIZONTAL UNCOMPACTED LAYERS AND BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM OF 90% RELATIVE COMPACTION. IMPORTED SAND MAY BE USED FOR TRENCH BACKFILL MATERIAL PROVIDED IT IS COMPACTED TO AT LEAST 90% RELATIVE COMPACTION. WATER JETTING ASSOCIATED WITH COMPACTION USING VIBRATORY EQUIPMENT WILL BE PERMITTED ONLY WITH IMPORTED SAND BACKFILL WITH THE APPROVAL OF THE SOILS ENGINEER. ALL PIPES SHALL BE BEDDED WITH SAND EXTENDING FROM THE TRENCH BOTTOM TO TWELVE INCHES ABOVE THE PIPE. SAND BEDDING IS TO BE COMPACTED AS SPECIFIED ABOVE FOR SAND BACKFILL

EROSION CONTROL

A. ALL GRADING, EROSION AND SEDIMENT CONTROL AND RELATED WORK UNDERTAKEN ON THIS SITE IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE COUNTY GRADING ORDINANCE AND MADE A PART HEREOF BY REFERENCE.

B. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO ANY PUBLICLY OWNED AND MAINTAINED ROAD CAUSED BY THE AFORESAID CONTRACTOR'S GRADING ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON THE HAUL ROUTE.

C. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING THE RAINY SEASON, GENERALLY FROM OCTOBER FIRST TO APRIL FIFTEENTH. EROSION CONTROL PLANTING IS TO BE COMPLETED BY OCTOBER FIRST. NO GRADING OR UTILITY TRENCHING SHALL OCCUR BETWEEN OCTOBER FIRST AND APRIL FIFTEENTH UNLESS AUTHORIZED BY THE LOCAL JURISDICTION.

D. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE SOILS ENGINEER.

E. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.

F. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON.

G. WHEN NO LONGER NECESSARY AND PRIOR TO FINAL ACCEPTANCE OF DEVELOPMENT. SEDIMENT BASINS SHALL BE REMOVED OR OTHERWISE DEACTIVATED AS REQUIRED BY THE LOCAL JURISDICTION.

H. A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ANY POINT OF EGRESS FROM THE SITE TO ROADWAY. A CONSTRUCTION ENTRANCE SHOULD BE COMPOSED OF COARSE DRAIN ROCK (2" TO 3") MINIMUM DIAMETER) AT LEAST EIGHT INCHES THICK BY FIFTY (50) FEET LONG BY TWENTY (20) FEET WIDE

UNLESS SHOWN OTHERWISE ON PLAN AND SHALL BE MAINTAINED UNTIL THE SITE IS PAVED. I. ALL AREAS SPECIFIED FOR HYDROSEEDING SHALL BE NOZZLE PLANTED WITH STABILIZATION MATERIAL CONSISTING OF FIBER, SEED, FERTILIZER AND WATER, MIXED AND APPLIED IN THE FOLLOWING **PROPORTIONS:**

FIBER, 2000 LBS/ACRE

SEED, 200 LBS/ACRE (SEE NOTE J, BELOW) FERTILIZER (11-8-4). 500 LBS/ACRE

WATER, AS REQUIRED FOR APPLICATION J. SEED MIX SHALL BE PER CALTRANS STANDARDS.

K. WATER UTILIZED IN THE STABILIZATION MATERIAL SHALL BE OF SUCH QUALITY THAT IT WILL PROMOTE GERMINATION AND STIMULATE GROWTH OF PLANTS. IT SHALL BE FREE OF POLLUTANT MATERIALS AND WEED SEED.

L. HYDROSEEDING SHALL CONFORM TO THE PROVISIONS OF SECTION 20, EROSION CONTROL AND HIGHWAY PLANTING", OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED.

M. A DISPERSING AGENT MAY BE ADDED TO THE HYDROSEEDING MATERIAL, PROVIDED THAT THE CONTRACTOR FURNISHES SUITABLE EVIDENCE THAT THE ADDITIVE WILL NOT ADVERSELY AFFECT THE PERFORMANCE OF THE SEEDING MIXTURE.

N. STABILIZATION MATERIALS SHALL BE APPLIED AS SOON AS PRACTICABLE AFTER COMPLETION OF GRADING OPERATIONS AND PRIOR TO THE ONSET OF WINTER RAINS. OR AT SUCH OTHER TIME AS DIRECTED BY THE COUNTY ENGINEER. THE MATERIAL SHALL BE APPLIED BEFORE INSTALLATION OF OTHER LANDSCAPING MATERIALS SUCH AS TREES, SHRUBS AND GROUND COVERS.

O. THE STABILIZATION MATERIAL SHALL BE APPLIED WITHIN 4-HOURS AFTER MIXING. MIXED MATERIAL NOT USED WITHIN 4-HOURS SHALL BE REMOVED FROM THE SITE.

P. THE CONTRACTOR SHALL MAINTAIN THE SOIL STABILIZATION MATERIAL AFTER PLACEMENT. THE COUNTY ENGINEER MAY REQUIRE SPRAY APPLICATION OF WATER OR OTHER MAINTENANCE ACTIVITIES TO ASSURE THE EFFECTIVENESS OF THE STABILIZATION PROCESS. APPLICATION OF WATER SHALL BE ACCOMPLISHED USING NOZZLES THAT PRODUCE A SPRAY THAT DOES NOT CONCENTRATE OR WASH AWAY THE STABILIZATION MATERIALS.

15. CLEANUP

THE CONTRACTOR MUST MAINTAIN THE SITE CLEAN, SAFE AND IN USABLE CONDITION. ANY SPILLS OF SOIL, ROCK OR CONSTRUCTION MATERIAL MUST BE REMOVED FROM THE SITE BY THE CONTRACTOR DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. COST FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THE EXCAVATION AND COMPACTION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

> THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE VEER MAY MAKE ON-SITE RECOMMENDATIONS DURING GRADING OPERATIONS.

PLANT PALETTE

	_				
TREES	(24" Box unles	ss noted otherwise)			
KEY	QTY.	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING	3 WUCC
PAR DES	2-36" BOX	Parkinsonia "Desert Museum'	Desert Museum Palo Verde	aka Cercidium	Low
FRA LAT	1-36" BOX	Fraxinus latifolia	Oregon Ash	Standard	Mec
SHRUBS,	GROUNDCOVER	RS AND GRASSES (5 gallon unless noted	otherwise)		
KEY	QTY.	BOTANICAL NAME	COMMON NAME	COMMENTS/SPACING	3 WUCC
AGV	32	Anigozanthos 'Gold Velvet'	Gold Kangaroo Paw	24" o.c.	Low
APM	98	Arctostaphylos 'Pacific Mist'	Pacific Mist Manzanita	36" o.c.	Low
CAL	138	Calamagrostis foliosa	Leafy Reed Grass	18"o.c.	Low
СНО	8	Chondropetalum tectorum	Small Cape Rush	36" o.c.	Low
FES	34	Festuca californica	California Fescue	24" o.c.	Low
HES	55	Helictotrichon sempervirens	Blue Oat Grass	30" o.c.	Low
HET	3	Heteromeles arbutifolia	Toyon	48" o.c.	Low
MUH	37	Muhlenbergia rigens	Deer Grass	24" o.c.	Low
SAL	47	Salvia clevelandii	Cleveland Sage	24" o.c.	Low

- Plants with low WUCOLS ratings are drought tolerant and regionally appropriate species. Plants noted are Native to California. Other plants, not in either of these two categories are well adapted to Palo Alto. Habitat forming column refers to food value of flowers or fruit for small animals, birds, butterflies and other insects in addition to shelter for some insects.
- Do not use chemical fertilizers, pesticides, herbicides or commercial soil amendment. Use Organic Materials Review Institute (OMRI) materials and compost. Refer to the Bay-Friendly Landscape Guidelines: http://www.stopwaste.org/resource/brochures/bay-friendly-landscape-guidelinessustainable-practices-landscape-professional for guidance
- Avoid compacting soil in areas that will be unpaved. All planting areas to receive 3" layer of bark mulch.

The total quantity of plants proposed is 455. Of these 455 plants, 362 are native which totals 79.5% Native plantings.

PLANT SPACING DIAGRAM

PLANT CALLOUT SYMBOL

-Quantity (or See Spacing Comments) — Plant Key (See Plant List)

shrub plantings

PLANT QUANTITY DIAGRAM

SPACING 'A'	SPACING 'B'	SPACING 'C'	NO. OF PLANTS/SQUARE FOOT
6" O.C.	5.20"	2.60"	4.60
8" O.C.	6.93"	3.47"	2.60
9" O.C.	7.79"	3.90"	1.78
10" O.C.	8.66"	4.33"	1.66
12" O.C.	10.40"	5.20"	1.15
15" O.C.	13.00"	6.50"	0.74
18" O.C.	15.60"	7.80"	0.51
24" O.C.	20.80"	10.40"	0.29
30" O.C.	26.00"	13.00"	0.18
36" O.C.	30.00"	15.00"	0.12
48" O.C.	40.00"	20.00"	0.07
72" 0.C.	62.35"	31.18"	0.04

See Plant Spacing Diagram for maximum triangular spacing 'A'. This chart is to be used to determine number of ground cover required in a given area and spacing between shrub massings. Where shrub massings are shown, calculate shrub mass areas before utilizing spacing chart to determine plant quantities.

* Where curb, sidewalk, adjacent planting bed or wall condition occurs, utilize spacing 'C' to determine plant distance from wall, sidewalk, adjacent planting bed or back of curb, where C=1/2 B.

PLANTING NOTES

THE FOLLOWING SIX (6) NOTES ARE FOR BIDDING PURPOSES ONLY

- The contractor is required to submit plant quantities and unit prices for all plant materials as a part of the bid.
- Assume 15 gallon plant for any unlabelled or un-sized tree; 5 gallon plant for any unlabelled or un-sized shrub; and 4" pots @ 12" o.c. (not flats) for any unlabelled ground cover. All planting beds, except for lawns, are to receive ground cover plant installation in addition to the shrubs and trees shown on the plans.
- The new planting areas shall be ripped to a depth of 8" to reduce compaction. The native subgrade soil shall be treated with 100 lbs of gypsum/1000 sf and leached to improve drainage and reduce the soil interface barrier. Contractor shall coordinate this work with other trades. This is subject to the final recommendations of the soils test (see below) and review by the Landscape Architect and the Owner.
- All new planting areas are to receive Super Humus Compost by BFI (408.945.2844; www.bfi.com) at the rate of 6 cubic yards/1000 square feet, evenly tilled 6" deep into the soil to finish grade. All planting areas shall have 6-20-20 Commercial Fertilizer at 25lbs/1000 square feet evenly distributed into the soil. This is subject to the final recommendations and review of the soils test (see below) by the Landscape Architect and the Owner.
- Planting pits are to be backfilled with a mixture of 50% native soil and 50% amended native soil.
- The General Contractor is to provide an agricultural suitabilities analysis for on-site rough graded soil and any imported topsoil. Recommendations for amendments contained in this analysis are to be carried out before planting occurs. Such changes are to be accompanied by equitable adjustments in the contract price if/when necessary. See specifications for testing procedure.
- 7. All work shall be performed by persons familiar with planting work and under supervisions of a qualified planting foreman.
- 8. Plant material locations shown are diagrammatic and may be subject to change in the field by the Landscape Architect before the maintenance period begins.
- 9. All trees are to be staked as shown in the staking diagrams.
- 10. All tree stakes shall be cut 6" above tree ties after stakes have been installed to the depth indicated in the staking diagrams. Single stake all conifers per tree staking diagram.
- 11. Plant locations are to be adjusted in the field as necessary to screen utilities but not to block windows nor impede access. The Landscape Architect reserves the right to make minor adjustments in tree locations after planting at no cost to the Owner. All planting located adjacent to signs shall be field adjusted so as not to interfere with visibility of the signs.
- 12. The Landscape Architect reserves the right to make substitutions, additions, and deletions in the planting scheme as felt necessary while work is in progress. Such changes are to be accompanied by equitable adjustments in the contract price if/when necessary and subject to the Owner's approval.
- 13. All planting areas, including pots but not lawns areas, shall be top-dressed with a 3" layer of Pro-Chip Decorative Mulch in Black by BFI Organics, 408.945.2844. Submit sample to Landscape Architect for review prior to ordering. Hold all mulch six (6) inches from tree trunks where mulch is applied over the rootball of tree.
- 14. Trees shall be planted to anticipate settlement.
- 15. Plant material requiring iron supplements shall have chelated iron foliar feeding applications per manufacturer's specifications. See specifications for materials.
- 16. The Landscape Contractor shall arrange with a nursery to secure plant material noted on the drawings and have those plants available for review by the Owner and Landscape Architect within thirty (30) days of award of contract. The Contractor shall purchase the material and have it segregated and grown for the job upon approval of the plant material. The deposit necessary for such contract growing is to be born by the Contractor.
- 17. The Landscape Contractor shall, as a part of this bid, provide for a planting allowance for the amount of \$2,000,000 (2 Thousand Dollars) to be used for supplying and installing additional plant material as directed by the Landscape Architect and approved by the Owner in writing. The unused portion of the allowance shall be returned to the Owner at the beginning of the maintenance period.
- 18. The project has been designed to make efficient use of water through the use of drought tolerant plant materials. Deep rooting shall be encouraged by deep watering plant material as a part of normal landscape maintenance. The irrigation for all planting shall be limited to the amount required to maintain adequate plant health and growth. Water usage should be decreased as plants mature and become established. The irrigation controllers shall be adjusted as necessary to reflect changes in weather and plant requirements.
- 19. The Landscape Contractor shall verify the location of underground utilities and bring any conflicts with plant material locations to the attention of the Landscape Architect for a decision before proceding with the work. Any utilities shown on the Landscape drawings are for reference and coordination purposes only. See Civil Drawings.
- 20. The design intent of the planting plan is to establish an immediate and attractive mature landscape appearance. Future plant growth will necessitate trimming, shaping and, in some cases, removal of trees and shrubs as an on-going maintenance procedure.

Cut stakes so that stake does not intrude - 1"x4" Doug/Fir brace nailed to stakes w/ (4) 1-1/2" galvanized ring shank nails.

2" Lodge Pole Pine Stake (Untreated)

"Gro-Strait" rubber and wire tree tie or approved equal. Provide two (2) per tree.

- Rootball w/nursery container removed. Top of rootball to be 1-1/2" above finished grade. - 3" High watering basin. Ground cover areas only

Plant fertilizer tablets installed per manufacturer's instructions and specifications. Back fill mix. See Planting Notes. 3" ø perforated PVC aeration tube wrapped in filter fabric. Provide removeable, drain

cap. Paint all exposed surfaces black. Extend tube to bottom of planting pit. Watered settled native soil. NOTES: Trees in lawn shall not have sod or seed

Hold all mulch 6" from trunk of tree where mulch is applied over rootball.

Tree Staking Diagram w/Aeration Tube

Not to Scale

SCHEMATIC PLAN LEGEND

	Ground Cover	E.J.	Expansion Joint
	Pedestrian //ehicular Concrete	S.A.D.	See Architect's Drawings
		S.C.D.	See Civil Drawings
X	-Detail Number	S.E.D.	See Electrical Engineer's Drawings
L-X	—Sheet Number	S.C.F.S.	See Color and Finish Schedule
	Property Line		
	Limit of Work Line		
	Align		
	Utility Boxes S.C.D.		

LAYOUT NOTES

- 1. The Contractor shall verify all distances and dimensions in the field and bring any discrepancies to the attention of the Landscape Architect and Owner for a decision before proceeding with the work.
- Contractor to take all necessary precautions to protect buildings and waterproof membranes from damage. Any damage caused by the Contractor or the Contractor's representatives during their activities shall be repaired at no cost to the Owner.
- 3. All written dimensions supersede all scaled distances and dimensions. Dimensions shown are from the face of building wall, face of curb, edge of walk, property line, or centerline of column unless otherwise noted on the drawings.
- Walk scoring, expansion joints and paving shall be located as indicated on the Layout Plans, Landscape Construction Details, or as field adjusted under the the direction of the Landscape Architects.
- All site architectural information is based on drawings prepared by: Randolph Popp Architect 904 High Street Palo Alto, CA 94301 650.427.0026
- 6. The Contractor is to verify location of all on-site utilities before commencing with the work. The Contractor shall be responsible for the repair of any damage to utilities caused by the activities of the Contractor or the Contractor's representatives. Any utilities shown on Landscape Drawings are for reference and coordination purposes only.
- 7. Protect all existing construction from damage. The Contractor shall be responsible for the repair of any damage to existing construction caused by the activities of the Contractor or the Contractor's representatives.
- Expansion joints shall be located no less than 16' o.c. nor greater than 20' o.c. and/or as indicated on the Layout Plans, Landscape Construction Details, or as field adjusted under the direction of the Landscape Architect.

COLOR AND FINISH SCHEDULE

PEDESTRIAN CONCRETE PAVING Type 1 Natural grey concrete with light sandblast finish, per City's Standard.

PEDESTRIAN UNIT PAVING

Acker-Stone, www.ackerstone.com, 951.674.0047 Type 1 12x24, Running Bond Pattern. Color: Stanford Sand with Seashells FM

Type 2 4x24, No Chamfer, 2' Wide Alternate Running Bond Pattern. Color: 30% Light Moonstone, 30% Stanford Sand F.M. Standard Finish, 40% Slate with Blue Agg. FM & Grind.

SITE FURNITURE

Mingle 2 Seats, metallic silver finish, by Landscape Forms, www.landscapeforms.com, Contact: Rebecca Casey, 800.430.6206 x 1313. Chair Qty: 2.

BIKE RACK

Welle Circular Bike Rack, metallic silver finish, by Palmer Group, LLC, www.bikeparking.com, 888.764.2453. Qty: 2 racks for 4 spaces.

HANGING LIGHT SCULPTURE

Aura-Ring, Exterior Illuminated Wood Pedant, by Structura, 913.390.8787, structura.com. Qty: 1.

BIKE LOCKER

MADRAX Single Bike Locker, ML1-1 Dark Grey finish, by Madrax, www.madrax.com, 1-800-448-7931. Qty: 2 lockers for 2 spaces.

SHEET INDEX

L-1.1	General Notes, Legend and Planting Notes
L-1.2	Planting Palette and Imagery
L—2.1	Layout Plan
L—21a	Layout Plan in Color
L—3.1	Planting Plan and Water Use Calculation
L—4.1	Tree Disposition Plan
L-6.1	Landscape Details

Pedestrian Unit Paver Type 2

Parkinsonia Desert Museum

Heteromeles arbutifolia

Chondropetalum tectorum

Muhlenbergia rigens

- FEATURES: • Available in 2' to 12' diameters
- >90CRI smooth, dot free illumination
- Cimmable outdoor rated power supply and IP67 luminaire
- Catenary cable, ceiling, and wall mounting options

SPECIFICATIONS:

HOUSING: Solid Accoya wood linear assembled through glulam construction and precision machined using CNC technology. Adhesive complies with ASTM D-2559 glulam construction specifications for extreme exposed weather conditions, waterproof, and rated for wet or dry use exposure.

ELECTRICAL: Powered by a standalone Q-Tran QZ, 120-277VAC primary/24VDC secondary outdoor rated remote dimmable power supply. Power supply features built-in short circuit protection, over load protection, and over temperature protection. System is forward phase, reverse phase, and 1-10V dimming. Consult factory for other driver options. Catenary mounted fixtures supplied with 1' infeed cable. A 40' leader cable supplied with infeed only fixtures. Ceiling canopy mounted fixtures supplied with 6' infeed cable. Operating temperature of -13°F to 125°F SO, 115°F MO, and 108°F HO.

OPTICAL SYSTEM: Available in 2700K, 3000K, 3500K, 4000K color temperatures with smooth, dot free illumination.

FINISHES AND MATERIALS: Wood is finished with a low VOC

waterborne matte exterior finish containing UV and mildew inhibitors. Care and Maintenance

Candela - Direct

	Standard	Output	Medium	Output	High O	utput		
Dia.	Lumens ⁽²⁾	Watts	Lumens ⁽²⁾	Watts	Lumens ⁽²⁾	Watts	Weight ⁽³⁾	EPA(3)
2'	627	9	1139	18	1593	29	17lbs.	.69ft ²
3'	936	13	1700	26	2378	43	25lbs.	.95ft2
4'	1299	18	2360	36	3301	60	32lbs.	1.24ft ²
5'	1662	23	3020	46	4224	77	41lbs.	1.52ft ²
6'	1980	28	3597	55	5032	91	47lbs.	1.81ft2
8	2671	37	4851	74	6787	123	64lbs.	2.36ft ²
10'	3361	47	6105	93	8541	155	80lbs.	2.92ft ²
12'	4033	56	7326	110	10249	185	96lbs.	3.48ft2

8' Diameter Aura Ring Wood Pedant with Specifications

Pedestrian Unit Paver Type 2

Welle Circular Bike Rack-Silver

Helictotrichon sempervirens

Anigozanthos 'Gold Velvet'

Calamagrostis foliosa

Festuca californica

Madrax Single Bike Locker-Gray

Salvia clevelandii

Mingle 2 Seats

MIDDLEFIELD ROAD (65')

----16

MIDDLEFIELD ROAD (65')

TRFFS 101	' Box unless	s noted otherwin	e)						
KEY	QTY.	BOTANICAL NAM	1E 1E		COMMON NAME	Dala Manda	COMMENTS/SPACI		
FRA LAT	2-36"BOX 1-36"BOX	Fraxinus latifoli	ia		Oregon Ash	Palo Verde	Standard	Low Med	
SHRUBS, GR KEY	OUNDCOVER	S AND GRASSES BOTANICAL NAM	(5 gallon unl 1E	less noted oth	COMMON NAME		COMMENTS/SPACI	NG WUCOL	_S
AGV APM	32 98	Anigozanthos '(Arctostaphylos	Gold Velvet' 'Pacific Mist'		Gold Kangaroo F Pacific Mist Man	Paw zanita	24" o.c. 36" o.c.	Low Low	Reg
CAL	138	Calamagrostis	foliosa		Leafy Reed Gras	S	18" o.c.	Low	Rec
FES	34	Festuca califor	nica		California Fescue		24" o.c.	Low	
HES HET	55 3	Helictotrichon s Heteromeles ar	sempervirens butifolia		Blue Oat Grass Toyon		<u> </u>	Low Low	Reç
MUH SAL	37 47	Muhlenbergia ri Salvia clevelano	igens dii		Deer Grass Cleveland Sage		24" o.c. 24" o.c.	Low Low	
 Plants no are well fruit for insects. Do not u Organic Bay-Frier http://ww sustainat Avoid co of bark r 	oted are Na adapted to small anim se chemica Materials R ndly Landso ww.stopwa ole-practice mpacting s nulch.	tive to Californ Palo Alto. Hab als, birds, butte l fertilizers, pes eview Institute ape Guidelines: ste.org/resource es-landscape-pro	ia. Other plan bitat forming o rflies and oth ticides, herbic (OMRI) mater e/brochures/ba ofessional for o t will be unpa	nts, not in eit column refers er insects in a rials and com ay-friendly-lan guidance ved. All plant	her of these two ca s to food value of f addition to shelter hercial soil amendm post. Refer to the ndscape-guidelines	e 3" layer			
									r r
79.5% Native	plantings.	ants proposed is	5 400. Ut thes	e 400 plants,	soz are native whi	ch lotais			

This works	heet is filled o	WATER EI out by the project ap	FFICIENT LA	I required eleme	ORKSHEET nt of the Landscape Do	cumentation Pack	age.		
ference Evapot	transpiratio	n (ETo) 43.1							
Hydrozone # lanting Descripti	on ^a (Plant F	Factor Irrigation F) Method ^b	Irrigation Efficiency	ETAF (PF/IE)	Landscape ETAF Area (sq. ft.)	x Area Estimata Wate / ETV	ed Total r Use vul*		
gular Landscap	pe Areas		0.94	0.27	4.046	720	10.240		
w water-Use ants	0.0		0.81	0.37	1,940	720	19,240		
				Totals	(A)	(B)	19 240		
ecial Landscap	e Areas			Totais	1,940	720	219,240		
-									
					(C)	(D)		12.50	
				Totals	0	0		0"E	
					ETV	/U Total	19,240	°15'0	
drozone #/Planting	g Description	ьIm	gation Method	owed water All	owance (MAWA)» clency		23,400	N38	
ront lawn		overi or dr	head spray ip	0.75 for spray 0.81 for drip	head				
ow water use plantii medium water use p	ngs Manting								
	no Boguland)	- 54 0.62 - 5745	. 4						
re 0.62 is a convers	sion factor that (<i>= Eto x 0.62 x ETAF x</i> converts acre- inches	<i>c Area</i> per acre per year to	gallons per squar	e foot per year.				
AWA (Annual Gallo	ons Allowed) =	(Eto) (0.62) [(ETAF	x LA) + ((1-ETAF) >	× SLA)]					
re 0.62 is a convers quare feet. SLA is th	sion factor that one total special	converts acre-inches p landscape area in sou	er acre per year to are feet. and ETAF	gallons per square is .55 for resident	o foot per year, LA is the to ial areas and 0.45 for non-	tal landscape area residential areas.			
	· · · · · · · · · · · · · · · · · · ·								
	<u>s</u> Areas	Average E for reside	ntial areas, and	ar Landscape d 0.45 or belov	Areas must be 0.55 v for non-residentia	or below I areas.			
al ETAF x Area (I	B)	720							
al Area (A)	_,	1,946							
erage ETAF		0.37						(/ <u>з</u> (сно
Landscape Area	as	·							
tal E⊺AF x Area	(B+D)	720							
tal Area	(A+C)	1,946							88
tewide ETAF (B+	+D) ÷ (A+C)	0.37							
							>	the .	
							10 Times		2
						$i \leq -$	TPL Diameter	X	
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MIDDLEFIELD ROAD (65')

Notes:

 Proposed landscape area including the landscape out to the curb on Middlefield Road is 1,946 SF.

-----1(

Pedestrian Concrete Paving

Scale: 1" = 1'-0"

3-

For Integral Color Concrete use 1/2" Homex, Non-Asphaltic Joint w/Polysulfide Bead over. Color to Match adjacent pedestrian concrete paving. Homex by Homasote, Trenton, N.J. 609.883.3300. All Joints to occur at 20'-0" o.c. max., at Material Interfaces, and as shown on Drawings

Concrete Paving. See Layout Plans and Color and Finish Schedule for finishes and colors. Aggregate Base compacted to at least 90% or per Geotechnical Report Sub-grade compacted to at least 90% or per Geotechnical Report

	DISCLOSURE STATEMENT	
Palo Alto Municipal Code, Chapter property, and that they be shown applications that include exterior	r 8.10.040, requires disclosure and protectio on approved site plans. A completed disclos work, all demolition or grading permit applica	n of ure tions
PROPERTY ADDRESS: 333 T	niduleneid Hoad, Falo Alto, OA	
Are there Regulated trees on o	r adjacent to the property? YES	
1. Where are the trees? Check th	ose that apply (Plans must be submitted s	cne shov
 □ On the property □ On adjacent property X In the City planter strip 	overhanging the project site o or right-of-way easement within 30' of prop	erty
¹ Street trees require special protec in authorized Street Tree Protection iencing (see attached Detail #605).	tion by a fenced enclosure , per the attached inst Verification form by calling Public Works Opera	ructi tions
2. Are there any Protected ¹ or De □ Protected Tree (s) □ Designated Tree (s) ¥ On or overhanging the	signated ¹ Trees? YES Check where app	lical
3. Is there activity or grading with <i>If Yes, a Tree Preservation Report m</i>	n the dripline? (radius 10 times the trunk dia nust be prepared by an ISA certified arborist and	mete subr
 Attach this report to Sheet T-1,:Tree 4. Are the Site Plan Requirement 	s** completed? YES NO	(equ
**Protection of Regulated trees durin dripline; (2) Plans must denote, as a <u>http://www.cityofpaloalto.org/trees/f</u>	ig development require the following: (1) Plans in bold dashed line, a fenced enclosure area out to the <u>orms.htm</u> (See also TTM ² , Section 2.15 for area to	nust 1e dr to be
I, the undersigned, agree to the misleading information in response 8.10.040, which can lead to crimin	conditions of this disclosure. I understand the to this disclosure requirement constitutes a mal and/or civil legal action.	d tha a vic
ignature: (Prop. Owner or Ag	Print: Paul Lettieri	
Protective Fencing	FOR STAFF USE:	
 5. Protected Trees. The specified protective fencing is correctly in p 	tree fencing is in place. A <u>written statement</u> lace around protected and/or designated tree	it pe <u>is at</u> es.
 (N/A if there are no protected trees) 6. <u>Street Trees</u>. A signed Public V (N/A if there are no street trees, context trees) 	s, check here \Box) Vorks Street Tree Protection Verification forn heck here \Box).	n is i
Regulated Trees – a) Street trees – trees Redwoods which are 18" in diameter or 1 Designated Trees – commercial or non-re Palo Alto Tree Technical Manual (TTM	on public property; b) Protected trees – Coast Live Oal arger, when measured 54" above natural grade; and Her sidential property trees, which are part of an approved 1) contains instructions for all requirements on this form	ts or ritage lands L, ava
S:Plan/Pladiv/Arborist/Tree Protection Info/	http://www.cityofpaloalto.org/planning-community/tre	e_te
		_
City of Palo A 250 Hamilton Ave	Alto nue, Palo Alto, CA 94301	
Search:	Advanced	
	Tree Technical Manual	
CRO C	To purchase the Tree Te	ecl
TREE	June, 2001 First Edition	
Home	View by section:	
City-owned Trees Privately-owned Trees About the Tree Ordinance Title 8.10 Heritage Trees Forms Tree Technical Manual	 Table of Contents (PDF, 87KB) Intent and Purpose (PDF, 1.05MI Introduction - Use of Manual (F Section 1.0 - Definitions (PDF, 9 Section 2.0 - Protection of Tree Section 3.0 - Removal, Replace Section 4.0 - Hazardous Trees Section 5.0 - Tree Maintenance Section 6.0 - Tree Reports (PDI) 	3) 20F, 26KE es E eme (PD e Gi F, 84
FAQs Contact Us	View ALL sections:	D-
Resources	Tree Technical Manual - Full (P APPENDICES	UF,
	 A. Palo Alto Municipal Code Chapter & Regulations B: Tree City - USA C: ISA Hazard Evaluation Form D: List of Inherent Failure Patterns for E: ISA Tree Pruning Guidelines (PDF, 2) F: Tree Care Safety Standards, ANSI G: Pruning Performance Standards, A 	3.10 or S 1.85 Z1 NS 50
	Tree Planting Details, Diagram 504 & I: Tree Disclosure Statement J: Palo Alto Standard Tree Protection	1112
	Tree Planting Details, Diagram 504 & I: Tree Disclosure Statement J: Palo Alto Standard Tree Protection	101:

Y-\DRG Projecte\DRG NCAL\DRGNCAL79\CADD\D5_ENVR\DRGNCAL79 555 MIDDLFFIELD TRFFS 2021.01.1.6.4wn T=1 Plotted Bv: Hulse Carv 1 /16/2021 9:10 AM

City of Palo Alto Tree Protection - It's Part of the Plan!

Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from ontact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An appoved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual(TTM) found at www.cityofpaloalto.org/trees/.

tree-related reports shall be added to the space provided on this sheet (adding as needed) his sheet(s) on Project Sheet Index or Legend Page. of T-1 can be downloaded at www.cityofpaloalto.org/arb/forms

Tree Technical Manual			City of	Palo Alto Tree Tec	hnical Manual ADDENDUM 11	p.
ARBORIST INSPEC	CTION SCHEDULE	Arborist Fi	rm Data Here		email RCA/ISA Certified Arborist #WE-000	0
\odot)	N	Monthly Tree Act	tivity Repo	ort- Construction Site	¢
Items Apply to this project	t:	Inspection Date:	Site address:	Contractor- Main Site	#1: Job site superintendent Company:	5
n of Protective Tree Fencin	g The Street Tree Verification Form shall		Pale Alte CA	Contact Information	Email: Job site	
he City Arborist. For other	Protected Trees, the project arborist shall	#	Paio Alto, CA		Cell: Mail:	
on of the trees and that the pr	raph verifying that he has conducted a rotective tree fencing is in place prior to			Also	•	
demolition, grading, or build	ling permit. (see Verification of Tree			present:	•	
truction Monting Drive to a	common company of construction the	Distribution:	1. City of Palo Alto	Attn: Dave Dockter	Dave.dockter@cityofpaloalto.org 650-329-2440	
ontractor shall conduct a pre	-construction meeting to discuss tree	Provide the red	2. Others quested minimum information	with each report, c	ustomize as necessary. To be completed by project	9
h the job site superintendent Arborist, and, if a city maint	, grading equipment operators, project tained irrigation system exists, the Parks	needed.	end monthly to city aroonst at	above autress unit	n project completion, ose additional sheets as	
ntact 650-496-6962).		1. Assignmer a. Pre-c	nt Activity (Demolition/grad	ding/sewer/trench ment with sub-co	ing/foundation/list relevant visits) entractors	
n of Rough Grading. The p	roject arborist shall perform an inspection	b. Inspe c. Deter	ect to verify that tree protect mine if field adjustments, v	tion measures are vatering or plan re	in place evisions may be needed	
rse of rough grading adjaces npaction, cut or fill, drainage	nt to the TPZ to ensure trees will not be e and trenching, and if required, inspect	2. Field Obse	ervations (general site-wide	and list by indivi	dual tree number)	
ms, tree wells, drains and sporist at least 48 hours advan	ecial paving. The contractor shall provide	a. Tree b. Trend	Protection Fences (TPF) are ching has/will occur	e		
		3. Action Iter	ms (list site-wide, by tree nu	umber and date to	be satisfied) and Date Due	
Inspections . The project arb monitor and advise for condi	orist shall perform a monthly activity itions and tree health. The City Arborist	a. Iree b. Root	zone buffer material (wood	eds adjusting (tree l chips) can be ins	# x, x, x) stalled next	
eipt of the activity report du	ring the first week of each calendar month	c. Scree	dule sewer trench, foundatio	on dig with		
It there are <i>any revisions</i> x to (650) 329-2154. (see M	to the approved plans or protection Ionthly Inspection Report, Section 1.17).	4. Photograph	tion Man (mandatory 8 5 v	11 cheat)		
ctivity within the Tree Prot	tection Zone. Work in this area (TPZ -	6 Recommen	ndations, notes or monitor it	tems for project/s	taff/schedule	
7 below) requires the direct	onsite supervision of the project arborist	•	idations, notes of monitor in	ients for projects		
g, Excavation and Equipmen	It, Section 2.20 C).	7. Past visits	(list carry-over items satisfi	ed/still outstandi	ng)	
pe Architect Inspection . For prary or final occupancy the a	r discretionary development projects, applicant or contractor shall arrange for the		(as carly over held said		-6/	
chitect to perform an on site	inspection of all plant stock, quality of					
and planting (see Quality, Se consistent with the approved c	construction plans. The City shall be in	Respectfully	submitted,			
tten verification of Landscap	be Architect approval prior to scheduling	Project site an Consultant co	rborist ontact information (Include	email, cell#, and	mailing)	
		Cc:	CD4 14 41 T			
lease describe) REFER TO TRE	E PROTECTION PLANS FOR DETAILED REQUIREMENTS	Enter Date	CPA Monthly 1	ree Activity Repor	t: Type site address here Page #1 of 1	
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City of Palo Alto	Varification of		\//	RNI		
ublic Works Operations O Box 10250 Palo Alto, CA 94303	Street Tree Protection					
50/496-5953 FAX: 650/852-9289 eeprotection@CityofPaloAlto.org		Tro	o Dro	toct	tion Zono	
ns: Complete upper portion of this fo nt to Public Works Dept. Public Wor	orm. Mail or FAX this form along with signed Tree rks Tree Staff will inspect and notify applicant.					
TE:						
OTECTED:		This f	encina s	hall n	ot be removed	
ME:		varit k	out City	Arbo	rict opproval	•
LEPHONE		WILI	iout City	AIDU	nist approval	
:		(650-4	496-5953	5). Re	moval without	
es at the above		nermis	ssion is a	, subie	ct to a \$500 fin	Δ
e adequately type of protection						
	- IT NO, go to #2 below		p	er day	y ^.	
		*	Palo Alto Munio	cipal Code	e Section 8.10.110	
on:						
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DT adequately						
re required:	······································	SPECIAL	INSPECTIONS		PLANNING DEPARTM	EN
ne required		PAMC 8.10 F	ROTECTED TREES. CONT	RACTOR SHALL	°EG I IONS MANDA I OKY ENSURE PROJECT SITE ARBORIST IS PERFOI	RMIN
t		REQUIRED 1 REPORTS T	IREE INSPECTION AND SIT O THE PLANNING DEPART	TE MONITORING. MENT LANDSCA	PROVIDE WRITTEN MONTHLY TREE ACTIVITY PE REVIEW STAFF BEGINNING 14 DAYS AFTER	r R
ction		BUILDING PI				
ve address were found rotected: * I	YES NO*					
			ALE OF 1" TREE ACTIVI	IY REPORT:		
n:			IT SIAFF:			·
		REPORTING VERIEV THA	TALL TREE PROTECTION	LT INCE ACTIVIT	IT REPORT SHALL CONFORM TO SHEET T-1 F	RAC
reet trees by species,			CHEDUI ED OD I MOCHED	LILED WITHIN A	TREE PROTECTION POOT TONE NON COM	
reet trees by species, type of tree protection e if pictures were		ACTIVITY, 8 IS SUBJECT SECTION 20	CHEDULED OR UNSCHED TO VIOLATION OF PAN 10 AND ADDENDLIM 11	ULED, WITHIN A AC 8.10.080. RE	TREE PROTECTION ROOT ZONE, NON-COMI FERENCE: PALO ALTO TREE TECHNICAL N	PLIA IAN
reet trees by species, type of tree protection e if pictures were f sheet if necessary.		ACTIVITY, 8 IS SUBJECT SECTION 2.0	CHEDULED OR UNSCHED TO VIOLATION OF PAN 00 AND ADDENDUM 11.	uled, within a AC 8.10.080. Re	TREE PROTECTION ROOT ZONE, NON-COM FERENCE: PALO ALTO TREE TECHNICAL N	
reet trees by species, type of tree protection e if pictures were f sheet if necessary.		ACTIVITY, 8 IS SUBJECT SECTION 2.0	CHEDULED OR UNSCHED TO VIOLATION OF PAN 30 AND ADDENDUM 11.	ULED, WITHIN A AC 8.10.080. RE	TREE PROTECTION ROOT ZONE. NON-COMI FERENCE: PALO ALTO TREE TECHNICAL N	

Special Tree Protection Instruction Sheet City of Palo Alto

TREE PRESERVATION SPECIFICATIONS AND NARRATIVE 4. CONSTRUCTION MONITORING/INSPECTIONS 1. <u>GENERAL</u> 1.1. ALL MEASURES WILL BE REVIEWED AFTER INSTALLATION AND APPROVED BY OWNER AND CITY OF PALO ALTO. REPORTS SHALL DOCUMENT CONDITION OF TREE AND CITY OF PALO ALTO. 1.2. SUBSTITUTIONS OR ALTERNATIVE METHODS OR MATERIALS SHALL BE REVIEWED AND ADDITIONAL CARE. APPROVED BY CITY OF PALO ALTO. MISCELLANEOUS TREE PROTECTION REQUIREMENTS ROTECTION MEASURES MUST BE IN PLACE PRIOR TO COMMENCEMENT OF DEMOLITION, SITE CLEARING OR CONSTRUCTION AND MAINTAINED THROUGHOUT CONSTRUCTION. TREE PROTECTION MEASURES MAY ONLY BE REMOVED WITH CITY MANNER TO MINIMIZE DAMAGE TO TREES, SHRUBS, GROUND COVER, SOIL AND OF PALO ALTO APPROVAL. ROOT SYSTEMS. 1.4. REFER TO THE TREE PROTECTION ACTION KEY (TPAK) FOR SPECIFIC 5.3. MECHANIZED EQUIPMENT SHALL NOT BE PERMITTED TO ENTER ANY TREE RECOMMENDATIONS FOR EACH TREE. PROTECTION AREAS. 2. TREE PROTECTION FENCE 6. <u>CANOPY PRUNING & SUPPORT CABLES</u> 2.1. TYPICALLY, INSTALL AFTER ROOT PRUNING AND PRIOR TO CLEARING & GRADING. 2.2. FENCE SHALL BE 5' OR 6' HIGH CHAIN LINK FENCE FABRIC MOUNTED ON 7', 2"0 GALVANIZED IRON POSTS. CORNER POSTS SHALL BE 2"Ø. FENCE SHALL BE BEST MANAGEMENT PRACTICES. ATTACHED TO POSTS USING ALUMINUM TIES. PLASTIC "ZIP" TIES SHALL NOT BE USED. 2.3. TREE PROTECTION AREA SIGNS SHALL BE AFFIXED TO ALL TREE PROTECTION OF LIMBS TO IMPROVE STRUCTURE. FENCE AT 30' SPACING AVERAGE. SIGNS SHALL BE BILINGUAL (ENGLISH AND 6.3. FOLIAGE REMOVAL SHALL NOT BE MORE THAN 25% OF THE TOTAL LIVE CANOPY SPANISH). SIGNS SHALL NOT BE AFFIXED DIRECTLY TO TREES. SEE DETAIL. INTERIOR BRANCHING EXCEPT AS OTHERWISE STATED. 2.4. SILT FENCE SHALL BE COORDINATED FOR INSTALLATION TO ENHANCE PROTECTION AND AVOID UNNECESSARY ROOT CUTS BY SILT FENCE INSTALLATION. 6.4. PRUNING FOR SPECIFIC CLEARANCE (FOR CONSTRUCTION ACCESS OR PROPOSED 2.5. FENCE MAY BE REMOVED ONLY AFTER ALL CONSTRUCTION AND FINAL LANDSCAPING IS COMPLETE AND WITH CITY OF PALO ALTO APPROVAL. PALO ALTO. 3. <u>ROOT PRUNE</u> 6.5. SUPPORT CABLES SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT ANSI A300 STANDARDS AND ISA BEST MANAGEMENT PRACTICES. 3.1. THE EXACT LOCATION AND DEPTH WILL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING. SPECIFIC EQUIPMENT & METHODS WILL BE DETERMINED BY CITY OF PALO ALTO BASED UPON DEPTH & TREE IMPACT. (SEE DETAIL) 3.2. HAND PRUNE ROOTS OVER 1" DIAMETER WITHIN CRZS OF SIGNIFICANT TREES. STEEP SLOPES, DEEP EXCAVATIONS AND PAVEMENT/CURB REMOVAL WILL BE REVIEWED WHEN OPEN FOR HAND ROOT PRUNING DURING CONSTRUCTION. 3.3. COORDINATE WITH SILT FENCE INSTALLATION TO MINIMIZE UNNECESSARY ROOT DAMAGE. 3.4. ROOT PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST. 3.5. ARBORIST SHALL HAND PRUNE ROOTS EXPOSED DURING EXCAVATION. TREE PROTECTION ACTION KEY (TPAK) DBH Common Name Botar 100 4 at at 23 Southern magnolia Magnolia 20 Southern magnolia Magnoli 23 European hackberry 16 Southern magnolia Magnoli 12 Xylosma Xylosma All other tree-related reports shall be added to the space provided on this sheet (adding as needed) Include this sheet(s) on Project Sheet Index or Legend Page. A copy of T-1 can be downloaded at www.cityofpaloalto.org/arb/forms 1-3

City of Palo Alto Tree Protection - It's Part of the Plan!

Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from ontact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An appoved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree. For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.

- 4.1. A CERTIFIED ARBORIST SHALL MAKE REGULAR MONTHLY INSPECTIONS DURING
- ACTIVE CONSTRUCTION AND DEMOLITION AND PROVIDE REPORTS TO THE OWNER PROTECTION DEVICES AND PROVIDE RECOMMENDATIONS FOR MAINTENANCE AND/O
- MATERIALS SHALL BE STORED WITHIN 100' OF TREE PROTECTION AREAS. ALL WORK IN OR NEAR TREE PROTECTION AREAS SHALL BE PERFORMED IN A
- 6.1. CANOPY PRUNING SHALL BE CLEANING PRUNING AND/OR RESTORATION PRUNING AND SHALL BE IN CONFORMANCE WITH CURRENT ANSI A300 STANDARDS AND ISA
- 6.2. PRUNING SHALL REMOVE ONLY DEAD, DYING, DAMAGED OR BROKEN BRANCHES GREATER THAN 1" IN DIAMETER. PRUNING OF SMALL TREES MAY INCLUDE REMOVAL
- VOLUME OF ANY TREE IN ANY ONE SEASON. PRUNING SHALL NOT REMOVE
- IMPROVEMENTS) SHALL BE REVIEWED AND APPROVED BY THE OWNER AND CITY OF

Matrix Sondition Rating andition Rating andition Rating condition Rating andition Rating and Root Zone Radius in Feet (Palo Alto) and Nulch Mulch Root Prune Type 3 Mulch Root Prune Type 3 conopy Prune anover Condition conopy Prune Type 3 de Protection Fence Type 3 de Status in Feet B de Protection Fence Type 3 de Protection Fence Type 4 de Protec		%			TPZ	SRZ	CRZ				Preser	vatio	n Mea	asures	5				
	nical Name	Condition Rating	Condition Rating	Number of Stems	Tree Protection Zone (radius) in Feet (Palo Alto)	Structural Critical Root Zone (radius) in Feet	Critical Root Zone Radius in Ft (1.5 ft radius/in DBH)	Removal	Tree Protection Fence Type 1	Tree Protection Fence Type 2	Tree Protection Fence Type 3	Mulch	Root Prune	Tree Condition Inspections/Monitoring	Arborist Construction Oversight/Monitoring	Canopy Prune	Comments	Additional Notes	Condition Notes
a grandiflora 56 Fair 1 19 10 35 X X X A hypoxylon canker Stressed, Twig dieback/decline	a grandiflora	56	Fair	1	19	10	35			X		Х		X	X			hypoxylon canker	Stressed, Twig dieback/decline
a grandiflora 53 Fair 1 17 9 30 X X X X S Stressed	a grandiflora	53	Fair	1	17	9	30	-		X		Х		X	X				Stressed
ustralis 48 Poor 1 19 10 35 X X X X X X X Large DW (3"+), Root Damage/Decay, Mechanical Damage	ustralis	48	Poor	1	19	10	35				x	х		x	x	х			Large DW (3"+), Root Damage/Decay, Mechanical Damage
a grandiflora 53 Fair 1 13 7 24 X X X X I Included Bark/Weak Union, Twig dieback/decline	a grandiflora	53	Fair	1	13	7	24				x	х		x	x				Included Bark/Weak Union, Twig dieback/decline
a congestum 55 Fair <u>1</u> 10 5 18 X III	a congestum	55	Fair	1	10	5	18			X									

Special Tree Protection Instruction Sheet City of Palo Alto

DAVEY Resource Gro	oup	Kent, OH 44240 800-828-8312 Local Office 5995 Capistrano Suite A Atascadero, CA 93422 805-461-7500	Tree Inventory & Tre 555 Middlefield I Prepa	ree Protection Plan for Road Palo, Alto, CA ared for
January 12, 2021			Christia Wheatley 755 Page Mill F Palo Alto	an Hansen y Properties Road Suite BT-100 o, CA 94393
Christian Hansen Wheatley Properties 755 Page Mill Road Suite BT-100			Janua	ary 2021
Palo Alto, CA 94304			Prepa	ared by:
RE: Arborist Report and Tree Prote	ection Plan for 555 Middlefield Road, Palo Alto, California		Davey Resou 5995 Capis Atascader	irce Group, Inc. strano Suite A ro, CA 93422
Dear Christian, Thank you for contracting with I	Davey Resource Group regarding the above project. In	support of your objectives.	805-4	461-7500
Davey Resource Group (DRG) is plo A DRG International Society of Ar that may be impacted by constru 12, 2021. The trees were assesse and structural root zones to assi report can be used to make inform	leased to provide you with the attached report for the pla rboriculture (ISA) Certified Arborist conducted the initial action at 555 Middlefield Road on January 15, 2020, and ed for location, size, current condition and overall health, ist with design considerations for tree protection and/or med decisions about construction planning, and long-term	anned project. I site assessment of the trees revisited the site on January , as well as identifying critical r tree removal. The attached n care of the trees.		
The survey determined the follow • Five (5) trees were e • Three (3) distinct s (Magnolia grandiflor • Four (4) of the trees • Four (4) trees were	ving: evaluated. species were identified, European hackberry (<i>Celtis au</i> <i>ra</i>), and xylosma (<i>Xylosma congestum</i>). were in Fair condition and one (1) was in Poor condition. identified as city street trees, which are regulated by th	ustralis), Southern magnolia ne City of Palo Alto Municipal	Notice of Inventory data provided by Davey Resource Group is based on vis not include testing or analysis and do not include aeria responsible for discovery or identification of hidden or accurate after inspection due to variable deteriorati Resource Group provides no warranty with respect t whatsoever or for future out	of Disclaimer isual recording at the time of inspection. Visual records al or subterranean inspection. Davey Resource group is or otherwise non-observable risks. Records may not rem tion of inventoried material and site disturbance. Dave to the fitness of the urban forest for any use or purpose atcomes of the inventoried trees.
Code. The trees are recommeasures. Tree protection fence of the on-site superv	ommended for retention with monitoring during constr ce should be established as noted in the tree protection p vising arborist.	ruction and tree protection		
Sincerely,	ou would like more information or nave any questions.			
Elizabeth Lanham, Project Manage Davey Resource Group, Inc. ISA Certified Arborist WE-9234A	er			
ISA TRAQ Qualified 669-236-7519			555 Middlefield Road Palo, Alto, CA 3	January 202
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Summary

In December 2020, Davey Resource Group (DRG) was contracted by Mr. Christian Hansen of Wheatley Properties to conduct a tree inventory and develop a tree protection plan for trees which may be impacted by future construction at the site in Palo Alto, CA. The request was made to assess the current condition of the trees to serve as a benchmark for future performance.

On January 15, 2020, an International Society of Arboriculture (ISA) Certified Arborist (#MA-5772A), and on January 12, 2021 ISA Certified Arborist #WE-9234A, from Davey Resource Group conducted the evaluation of five (5) trees on site and on the neighboring properties. The trees were assessed by their location, size, current condition, and overall health. This data was used to determine if the trees fall under the definition of protected or regulated as defined by the City of Palo Alto, and then used to calculate the critical root zone (CRZ), and structural root zone (SRZ) of the trees. These calculations will help guide construction options and mitigate potential impacts to the trees.

The condition of the assessed trees was fair to poor condition. Four (4) of these trees are city street regulated trees requiring a tree permit prior to any work on or within the canopy drip-line. This report can be used in the tree permit application process.

Introduction

Background

Wheatley Properties is planning to conduct exterior improvements to their commercial property at 555 Middlefield Road, Palo Alto, CA. The proposed improvements include parking lot resealing, adding ADA compliance features to the parking lot, and a new transformer and waste area within the parking lot. The work to be done may include, grading, digging, and trenching for new wires and infrastructure, use of large construction equipment, and installation of new landscaping. The proposed work for the site is adjacent to the public right-of-way and has the potential to impact the existing three (3) city regulated street trees.

Assignment

This inventory is the first step in assessing which trees are within the project area, but far enough from surface disruption that they are not likely to be impacted. This inventory establishes the quantity and condition of trees and canopies within the project area. The condition of each tree was visually assessed, and the trees were photographed so that change in condition can be assessed if needed. The tree protection plan then analyzes what meets the qualifications of a protected tree per City ordinance, and how design plans may impact the Critical Root Zones (CRZs) and Structural Root Zones (SRZs), as defined later in Methods, of all these trees.

Limits of Assignment

Many factors can limit specific and accurate data when performing evaluations of trees, their conditions, and potential for failure or response to site disturbances. No soil or tissue testing was performed. All observations were made from the ground on January 15, 2020 and January 12, 2021, and no soil excavation to expose roots was performed. The most recent development plans were used to assist in determining potential construction impacts. The determinations and recommendations presented here are based on current data and conditions that existed at the time of the evaluation and cannot be a predictor of the ultimate outcome for the evaluated trees in the future.

Purpose and Use of Report

The purpose of this report is to provide a summary inventory of all trees within the project area of impact, including an assessment of the current condition and health, as well as providing a tree protection plan for all evaluated trees/canopies that may be impacted by development plans. The findings in this report can be used to make informed decisions on construction design planning and be used to guide long-term care of the trees. This report can also be submitted to the City of Palo Alto for permitting purposes.

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555 Middlefield Road Palo, Alto, CA

January 2021

Observations

Methods

A visual inspection was used to develop the findings, conclusions, and recommendations found in this report. For each tree, diameter at breast height (DBH) was collected using the following methods. All trees four (4) inches and greater in diameter at approximately 54 inches above grade were collected. For multi-stemmed trees, the number of stems was noted and the diameter of the largest trunk and one-half (0.5) the cumulative diameter of the remaining trunks were summed for a total DBH.

Data collection also included height estimation, canopy radius estimation, a visual assessment of tree condition, structure, and health. To assign condition, numerical values were assigned to grade the attributes of the roots, trunk, branches, and foliage, including structure and health, and averaged to obtain an overall condition rating. No physical inspection of the upper canopy, sounding, root crown excavation, resistance drilling, or other technologies were used in the evaluation of the trees.

Site Observations

The inventory took place at 555 Middlefield Road, Palo Alto, CA. The street trees are located in planting strips that are approximately 5' wide with no irrigation. Limited vegetation was growing with the trees and rocks were located at the base of Tree 2 (Magnolia grandiflora). It was noted that there had been recent sidewalk repairs beneath the canopy drip lines of the three street trees onsite. Trenching for a new transmission pad and wires would occur under Tree 1 (Magnolia grandiflora). The pathway for all work and construction equipment has the potential to impact all three street trees onsite.

Tree Observations

Five (5) trees were assessed within the project area and three (3) distinct tree species were identified, European hackberry (Celtis australis), Southern magnolia (Magnolia grandiflora) and xylosma (Xylosma congestum). Trees 1 and 2 had pruning wounds with minor decay and reaction growth. Tree 1 exhibited small twig dieback and Tree 2 had water sprouts, both of which are signs of overall stress. Tree 1 was also noted with hypoxylon canker and other lesions. Tree 3 had mechanical damage to the trunk and an upper adjacent branch, which was likely caused by a vehicular accident. Large deadwood greater than 6" in diameter were found in Tree 3. Evidence of large structural root cuts were present on Tree 3. Tree 4 has tip dieback, as well as included bark at the juncture. Tree 5 is in good health, but has some structural issues. Trees 1, 2, 4, and 5 were rated in Fair condition. Tree 3 was rated in Poor condition, primarily due to the severely pruned structural roots and mechanical damage to the trunk and scaffold branches. The tree diameters ranged from 20" to 23" with an average of 22". Tree heights ranged from approximately 20 to 30' with an average of 25'. Canopy spread ranged from 32' to 38' with an average spread of 35'. The trees were of mature age.

A complete Tree Inventory and Condition Assessment can be found in Appendix A.

Analysis and Discussion

Preliminary designs were provided and reviewed for this Arborist Report. Potentially, all trees are subject to impacts from site development and it was determined that the trees should be retained and protected from construction activities. Tree preservation guidelines will need to be followed to minimize impacts and enhance tree longevity of the trees.

The diameters of the surveyed trees are used to determine the potential critical root zone (CRZ) of each tree. The CRZ can be calculated using the Palo Alto tree protection zone measure by multiplying the DBH by 10x. For instance, a tree with a DBH of 12 inches has a calculated CRZ of 10 feet radially in any direction. This distance may extend beyond the tree canopy drip line and is normally considered the tree protection zone (TPZ). The City of Palo Alto's Street Tree

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555 Middlefield Road Palo, Alto, CA

January 2021

Protection Specifications states that the greater. Most of the assessed trees we For the neighboring trees, Type III show Like the CRZ, the structural root zone Kim Coder in <i>Construction Damage A</i> roots, zone of rapid taper area, and	ne ere ıld
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considered as a minimum distance catastrophic tree failure exists if structu	sse d ro th ura
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This report is the first step in preservi development. Trees and green spaces with a basic understanding of the heal have been selected for preservation	ng pro th
workers before any land disturbance. Tree Protection fencing should be inst long-term viability of trees and stands minimum required tree protection fo Alto's Street Tree Protection Specificati	alle id rtl
tree or 10 feet, whichever is greater. followed for this project. To reduce follows:	Ty imi
 Trees 1-3 shall be protected by 2' into the ground and space protection fencing (straw wath Warning signs must be placed Zone - This fence shall not be 	d n tle, d o rer
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 All neighboring trees to the pr All equipment shall be restrict to avoid soil compaction. If impacts occur to the trees w 	vith
 additional monitoring or tree Large deadwood greater than hazards to any workers or equ Additional tree preservation n 	rer 4 i lipr
¹ Dr. Kim D. Coder University of Georgi	a li
¹ Dr. Kim D. Coder, University of Georgi 555 Middlefield Road Palo, Alto, CA Appendix A – Tree Inve	nt
¹ Dr. Kim D. Coder, University of Georgi 555 Middlefield Road Palo, Alto, CA Appendix A – Tree Inver Table 1.	nt Tr
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¹ Dr. Kim D. Coder, University of Georgi 555 Middlefield Road Palo, Alto, CA Appendix A – Tree Inver Table 1. Tree Number DBH (inches) Comm 1 23 Souther 2 20 Souther 3 23 Europear 4 16 Souther 5 12 Xy	n t n n n n n n osr
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the tree protection fencing must be installed at the TPZ or 10 feet, whichever is ere situated in planting strips and so Tree Protection Type II should be followed. Id be used.

(SRZ) was also calculated using a commonly accepted method established by Dr. Assessments: Trees and Sites.¹ In this method, the root plate size (i.e. pedestal d roots under compression) and limit of disruption based upon tree DBH is that any disruption should occur during construction. Significant risk of ural roots within this given radius are destroyed or severely damaged. The SRZ is occur without arborist supervision.

nendations

ng the forest aesthetic, health, function, and value on the site during and after provide benefits and add value to residents and visitors. Tree preservation starts th and structure of the trees on the site. The importance of protecting trees that should be clearly communicated to contractors, equipment operators, and

alled **prior to any site impacts and retained throughout construction.** To ensure identified for protection, construction activities shall comply with the following those trees determined to remain on the site. According to the City of Palo ons, the radius of the tree protection zone (TPZ) be 10 times the diameter of the Type II Tree Protection guidelines outlined by the City of Palo Alto should be mpacts, recommendations are based on the local ordinance requirements as

on zones shall be supervised by a Certified Arborist and photo documented. by 6' high chain link fencing mounted on 2" galvanized iron posts driven at least d no more than 10' apart. Trees 4-5 can be protected with modified type 3 tree tle, 2x4s, and orange fencing wrapped around the trunk of the tree) d on the fencing at no more than 20' spacing with "WARNING - Tree Protection removed and is subject to a fine according to PAMC Section 8.10.110." cted within the TPZ on non-paved surfaces, fence the area of the TPZ outside the ement to avoid soil compaction. quipment will be used within 5' of a tree trunk.

of the tree to be retained shall be supervised by a Certified Arborist. oject site should also be protected from any impact.

ted to paved areas within the TPZ and not enter any soil, gravel or mulched area within the structural and critical root zones, the Arborist may recommend removal to mitigate hazards.

Findwar to finitigate nazards. I inches in diameter should be removed prior to any work to avoid safety pment.

otes can be found in the attached tree protection plan.

July 1996 7 January 2021

January 2021

ntory and Condition Assessment

Tree Inventory updated January 2021

n Name	Species Name	Condition	SRZ (feet)	CRZ (feet)
magnolia	Magnolia grandiflora	Fair	10	19
magnolia	Magnolia grandiflora	Fair	9	17
hackberry	Celtis australis	Poor	10	19
magnolia	Magnolia grandiflora	Fair	7	13
sma	Xylosma congestum	Fair	5	10

ition Assessment updated January 2021

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Frunk Iealth	Trunk Structure	Scaffold Health	Scaffold Structure	Twigs	Foliage	Condition
2	2.5	2	2	2.5	3	Fair
2.5	2.5	2	2	2	3	Fair
2	2	1.5	2	2.5	3	Poor
2.5	2.5	2	2	2	3	Fair
2.5	1.5	2.5	1.5	2.5	3	Fair

Appendix B – Photo

Photo 1. Tree #1 Magnolia grandiflora.

Photo 2. Tree 1 with cankers and lesions on trunk and branches.

January 2021 555 Middlefield Road Palo, Alto, CA 10 January 2021

er tree-related reports shall be added to the space provided on this sheet (adding as needed) this sheet(s) on Project Sheet Index or Legend Page. of T-1 can be downloaded at www.cityofpaloalto.org/arb/forms

Special Tree Protection Instruction Sheet City of Palo Alto

Special Tree Protection Instruction Sheet City of Palo Alto

	GENERAL CONSTRUC
1.	CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND F SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
2.	THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICE THIS CONTRACT WORK.
3.	CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING A THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL A CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN INFORM TRADES WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR C
4.	CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSO INSURANCE COVERAGE AS NECESSARY FOR LIABILITY AND PERSO
5.	PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJE TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONC
6.	ACCURATE "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITEC
7.	CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION
8.	CONTRACTOR SHALL PROVIDE ALL REQUIRED "CUTTING, PATCHING NECESSARY TO RESTORE DAMAGED SURFACES TO EQUAL OR BET AT START OF WORK
9.	CONTRACTOR SHALL BE RESPONSIBLE FOR PAINTING ALL EXPOSE REFER TO ARCHITECTS PAINTING SECTION FOR REQUIREMENTS.
10.	ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WE INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED A ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTH
11.	ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR RC SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRE
12.	ALL BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. SHARE NOT ALLOWED.
13.	ALL 120/277V LIGHT SWITCHES AND WALL OCCUPANT SENSORS SH DEVICE BOX EXCEPT WHERE A CONDUIT OR SURFACE RACEWAY S
14.	COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PACONFLICTS.
15.	SEE ARCHITECTURAL DOCUMENTS FOR EXACT PLACEMENT OF LIG ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICA ARCHITECTURAL DOCUMENTS AND PROVIDE AND INSTALL ALL REC PROVIDE AND INSTALL U.L. LISTED FIRE STOP ENCLOSURES FOR A CEILINGS.
16.	FROM ALL NEW FLUSH MOUNT PANELS; THE CONTRACTOR SHALL S A MINIMUM OF FOUR (4) 3/4" CONDUITS FOR FUTURE USE.
17.	CONTRACTOR SHALL, PRIOR TO BID, FIELD VERIFY ALL REQUIREME DATA, AND INTERCOM SYSTEMS TO ACCOMMODATE ADDITIONS NO ALL MATERIALS NEEDED TO MAKE A FULLY OPERATIONAL SYSTEM
18.	CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A D
19.	ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. CUT AND F NECESSARY. WHERE IT IS NECESSARY TO CUT OR BORE EXISTING WORK OBTAIN PERMISSION FROM THE ARCHITECT PRIOR TO STAR WHERE POSSIBLE.
20.	WHERE IT IS NOT POSSIBLE TO REUSE EXISTING CONDUIT OR RUN NON-METALLIC SURFACE RACEWAY AND BOXES. ROUTING OF ALL APPROVED BY THE ARCHITECT OR OWNER'S REPRESENTATIVE PR
21.	EXTENSION RINGS OR RESET BOXES TO BE FLUSH WITH NEW WAL
22.	CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXIST WATER, TELEPHONE, ELECTRICAL, SEWER, ETC.). THE CONTRACTO DAMAGE TO EXISTING UNDERGROUND SYSTEMS AS A RESULT OF I UNDERGROUND SYSTEMS SHALL BE TO THE OWNERS SATISFACTI OWNER.
23.	EXISTING WIRING SHOWN HAS BEEN TAKEN FROM OLD PLANS AND CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND MAK CONDITIONS AND TO MEET THE INTENT OF THE CONTRACT DOCUM
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24.	WILL BE PERMITTED ON A CASE-BY-CASE BASIS ONLY BY WRITTEN
24. 25.	WILL BE PERMITTED ON A CASE-BY-CASE BASIS ONLY BY WRITTEN ALL INSTALLATION OF EXPOSED SURFACE MOUNTED RACEWAY IN [ARCHITECT] [ELECTRICAL ENGINEER] BEFORE ROUGH-IN. CONTR/ ACCESSIBILITY OF ATTIC, FURRED SPACE, HOLLOW MULLIONS, ET [ARCHITECT] [ELECTRICAL ENGINEER]. IF SYSTEM CAN BE ROUTED ACCESSIBILITY, CONTRACTOR IS TO DO SO. IF INACCESSIBILITY IS INSTALL SURFACE MOUNTED RACEWAY IN THE MOST AESTHETICA THE [ARCHITECT] [ELECTRICAL ENGINEER]. NO ALLOWANCE FOR A ROUTING AS DIRECTED BY THE [ARCHITECT] [ELECTRICAL ENGINEER]
24. 25. 26.	WILL BE PERMITTED ON A CASE-BY-CASE BASIS ONLY BY WRITTEN ALL INSTALLATION OF EXPOSED SURFACE MOUNTED RACEWAY IN [ARCHITECT] [ELECTRICAL ENGINEER] BEFORE ROUGH-IN. CONTR/ ACCESSIBILITY OF ATTIC, FURRED SPACE, HOLLOW MULLIONS, ET [ARCHITECT] [ELECTRICAL ENGINEER]. IF SYSTEM CAN BE ROUTED ACCESSIBILITY, CONTRACTOR IS TO DO SO. IF INACCESSIBILITY IS INSTALL SURFACE MOUNTED RACEWAY IN THE MOST AESTHETICA THE [ARCHITECT] [ELECTRICAL ENGINEER]. NO ALLOWANCE FOR A ROUTING AS DIRECTED BY THE [ARCHITECT] [ELECTRICAL ENGINEI CONTRACTOR SHALL COORDINATE WITH CITY OF PALO ALTO ENER CONSTRUCTION POWER & TELEPHONE.

TION NOTES

REGULATIONS. MATERIALS AND EQUIPMENT

ENSES AND INSPECTION FEES REQUIRED BY

AND ALLOW FOR ALL FIELD CONDITIONS. WORK NOTED AND CALLED OUT ON ALL MATION AND BE FAMILIAR WITH ALL OTHER OORDINATION BETWEEN OTHER TRADES

ONS AND PROPERTY AND SHALL PROVIDE NAL, PROPERTY DAMAGE, TO FULLY ALL CLAIMS RESULTING FROM THIS WORK. ECT SITE INDICATING ALL MODIFICATIONS LUSION OF THE PROJECT PROVIDE

CONTRACTOR SHALL BE RESPONSIBLE TO A COMPLETE INSTALLATION. ON SCHEDULE OF ELECTRICAL WORK. THE STONES WITH COMPLETION DATES.

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D CONDUITS AND ELECTRICAL EQUIPMENT.

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- D NEUTRALS ON MULTIWIRE CIRCUITS IS ALL HAVE A NEUTRAL INSTALLED TO THE
- YSTEM IS INSTALLED. ANELS WITH ALL OTHER WORK TO AVOID

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ENTS FOR MODIFYING THE EXISTING CLOCK, TED. THE CONTRACTOR SHALL PROVIDE AT THE CONCLUSION OF PROJECT WORK.

RAW STRING FOR USE IN FUTURE

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NEW CONCEALED CONDUIT USE NON-METALLIC RACEWAYS SHALL BE IOR TO ROUGH-IN.

THICKNESS.

ING UNDERGROUND SYSTEMS (GAS, OR SHALL REPAIR & PAY ALL EXPENSES FOR NEW WORK. REPAIR TO DAMAGED ON WITHOUT EXTRA EXPENSE TO THE

IS ASSUMED TO BE CORRECT. ELECTRICAL E ADJUSTMENTS TO SUIT ACTUAL IENTS.

CONTRACTOR SHALL REMOVE TO PLACE WITH CONDUIT. METAL CLAD CABLE APPROVAL FROM THE ARCHITECT.

PUBLIC AREAS SHALL BE REVIEWED BY ACTOR IS TO DETERMINE THE C. IN EACH AREA AND REVIEW WITH CONCEALED EITHER BY FISHING OR DETERMINED, CONTRACTOR SHALL LLY PLEASING MEANS AS DETERMINED BY DDITIONAL COMPENSATION DUE TO

ER] WILL BE MADE. RGY & PAY ALL CHARGES FOR TEMPORARY

OBTAIN UTILITY COMPANY CONSTRUCTION

0	FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
	EMERGENCY OR NIGHT LIGHT
⊢-o	STRIP FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
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\rightarrow	RECESSED WALL WASHER
0	LUMINAIRE - SURFACE MOUNTED - SEE SCHEDULE
•••	LUMINAIRE - POLE OR POST MOUNTED - SEE SCHEDULE
ю	LUMINAIRE - WALL MOUNTED SEE SCHEDULE
-•	BOLLARD OR PATH LIGHT - SEE SCHEDULE
$\overrightarrow{\otimes}$	EXIT LIGHT - DIRECTIONAL ARROWS AS INDICATED - SEE SCHEDULE
<u> </u>	TRACK LIGHTING - SEE SCHEDULE
	EMERGENCY LIGHT
	DIGITAL DUAL TECHNOLOGY OCC. SENSOR
\triangleleft -	LIGHTING CONTROL OCCUPANCY SENSOR CORNER MOUNTED
DRC	DIMMER ROOM CONTROLLER
PC	PLUG LOAD CONTROLLER
RC	ROOM LIGHTING CONTROLLER
LCP	LIGHTING CONTROL PANEL
	DIGITAL DAYLIGHT SENSOR
\$	SINGLE POLE SWITCH **
\$ a	SINGLE POLE SWITCH, ** a = CIRCUIT CONTROLLED
\$ 3	THREE WAY SWITCH**
\$ 4	FOUR WAY SWITCH**
\$ M	MANUAL MOTOR STARTER
\$ к	KEY OPERATED SWITCH **
\$	LIGHTING DIMMER **
\$	DIGITAL ON/OFF SWITCH **
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\$	WALL OCCUPANCY SENSOR **
\$ 2	DOUBLE SWITCHED WALL OCCUPANCY SENSOR **
	DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR **
() ₂	2-BUTTON DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR **

SECURITY DOOR CONTACTS HMD-> SECURITY MOTION DETECTOR HSC⊲ CCTV CAMERA **H** KP SECURITY SYSTEM KEYPAD Η• DOOR BELL PUSHBUTTON СН DOOR CHIME WITH LED RECEPTACLE - DUPLEX * DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER -FIELD VERIFY HEIGHT GFCI CONVENIENCE RECEPTACLE - DUPLEX* GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT RECEPTACLE DOUBLE DUPLEX * HALF SWITCHED DUPLEX RECEPTACLE * SINGLE RECEPTACLE* DUPLEX RECEPTACLE - CEILING MOUNTED LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE * Φ LETTER INDICATES DUPLEX FULLY CONTROLLED RECEPTACLE * \odot FLOOR MOUNTED DUPLEX RECEPTACLE \mathbf{O} FLOOR MOUNTED BOX POWER OUTLET - SEE PLANS FOR NEMA TYPE* POWER POLE ∇ WALL TELEPHONE OUTLET ** VOICE/DATA WALL OUTLET * **T**^[#] VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT SURFACE MOUNTED VOICE/DATA WALL OUTLET * SURFACE MOUNTED VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT WIRELESS ACCESS POINT (WAP) -CEILING MOUNTED WIRELESS ACCESS POINT (WAP) -WALL MOUNTED - FIELD VERIFY HEIGHT VOICE/DATA OUTLET - FLOOR MOUNTED TV OUTLET * VOICE/DATA OUTLET - CEILING MOUNTED (\mathbb{S}) INTERIOR SPEAKERS CEILING MOUNTED ЮS INTERIOR SPEAKERS WALL MOUNTED Ю CLOCK +8'-0" AFF U.O.N. VERIFY BEFORE INSTALLATION

APPLICABLE CODES & STANDARDS

CODES:

- 1. 2019 CALIFORNIA ADMINISTRATIVE CODE C.C.R., TITLE 24, PART 1.
- 2019 CALIFORNIA BUILDING CODE (CBC) C.C.R., TITLE 24, VOL. 1 & 2 BASED ON THE
- 2018 INTERNATIONAL BUILDING CODE (IBC) WITH CALIFORNIA AMENDMENTS. 3. 2019 CALIFORNIA ELECTRICAL CODE (CEC) C.C.R., TITLE 24, PART 3 BASED ON THE
- 2017 NATIONAL ELECTRICAL CODE (NEC) WITH CALIFORNIA AMENDMENTS.
- 4. 2019 CALIFORNIA MECHANICAL CODE (CMC) C.C.R., TITLE 24, PART 4 BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) WITH CALIFORNIA AMENDMENTS.
- 2019 CALIFORNIA PLUMBING CODE (CPC) C.C.R., TITLE 24, PART 5 BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC) WITH CALIFORNIA AMENDMENTS.
- 6. 2019 CALIFORNIA ENERGY CODE C.C.R., TITLE 24, PART 6.
- 7. 2019 CALIFORNIA FIRE CODE (CFC) C.C.R., TITLE 24, PART 9 BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC) WITH CALIFORNIA AMENDMENTS.
- 8. 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE C.C.R., TITLE 24, PART 11.
- 9. 2019 CALIFORNIA REFERENCED STANDARDS CODE C.C.R., TITLE 24, PART 12.
- 10. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
- 11. NATIONAL FIRE ALARM CODE (NFPA 72) 2016.
- 12. CITY OF PALO ALTO ORDINANCES, CODES AND REGULATIONS.

STANDARDS:

- AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
- 2. ELECTRONICS INDUSTRIES ASSOCIATION (EIA)
- 3. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
- 4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
- 5. NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
- 6. UNDERWRITER LABORATORIES (UL)
- 7. CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL/OSHA)

SYMBOLS & ABBREVIATIONS SHOWN

ELECTRICAL SYMBOLS & ABBREVIATIONS

N ARE FOR G	ENERAL USE. DISREGARD THOSE WHICH DO NOT A	PPEAR ON	N THE PLANS.				
	PANELBOARD - FLUSH MOUNTED	2-0	DETAIL NOTE REFERENCE S SEE ASSOCIATED NOTE ON	SYMBOL SAME DETA		IL NUMBER	ON REFERENCE
/	EQUIPMENT PANEL - FLUSH MOUNTED				E3.0 K SHEE	T NUMBER	
	PANELBOARD - SURFACE MOUNTED	F301	FEEDER DESIGNATION;			ATES QUAN	TITY OF TELEPHONE OUTLETS
	EQUIPMENT PANEL - SURFACE MOUNTED	1001	SEE ASSOCIATED NOTE ON	SAME DETA	AIL $\begin{pmatrix} 1 \\ 2 \end{pmatrix}$		
M-3	METER W/ CURRENT TRANSFORMER	ABBRI	EVIATIONS		INDIC	ATES QUAN	TITY OF DATA OUTLETS
⊙/Ю	JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CODE, TAPE AND TAG WIRES	A		GFCI	GROUND FAULT	NTS	NOT TO SCALE
Ŋ	MOTOR CONNECTION	AFF ALUM/AL	ABOVE FINISHED FLOOR ALUMINUM	GND, G	GROUND	OC	OVERALL HEIGHT ON CENTER
C	NON-FUSED DISCONNECT SWITCH	ARCH AWG	ARCHITECT AMERICAN WIRE	GRS	GALVANIZED RIGID STEEL	OH PA	OVERHEAD PUBLIC ADDRESS
Ľ	FUSED DISCONNECT SWITCH; FUSED WITH DUAL-ELEMENT FUSES SIZED PER EQUIPMENT MFGR'S NAMEPLATE DATA	BKR C CATV	GAUGE BREAKER CONDUIT CABLE TV	HT IC IDF	HEIGHT INTERCOM INTERMEDIATE DISTRIBUTION FRAME	PB PF PH PIR	PULL BOX POWER FACTOR PHASE PASSIVE INERARED
⊠ r	COMBINATION STARTER/FUSED DISCONNECT SWITCH; FUSED DISCONNECT SWITCH ELEMENT FUSES SIZED PER EQUIPMENT MFGRS NAMEPLATE DATA	CB CCTV CKT CL	CIRCUIT BREAKER CLOSED CIRCUIT TV CIRCUIT CENTER LINE	INCAND JB KV KVA	INCANDESCENT JUNCTION BOX KILOVOLT KILOVOLT AMPERES	PNL PV PVC	PANEL PHOTOVOLTAIC POLYVINYL CHLORIDE
\boxtimes	MAGNETIC STARTER - NEMA SIZE INDICATED NEMA 3R ENCLOSURE UNLESS OTHERWISE SPECIFIED	CLG C.O. CTR	CEILING CONDUIT ONLY CENTER	KW LCP	KILOWATT LIGHTING CONTROL PANEL	PWR (R) (RP)	POWER EXISTING TO BE REMOVED REMOVABLE POLE
	CIRCUIT BREAKER	D	DIMMER	LTG		RECPT'S	RECEPTACLES
● – ।·	GROUND ROD WITH GROUNDWELL BOX	DIST	DISTRIBUTION	KCM		REQMT'S	REQUIREMENT(S)
• I+	GROUND ELECTRODE	(E) EC	EXISTING ELECTRICAL CONTRACTOR	M.B.	MAIN CIRCUIT BREAKER	SLD	SINGLE LINE DIAGRAM
	NORMALLY OPEN CONTACT	(EL)	EVENING LIGHT	MCA	MINIMUM CIRCUIT AMPS	510	CABINET
_//	NORMALLY CLOSED CONTACT	EMT	ELECTRICAL METALLIC TUBING	MDF MECH	MAIN DISTRIBUTION FRAME MECHANICAL	SW SWBD	SWITCH SWITCHBOARD
\boxtimes	TRANSFORMER - SEE SINGLE LINE FOR SIZE	EQUIP		MH MLO	METAL HALIDE MAIN LUGS ONLY	TVP	BACKBOARD
	PULLBOX	EV FA FACP	FIRE ALARM	MPOE MTD MTG	MAIN POINT OF ENTRANCE MOUNTED MOUNTING	UON UG	UNLESS OTHERWISE NOTED
\sim	FLEX CONDUIT WITH CONNECTION	FC	CONTROL PANEL FOOT CANDLE	MOCP	MAXIMUM OVER CURRENT PROTECTION	V VD W	VOLT VOLTAGE DROP WATT
o	CONDUIT - UP	FIN FL	FINISH FLOOR			W/	WITH
o	CONDUIT - DOWN	FLA FLUOR	FULL LOAD AMPS FLUORESCENT	NIEC	NOT IN ELECTRICAL CONTRACT	WP XFMR	TRANSFORMER
— E —	CONDUIT EMERGENCY SYSTEM	(F) GC	GENERAL CONTRACTOR	(NL) NO. NOM	NIGHT LIGHT NUMBER NOMINAL		
<u> </u>	LOW VOLTAGE WIRING			Nom			
///////	SURFACE METAL OR NON-METALLIC RACEWAY						
	CONDUIT - CONCEALED IN WALLS OR CEILING						
	CONDUIT - EXISTING						
	CONDUIT - BELOW SLAB OR UNDERGROUND: 3/4"MIN.						
E	CAPPED OR STUB-OUT CONDUIT						
<u>ب</u>	CONDUIT CONTINUATION						
#10	CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES WHEN MORE THAN TWO. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. CROSS HATCHES WITH NUMBER ADJACENT INDICATES WIRE SIZE OTHER THAN #12 AWG.						
$\left\langle 2\right\rangle$	SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET				*	+15" A.F.F. +48" A.F.F.	TO BOTTOM OF BOX, U.O.N. TO TOP OF BOX, U.O.N.

SHEET INDEX

E0.1 SYMBOLS, ABBREVIATIONS, CODES, STANDARDS, NOTES

SCHEDULE SYMBOL; SEE ASSOCIATED

NOTE ON SAME SHEET

········//

lo. E21043 EXP. 3/31/23 AURUM CONSULTING ENGINEERS MONTEREY BAY, INC. Project No. 20-512.00 60 Garden Court • Suite 210 • Monterey, CA 93940 T.831.646.3330 • F.831.646.3336 • www.acemb.com

Voltage: 20/208V,3ø Wire: 4W Type: NEMA Mains: 000/3			1 2] DIS	ST. S	SWE	3D D	SB				Bussing:I OOOAFeed:TOPMounting:SURFACEA.I.C.65,000
Load	A	В	С	Bkr	Ck	abc	Ck	Bkr	А	В	С	Load
HOUSE PANEL "HP"					1	++	2					PANEL "AC"
HOUSE PANEL "HP"				150/3	3		4	225/3				PANEL "AC"
HOUSE PANEL "HP"					5	│ ├ ┼ ┿	6					PANEL "AC"
EXISTING DISCONNECT "A"					7		8					EXISTING DISCONNECT "B"
EXISTING DISCONNECT "A"				30/3	9	└├┿┤	10	30/3				EXISTING DISCONNECT "B"
EXISTING DISCONNECT "A"					11		12					EXISTING DISCONNECT "B"
EXISTING DISCONNECT "C"					13		14					EXISTING DISCONNECT "D"
EXISTING DISCONNECT "C"				30/3	15		16	30/3				EXISTING DISCONNECT "D"
EXISTING DISCONNECT "C"					17		18					EXISTING DISCONNECT "D"
SPACE ONLY				-	19	•	20	-				SPACE ONLY
SPACE ONLY				-	21		22	-				SPACE ONLY
SPACE ONLY				-	23	╽┝┼┿	24	-				SPACE ONLY
SPACE ONLY				-	25	++	26	-				SPACE ONLY
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SPACE ONLY				-	29	╽┝┼┿	30	-				SPACE ONLY
SPACE ONLY				-	31	+	32	-				SPACE ONLY
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SPACE ONLY				-	35	╽┝┼┿	36	-				SPACE ONLY
SPACE ONLY				-	37	•	38	-				SPACE ONLY
SPACE ONLY				-	39		40	-				SPACE ONLY
SPACE ONLY				-	41	╽┝┼┿	42	-				SPACE ONLY
	0	0	0						0	0	0	
(VA Phase A 0.0	1 SUBMITTAL S 2 LABEL PANEL	HALL MATCH FOR SHORT	H EXACT BREA CIRCUIT AM	AKER LOO PS AVAIL	CATIC _ABLE	NS SI PER (HOWN CEC I	10-24.				Total Comparts J Loo J KVA

CONCRETE TRANSFORMER PAD DETAIL

NOT THREE PHASE 75 KVA TRANSFORMERS.

TRANSFORMER		PAD DIMENSIONS, INCHES											
KVA	LBS(APROX)	A	В	С	D	E	F	G	H**	**ل	S**	T**	
* 25-75 1Ø	2500	12	30	54	60	10	15	35	12	6	12	6	
75-112.5	3000-4500	20	40	80	74	15	20	39	12	6	12	10	
150-500	4000-6500	20	48	88	74	15	20	39	12	6	12	10	
750-1000	9000-11000	26	48	100	100	15	24	61	15	9	6	10	
1500	13000	26	56	108	114	15	24	75	15	9	4	10	
2000-2500	20000	29	56	114	120	15	24	81	15	9	4	10	

DETAILS.

19.

20.

CONTACT CPAU ENGINEERING OR UNDERGROUND INSPECTOR FOR GUARD POST PLACEMENT

1. DISTURBED EARTH UNDER THE PAD SHALL BE REPLACED BY SAND OR OTHER SUITABLE MATERIAL

2. PLACE 6" DEPTH ONE SACK, PER CUBIC YARD, SLURRY IMMEDIATELY BELOW THE PAD.

3. CONCRETE IS REQUIRED BETWEEN ALL CONDUITS, LEVEL TO TOP OF THE PAD.

CONCRETE SHALL BE DESIGNED TO ATTAIN A STRENGTH OF 3000 PSI IN 28 DAYS.

7. EXPOSED HORIZONTAL SURFACES ARE TO BE SLOPED SLIGHTLY FOR DRAINAGE.

8. A MINIMUM OF 6 FEET SHALL BE MAINTAINED BETWEEN GROUND RODS.

10. CONTACT CPAU FOR APPROVED PRE-CAST TRANSFORMER PADS.

COMPACTED GRAVEL ALONG ALL EDGES.

STRUCTURE SHALL BE PROVIDED (SEE NOTE 22).

5. AFTER PLACING, MOIST CURE CONCRETE FOR 7 DAYS BEFORE PLACING EQUIPMENT.

INSPECTOR FOR THE TYPE, NUMBER REQUIRED, AND LOCATION OF BARRIERS.

6. WOOD FLOAT FINISH TOP OF SLAB. ALL EDGES AND CORNERS ARE TO BE FINISHED SMOOTH.

COMPACTED TO 95% OF MAXIMUM DRY DENSITY (ASTM D-1557). COMPACTION TEST RESULTS SHALL BE

11. PADS NOT SECURED IN PLACE BY CONCRETE OR ASPHALT SHALL HAVE A 2' WIDE BY 6" DEEP STRIP OF 90%

13. IF THE TRANSFORMER IS TO BE LOCATED IN AN AREA SUBJECTED TO VEHICULAR TRAFFIC, BARRIERS SHALL

BE PROVIDED IN ACCORDANCE WITH DETAIL 1 OR 2 ON SHEET 3. CONTACT CPAU ENGINEERING OR UG

12. A MINIMUM OF 3 FEET OF RADIAL CLEARANCE BETWEEN THE TRANSFORMER PAD AND ANY OTHER

#2 Str. Bare Cu Win

(Okay to run under pad, if necessary)

Conduit Window

Leave one foot loop above grade.

FRONT

- 5 -

TRANSFORMER GUARD POSTS

NO SCALE

3

CONFLICTS.

NO SCALE

NOTES

9. CAP ALL CONDUITS.

Ground Rod

SEE NOTE

18

CORNER BAR

(Below Grade)

PROVIDED TO THE CPAU INSPECTOR.

LOCATIONS DETAIL.

- ** REQUIREMENT FOR PADS POURED IN PLACE

- THIS PAD SHOULD BE USED FOR SINGLE PHASE 75 KVA TRANSFORMERS,

Leave a six foot tail

above grade.

1. DIRECT BURIED PRIMARY CONDUIT IS NOT AN APPROVED CONSTRUCTION METHOD. PRIMARY CONDUITS SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE APPROVED BY UTILITIES ENGINEER. 2. JOINT TRENCH WITH NATURAL GAS OR PRIVATE STREETLIGHT SYSTEMS IS NOT ALLOWED UNLESS APPROVED BY CITY OF PALO ALTO UTILITIES ELECTRIC AND WATER, GAS, WASTEWATER ENGINEERING DEPARTMENTS.

TYPE "DB 60" (SECONDARY) OR "DB 120" (PRIMARY) PLASTIC CONDUIT c. HOT DIPPED GALVANIZED RIGID STEEL CONDUIT.

4. EVERY EFFORT MUST BE MADE TO OBTAIN A STRAIGHT WATER-TIGHT CONDUIT LINE TRUE TO THE CENTER LINE OF THE TRENCH. 5. SHARP TURNS MUST BE AVOIDED. UNLESS APPROVED BY THE CITY OF PALO ALTO UTILITIES ELECTRICAL ENGINEER, FACTORY OFFSETS SHALL NOT BE USE. ALLOWABLE BEND RADIUS:

ZE	MINIMUM BEND RADIUS
	24 inches
	36 inches
	36 inches
1	60 inches
	36 inches

THE ELECTRIC UNDERGROUND INSPECTOR.

6. NO MORE THAN 2-90" BENDS (180") IN PRIMARY OR 3-90" (270") IN SECONDARY CONDUIT RUNS. ALL BENDS AND SWEEPS (90°) MUST BE ENCASED IN CONCRETE (MINIMUM 3") ALONG THE INSIDE RADIUS. 7. IF THE ELECTRIC UNDERGROUND INSPECTOR DETERMINES THAT THE BOTTOM OF THE TRENCH IS ROCKY, A 2" SAND BEDDING MUST BE INSTALLED BEFORE THE CONDUIT.

8. BACKFILL IN UNIMPROVED AREAS. 12" OF CLEAN NATURAL SAND PER CALTRANS STD SPECS SEC 19-3.025B ON TOP OF THE UPPERMOST CONDUIT, 90% COMPACTION; TOPPED WITH EXCAVATED NATIVE SOIL, 85% COMPACTION.

9. BACKFILL IN IMPROVED AREAS (STREETS, SIDEWALKS, DRIVEWAYS, ETC. OF ASPHALT OR CONCRETE) THE BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH THE CITY OF PALO ALTO PUBLIC WORKS DEPARTMENT STANDARD DRAWING NO. 401, TRENCHES - TYPICAL CROSS-SECTIONS. 10. ALL CONDUITS MUST BE MANDRELLED (STD. DWG DT-SS-U-1025). THIS TEST MUST BE WITNESSED BY

- 11. A 3/8" POLYPROPYLENE PULL LINE (MIN. 150 LBS. TEST) MUST BE INSTALLED IN EACH CONDUIT. 12. CONDUIT SPACING SHALL BE MAINTAINED BY SPACERS, APPROVED BY THE CITY OF PALO ALTO, INSTALLED
- NO MORE THAN 7 FEET APART. CONDUITS MUST BE SECURELY BOUND TO THE SPACERS. 13. MINIMUM COVER FOR DIRECT BURIED CONDUIT:
- a. SECONDARY (NON TRAFFIC) . COMMUNICATION (NON TRAFFIC) . SECONDARY (TRAFFIC) d. COMMUNICATION (TRAFFIC)
- 14. MINIMUM CLEARANCE OF ELECTRIC LINES FROM OTHER UTILITY LINES: a. VERTICAL CLEARANCE FROM CROSSING UTILITY LINES b. HORIZONTAL CLEARANCE FROM NATURAL GAS LINES
- c. HORIZONTAL CLEARANCE FROM WATER/WASTEWATER LINES 15. HORIZONTAL SPACING BETWEEN JOINTLY INSTALLED SECONDARY, COMMUNICATION, TELEPHONE, AND STREETLIGHTING CABLES OR CONDUIT MAY BE RANDOM UNLESS OTHERWISE SPECIFIED. THERE SHALL BE A MINIMUM OF 1" CLEARANCE AROUND ALL CONDUITS AT GROUND LEVEL.
- 16. JOINT TRENCH WITH GAS IS ONLY ALLOWED FOR RESIDENTIAL SERVICES AND WITH THE APPROVAL OF BOTH UTILITIES ELECTRIC AND WGW ENGINEERING. REFER TO CPAU WGW DRAWING NUMBER WGW-02
- FOR ADDITIONAL DETAILS. 17. THE CONCRETE SHALL BE READY-MIXED, CLASS B PORTLAND CEMENT CONCRETE, CONTAINING 3
- SACKS OF CEMENT PER CUBIC YARD AND 3/4" AGGREGATE. THE CONCRETE SHALL BE COLORED RED BY THE ADDITION OF 5 POUNDS OF RED OXIDE PIGMENT PER CUBIC YARD OF CONCRETE MIX. COLOR WILL BE TO THE SATISFACTION OF THE ELECTRIC UNDERGROUND INSPECTOR. 18. DURING CONCRETING, THE DUCTS SHALL BE HELD SECURELY IN PLACE WITH STAKES, PLASTIC
- POURED. 19. BENDS IN DUCT LINES SHALL BE OF MAXIMUM PRACTICAL RADIUS.

- CONCRETE

SEE NOTE 1

20. WHEN A BREAK IS MADE IN THE POURING OF THE DUCT BEAM, A 3-FOOT LONG 5/8" DIA STL RE-BAR SHALL BE INSERTED HORIZONTALLY AT EACH CORNER OF THE DUCT BEAM, LEAVING 18" TO TIE INTO THE SUBSEQUENT POUR.

CONCRET

14. PLASTIC CONDUITS SHALL BE TERMINATED WITH END BELLS. GALVANIZED STEEL CONDUITS SHALL BE TERMINATED WITH GROUND BUSHINGS. ALL CONDUITS AND ENDS WILL BE TO THE FINAL GRADE OF THE PAD.

16. PRIMARY CONDUITS SHALL BE LOCATED IN THE LEFT HALF OF THE CONDUIT OPENING. SECONDARY CONDUITS

18. ALL REBAR SHALL BE #4 A-615 GRADE 40. REBAR JOINTS SHALL BE FIRMLY AND SECURELY HELD IN POSITION BY WIRING AT INTERSECTIONS WITH NO. 16 GAUGE WIRE.

THE MAXIMUM NUMBER OF CONDUITS ENTERING THE SECONDARY SLOT SHALL BE FOUR. CONTACT THE ELECTRIC UTILITY PROJECT ENGINEER FOR DESIGNS REQUIRING MORE THAN FOUR SECONDARY CONDUITS.

GROUND ROD AND CLAMP, 5/8" X 8'. SEE CPAU STANDARD DWG. # DT-SS-U-1001 FOR MATERIALS INFORMATION. TRANSFORMER ANCHORS SHALL BE INSTALLED BY CPAU ACCORDING TO MANUFACTURER'S INSTRUCTIONS. EXPANSION BOLT SHALL BE "PARABOLT" BY MOLY OR APPROVED EQUIVALENT. MINIMUM EMBEDMENT LENGTH AND EDGE DISTANCE SHALL MEET THE MANUFACTURER'S REQUIREMENTS.

22. A MINIMUM OF 8 FEET CLEARANCE SHALL BE MAINTAINED FROM THE FRONT OF THE PAD FOR OPERATIONAL NEEDS. A MINIMUM OF 3 FEET SHALL BE MAINTAINED ON UNOPERABLE SIDES AND BACK. ALL MEASUREMENTS ARE TAKEN FROM THE EDGE OF THE PAD. SEE CPAU ENGINEERING STANDARD DT-CL-U-1031. 23. UNLESS OTHERWISE APPROVED BY CPAU, A BOX SHALL BE INSTALLED NEXT TO THE TRANSFORMER PAD.

PRIMARY CONDUITS ENTERING THE PAD WILL FIRST GO TO THIS BOX. REFER TO APPLICABLE LAYOUT DRAWING FOR LOCATION AND SIZE. SEE CPAU STANDARD DWG. # DT-SS-U-1002 FOR BOX INSTALLATION

- 1. UNUSUAL FIELD CONDITIONS MAY DICTATE BOX DIMENSIONS FOR DESIGNS DIFFER THOSE SPECIFIED IN THIS DRAWING. THE DETAILS FOR INSTALLATIONS VARYING FI SPECIFICATIONS WILL BE FURNISHED BY ELECTRIC UTILITY.
- 2. ALL BOXES SHALL BE COMPLETE WITH BODY, COVER, SOLID BASE, AND NECESSARY SOLID, CONCRETE FLOOR IS REQUIRED FOR ALL BOXES.
- 3. ALL NON-CONCRETE ENCLOSURES (BODY, BASE, COVER, AND EXTENSIONS WHERE SHALL MEET TIER 15 REQUIREMENTS AS SPECIFIED IN SCTE 77 2007 (OR LATEST VEI CPAU SPECIFICATION SS-01-09 - SPECIFICATION FOR NON-CONCRETE ENCLOSURES
- 4. THE NUMBER OF EXTENSIONS REQUIRED IS DEPENDENT ON THE DEPTH OF THE CO CONDUIT SHALL ENTER STRAIGHT INTO THE BOX, PARALLEL WITH THE COVER, I.E. VERTICAL BENDS OR SWEEPS. 5. ALL NON-ROUND COVERS ON ALL BOXES MUST BE SECURED BY RECESSED HOLD-D
- 6. ALL BOXES SHALL HAVE COVERS APPROVED BY CPAU AND HAVE A NON-SLIP SURFA 7. THE WORDS "CPA ELECTRIC", "CPA SL", "CPA TS", OR "CPA COMM" SHALL BE CAST C
- THE SURFACE OF ALL COVERS, 30"X48" AND SMALLER DEPENDING ON APPLICATION BOXES SHALL HAVE "CPA-HIGH VOLTAGE" INSCRIBED ON THE FRAME. 8. BOXES LARGER THAN 30"X48" SHALL HAVE PROVISIONS FOR ATTACHING A METAL PI
- INDICATING THE VAULT NUMBER (I.E. LOCATION NUMBER), ALONG WITH THE CORRE NUMBER PLATE. CONTACT THE UTILITY ENGINEER FOR THE NUMBER BEFORE ORDE 9. THE BASE OF EACH BOX SHALL BE PLACED ON A MINIMUM 6" BEDDING OF 3/4" DRAIN UNDISTURBED OR 95% COMPACTED EARTH. THE BOXES SHALL BE INSTALLED SO T
- LEVEL WITH THE ADJACENT CURB, DRIVEWAY, OR SIDEWALK GRADE. 10. FOR 30"X48" OR SMALLER BOXES, AN ALLOWANCE SHALL BE MADE FOR THE THICKN COVER TO ENSURE THE COVER IS FLUSH WITH THE FINISH GRADE. WHEN NO FINISH
- ESTABLISHED, BOX COVERS SHALL BE 2" ABOVE THE ADJACENT TERRAIN. 11. IT IS INTENDED THAT CONDUITS SHALL ENTER CONCRETE BOXES THROUGH THE KM PROVIDED. BOX WALL MAY BE CUT OR CORE DRILLED AT OTHER LOCATIONS TO PROVIDED. ENTRY WITH APPROVAL OF THE CPAU UNDERGROUND INSPECTOR.
- 12. STEEL CONDUITS SHALL EXTEND NO MORE THAN 2" INTO A BOX AND SHALL BE TER GROUNDING BUSHINGS. PLASTIC CONDUITS SHALL BE TERMINATED WITH BELL END THE WALL OF THE BOX. BELL ENDS MAY NOT PROJECT INTO THE BOX. ALL CONDUIT SHALL BE GROUTED.
- 13. BOXES USED IN HEAVY TRAFFIC AREAS SHALL BE DESIGNED FOR H-20-44 TRAFFIC 14. BOXES 3'X5' OR LARGER SUBJECT TO MOTOR VEHICLE TRAFFIC, BACKFILL WITH A 6' WIDTH OF TWO SACK SLURRY, OTHERWISE BACKFILL WITH 12" MINIMUM WIDTH OF AT 95% COMPACTION.
- 15. BOXES 3'X5' OR LARGER REQUIRE A 12" X 12" CONCRETE COLLAR WITH REBAR ARO AND VAULT. CONCRETE SHALL BE CLASS 2, CONTAINING SIX (6) SACKS OF CEMENT YARD AND SHALL PROVIDE A MINIMUM COMPREHENSIVE STRENGTH OF 3500 POUNI INCH AT 28 DAYS (MUST MEET CITY OF PALO ALTO SIDEWALK REQUIREMENTS, SECT PINTS OF LAMPBLACK PER CUBIC YARD OF CONCRETE IS REQUIRED. (SEE DRAWING
- FOR DETAILS) 16. STEEL TRAFFIC LIDS ARE FOR REPLACEMENT PURPOSES ONLY.
- 17. ALL BOXES LISTED IN TABLE 1 SHALL BE SIZED FOR THE LARGEST CONDUCTOR THEN EXPECTED TO CONTAIN.
- 18. FOR BOX INSTALLATION AT THE BASE OF A POLE RISER, SEE CPAU DWG'S DT-SS-U-1001 AND DT-SS-U-1001A.

PG1730
PG2436
PG3048

PG2436
PG3048

Box M	lanufacturer a	and Ca	talog Number	Ins	side Dimen	sions (Inch	nes)	1		_				
Quazite Corporation	Christy Co Products,	ncrete , Inc.	Utility Vault Company	Length (A)	Width (B)	Depth (C)	Extension (D)	Voltage	Maximum Wire Size (AWG or kcmil)	Maximur Spliced or Cables i	n # of Looped n Box	Maximum Conduit Size (Inches)	Maximum # of Conduits	Application
PG1118	N-9			17	10	12	10	Secondary	#2	8	+	2	4	Traffic Signal, Street Light, or Communications ONLY
PG1324	N-30			24	13	18	8	Secondary	# 2	12	٠	2	3	Pull box for secondary cables
PG1730	N-36			30	17	18	8	Secondary	4/0	12		2	3	Pull box for secondary cables
PG2436	N-40			36	24	30	8	Secondary	350	16	(2)	4	4	Pull box for secondary cables
PG3048	N-48			48	30	36	8	Secondary	750	24	(2)	4	6 🔶	Pull box for secondary cables
			444-LA-CPA	42 (3'6")	42 (3' 6")	OR REI (3' 6")	EREN	Secondary F - NOT AF Primary	PROVED F	OR NEW 12	V INST	ALLATION	S 6 ♦ 6	 200 A primary cables, single phase only Under single phase transformer pads
			CPA-3536	60 (5' 0")	36 (3' 0")	42 (3' 6")	6, 12	Secondary	750	24	(3)	4	6 🔶 -	Pull box for secondary cables
			CPA-3546	60 (5' 0")	36 (3'0")	54 (4° 6")	6, 12	Primary	350	12	(2)	4	4 -	 200 A primary cables 6 - 200 A Splices Submersible Load Break Pull box for 600 A primary cables
			644-LA-CPA	66 FOR R (5' 6")	42 EFERE (3' 6")	39 NCE - E (3' 3")	NGINE	Secondary ERING APP Primary	ROVAL RE	QUIRED	FOR 1 (3)		LLATIONS	NOT Allowed in Full Traffic Applications Sets - 200A or 600A splices 4 way 200A Padmount Load Break Junction
			PGE-466	78 (6' 6")	48 (4' 0")	60 (5' 0")		Secondary Primary	750 750	32	(4)	4	12 6	 2 sets - 200A or 600A splices 4 way 200A Padmount Load Break Junction 1 Bh Subsective Transformer < 100 Km
				102	54	84		Secondary	750	32	(4)	4	14	- 6 - 600 A primary cables - 6 - 600 A splices or connectors
			CPA-4686	(8' 6")	(4' 6")	(7" 0")	6, 12	Primary	750	16	(2)	5	6	 – 3 way 200 A switch – Submersible Transformer ≤ 150 kVA
			29V 510 LA CDA	120	60	84		Secondary	750	32		4	16	 6 - 600 A primary cables 6 - 600 A primary splices or connectors
			301-010-LA-CPA	(10' 0")	(5')	(7' 0")		Primary	750	16	(3)	5	6	 – 600 A Switch – Submersible Transformer ≤ 300 kVA
			38V 612 I A CDA	144	72	84		Secondary	750	32		4	16	 6 - 600 A primary cables 6 - 600 A primary splices or connectors 600 A Switch
			301-012-LA-OPA	(12' 0")	(6'0")	(7' 0")		Primary	750	16	(3)	5	6	 Submersible Transformer ≤ 750 kVA Padmount Switch

RENT FROM	-	Manufacturer and C	Catalog Number	N	Ianufacturer and Catalog	Nu
ROM THESE	Box Utility Vault Compar	Application/Cover Type	Catalog Number	Box	Cover Type	
	Ounty vaun Compan	Full Traffic	444 Roof Slab with inside-outside frame	Quazita Corp	arotion	_
	MALA-CPA	a construction of the second of the	assembly and one (1) 30" manhole frame	Quazite Corpt	Jialion	
Y EXTENSIONS. A	HT-LA OFA		and cover	PG1118	Heavy Duty w/ 2 Bolts	
		Transformer (1-phase)	Pad size as required by transformer	PG1324	Heavy Duty w/ 2 Bolts	
REQUIRED)		Non-Traffic, Submersible	Aluminum Adjustable Frame with torsion	PG1730	Heaw Duty w/ 2 Bolts	+
RSION) AND PER			644 Poof Slab with inside outside frame	DC2426	Hoose Duty W/ 2 Bolto	+
S.		Full Traffic - ONLY allowed	assembly and one (1) 30" manhole frame	PG2430	Heavy Duty w/ 2 Bolts	_
	644-LA-CPA	with CPAU Approval	and cover	PG3048	Heavy Duty w/ 2 Bolts	
		Load Break Cabinet (60"	Load Break Pad (48" x 72" x 8")			
WIIIINO		wide)		SUBSTATION	APPLICATIONS ONLY	
		Load Break Cabinet (44"	Load Break Pad Type 2, with A-1252 Cover	Steel covers f	or replacement purposes	on
DOWN BOLTS.		wide)	(48" x 72" x 8")	Christy Copor	or replacement purposes	UII
ACE		Eull Troffie	577 Roof Slab with inside-outside frame	Christy Concr	ele Producis, Inc.	
		rui nanc	and covers	NLQ	Non-Traffic - Concrete	
R INSCRIBED IN			Incidental Quick Release Slip Resistant	14-5	Traffic - Steel	
I. LARGER	577-LA-CPA	Non-Traffic	Aluminum Plates & Adjustable Frame	20.20	Non-Traffic - Concrete	+
			Present Prof Slob Toppred Lift Out Court	N-30	Traffic Stool	+
PLATE		Submersible Transformer	with Two (2) 30" Grated Cast Iron Covers		Trailic - Steel	+
ESPONDING	-			N-36	Non-Traffic - Concrete	
ERING THE BOX.	CPA-3536	Full Traffic	Full Traffic Rectangular Splice Cover/Frame		Traffic - Steel	
N ROCK ON THE COVERS ARE	CPA-3546			NL 40	Non-Traffic - Concrete	
		Non-Traffic	CPA Adjustable Frame with Torsion Assist	N-40	Traffic - Steel	+
THE OOVEROARE		Non-Traffic /	Incidental Quick Release Slip Resistant		Non Troffic Conorato	+
	PGE-466	Submersible Transformer	Aluminum Plates & Adjustable Frame	N-48	Non-Trailic - Concrete	_
NESS OF THE			Assembly	9009 (M220)	Traffic - Steel	
SH GRADE IS		Full Traffic	Full Traffic Cover/Frame Assembly with Two (2) Round Covers			
NOCKOUTS		Load Break Cabinet (44"	Load Break Pad Type 2, with A-1252 Cover			
ROVIDE CONDUIT		wide)		8	CPA ELECTRIC	
		Non Troffie	Incidental Quick Release Slip Resistant			
		Non- franc	Auminum Plates & Adjustable Frame	G	<u>kaakaaka</u>	
		Full Traffia	Full Traffic Cover/Frame Assembly with	ST	EEL COVER	PL
IT ENTRANCES		Fuil framç	Three (3) Round Covers	REPLAC	CEMENT PURPOSE ONLY	-
Elimination	0.004 4000	600A Switch, 600 A Splices	Full Traffic Cover/Frame Assembly with	3.577.577.87	~	
	CPA-4686	TRAFFIC	Three (3) Round Covers			
LOADING.		600A Switch, 600 A Splices	Incidental Quick Release Slip Resistant			A
6" MINIMUM		or Separable Connectors -	Aluminum Plates & Adjustable Frame		13	9
¾" BASE ROCK		NUN-TRAFFIC	CDA Hogay EVT Frame (5") & CDA 24"/20"			L.
		Submersible Transformer	Grated Cast Iron Cover			
	-	0.1	Precast Roof Slab - Tapered Lift Out Cover		and and	T.
		Submersible Switch	with Three (3) 30" Solid Cast Iron Covers			K
DS PER SOLIARE	38V-510-LA-CPA	Submersible Transformer	Precast Roof Slab - Tapered Lift Out Cover			~
TION 16), TWO	001-010-D4-01 A	Switch (Type A)	711-CPA Switch Pad Roof Slab Type A		A Start	/
G# DT-SS-U-1038		Switch (Type B)	711-CPA Switch Pad Roof Slab Type B		0 300	-
		Switch (Type C)	711-CPA Switch Pad Roof Slab Type C		be the t	GRC
	001/01/01/01/01	Switch	with Three (3) 30" Solid Cast Iron Covers		0	REC
	38Y-612-LA-CPA	Three Phase Transformer	Precast Roof Slab - Tapered Lift Out Cover			_
EY ARE			with Three (3) 30" Grated Cast Iron Covers			ΡĒ
					WHERE REQUIRED.	

TYPICAL BOX/CONDUIT INSTALLATION

(4) No more than 4-sets of maximum size (set = 4 conductors)

alog Number

Catalog Number

olts PG1118HA00

olts PG1324HA00

PG1730HA00

PG2436HA00

PG3048HA00

N9-61

N30

N30-61J

N36T

N36-61J

N40T

N40-61J

N48T

N48-61J

PLAIN COVER

- SEE NOTE 11

SEE NOTE 8

5/8"X 8" COPPER CLAD GROUND ROD WHEN

REQUIRED.

SEE NOTE 11

nese drawings are instruments of service and are r operty of AURUM CONSULTING ENGINEERS MONTEREY BAY

All designs and other information in the drawings are use on the specified project and shall not be used

NO SCALE

B. 3 FEET MINIMUM FROM NON-OPERABLE SIDES. THIS CLEARANCE MAY BE REDUCED WITH APPROVAL BY THE ELECTRICAL ENGINEERING DEPARTMENT FOR LANDSCAPING OBSTRUCTIONS (DECORATIVE WALLS, PLANTERS, ROCKS, ETC.)

THAT MAY BE PLACED NEXT TO THE PAD ON NON OPERABLE SIDES.

- 5. PAD MOUNTED EQUIPMENT (SEE SHT. 9): A. 8 FEET MINIMUM IN FRONT OF ALL EQUIPMENT DOORS TO PROVIDE ROOM TO OPERATE WITH HOT STICKS.
- 4. CLEAR AND LEVEL WORK AREAS ARE REQUIRED AROUND PAD MOUNTED EQUIPMENT TO PROVIDE A SAFE WORKING SPACE TO OPERATE AND MAINTAIN THE EQUIPMENT.
- THE CLEARANCE IS ADEQUATE TO HOIST IT. HORIZONTAL WORK SPACE REQUIREMENTS:
- B. 30 FEET MINIMUM FOR 3Ø PAD MOUNT EQUIPMENT. C. WHEN REQUIRED FOR INSTALLATIONS SUCH AS IN DRY VAULTS. THE CLEARANCES FOR PAD MOUNT EQUIPMENT MAY BE REDUCED TO 10 FEET FROM THE TOP OF THE PAD. THIS REDUCED CLEARANCE WILL GREATLY INCREASE THE REPLACEMENT TIME, SINCE THE EQUIPMENT MUST BE JACKED AND ROLLED OUT TO A POSITION WHERE
- A. 20 FEET MINIMUM FOR 1Ø PAD MOUNTED EQUIPMENT.
- OR WINDOW TO THE CLOSEST EDGE OF THE PAD. 3. VERTICAL CLEARANCE FROM OVERHANGS (SEE SHT. 7) - TO PROVIDE SPACE FOR HOISTING EQUIPMENT SO THAT IT CAN BE REPLACED, THE FOLLOWING VERTICAL CLEARANCES FROM THE TOP OF THE PAD ARE REQUIRED:
- NONCOMBUSTIBLE, WITH APPROVAL OF ELECTRIC UTILITY ENGINEERING. 2. DOORWAY AND WINDOW CLEARANCE (SEE SHT. 6) - PAD MOUNTED EQUIPMENT SHALL NOT BE PLACED WHERE IT IMPEDES THE FLOW OF AIR OR TRAFFIC THROUGH A DOORWAY OR WINDOW. CLEARANCE SHALL BE 10 FEET RADIALLY FROM THE DOORWAY
- EQUIPMENT SHALL HAVE THE FOLLOWING CLEARANCES: A. 3 FEET MINIMUM FROM ANY BUILDING WALL TO THE EDGE OF THE PAD. THIS CLEARANCE MAY BE REDUCED TO 2 FEET IF THE BUILDING SURFACE IS
- CLEARANCES: 1. CLEARANCES FROM BUILDING WALLS (SEE SHT. 6) - OIL FILLED PAD MOUNTED

OIL CONTAINMENT: 14. OIL ENCLOSURES ARE REQUIRED BY THE STATE OF CALIFORNIA IF PAD MOUNTED

TITLE 24, PART 3, STATE BUILDING STANDARDS). B. ANY CONTAINER WHICH STORES FLAMMABLE LIQUID OR GAS WILL BE CONSIDERED EQUIVALENT TO A "COMBUSTIBLE WALL". THE MINIMUM REQUIRED CLEARANCE IS 3

A. LIQUIFIED FLAMMABLE GASES: DO NOT INSTALL PAD MOUNTED EQUIPMENT WITHIN 20 FEET OF A GAS DISPENSER WITHOUT CONFORMING TO THE REGULATIONS CONCERNING INSTALLATION OF ELECTRICAL EQUIPMENT IN HAZARDOUS AREAS (REFER TO ARTICLES E500-1, E500-2, E514-1 AND E514-2 OF

13. THE FOLLOWING GUIDE IS TO BE USED WHEN INSTALLING PAD MOUNTED EQUIPMENT IN AREAS WHERE HAZARDOUS LIQUIDS AND GASES ARE DISPENSED OR STORED IN

HAZARDOUS LOCATIONS:

SEALED CONTAINERS:

FEET.

B. WHERE FIXED POSTS WOULD OBSTRUCT ACCESS FOR INSTALLATION OR REPLACEMENT OF THE EQUIPMENT.

A. POSTS ARE INSTALLED LESS THAN 8 FEET IN FRONT OF THE EQUIPMENT'S DOORS.

12. USE REMOVABLE POSTS WHEN:

AT A POINT WHERE A POST WOULD BE NORMALLY REQUIRED. 11. LOCATE BARRIER POSTS SO THAT THEY DO NOT INTERFERE WITH OPENING OF THE EQUIPMENT'S DOORS. CERTAIN TYPES OF PAD MOUNTED EQUIPMENT HAVE DOORS IN BOTH FRONT AND BACK AND REQUIRE 8'-0" MINIMUM CLEARANCE AND CAREFUL BARRIER POST PLACEMENT TO ALLOW THE DOORS TO BE OPENED.

SHALL BE PAINTED PADMOUNT GREEN. 10. A BUILDING CAN BE CONSIDERED AS PHYSICAL PROTECTION PROVIDED IT IS LOCATED

PROPOSED BY THE APPLICANT FOR CITY APPROVAL. 9. ALL BARRIER POSTS AT THE SAME INSTALLATION SITE WILL BE THE SAME HEIGHT AND

8. STEEL POSTS ARE THE STANDARD MEANS FOR PROVIDING SUCH PHYSICAL PROTECTION. SUITABLE ALTERNATIVES TO THESE PROTECTIVE POSTS MAY BE

COULD INTERFERE WITH REQUIRED CLEARANCES OR ACCESSIBILITY. ON THOSE INSTALLATIONS WHERE THERE IS A HIGH PROBABILITY OF A FUTURE OBSTRUCTION,

INSTALL A CLEARANCE REQUIREMENT SIGN ON THE EQUIPMENT.

20. CONSIDERATION SHOULD BE GIVEN NOT ONLY TO CONDITIONS EXISTING AT THE TIME OF INSTALLATION BUT ALSO TO POSSIBLE FUTURE STRUCTURES AND EQUIPMENT WHICH

FUTURE CONSTRUCTION:

STREET TO THE EQUIPMENT PAD.

CITY FOR OTHER OPTIONS.

INCREASED. CONSULT CITY ENGINEER WHEN SUCH SITATIONS OCCUR. FOR LOCATIONS

WHERE THE STANDARD ACCESSIBILITY REQUIREMENT ARE NOT MET, CONSULT WITH THE

BELOW THE PAD BEING PROTECTED. THE AREA WILL BE KEPT WEED FREE AND COVERED WITH A DECORATIVE COVERING. TRUCK ACCESSIBILITY:

GROUND AND NOT MORE THAN 12" ABOVE GROUND.

ABLE TO BE BACKED UP TO WITHIN 5 FEET OF THE PAD ON:

B. A PATH THAT IS A MINIMUM OF 12 FEET WIDE AND

BACKFILLED. 17. TREATED REDWOOD OR PRESSURE-TREATED DOUGLAS FIR POSTS (NOMINAL 4"x4" MINIMUM) AND PLANKS (NOMINAL 2" OR THICKER) MAY BE USED FOR RETAINING WALLS. POSTS SHOULD BE 24" OR LESS IN LENGTH AND EXTENDED AT LEAST 12" BELOW

18. THE WORKING AREA WITHIN THE RETAINING WALL WILL BE AT THE SAME LEVEL OR

19. PAD MOUNTED EQUIPMENT MUST BE ACCESSIBLE TO CITY TRUCKS. TRUCKS MUST BE

C. A MINIMUM VERTICAL CLEARANCE OF 14 FEET SHALL BE MAINTAINED FROM THE

IF THE PATH TO THE EQUIPMENT PAD REQUIRES ANY TURNS BY CITY TRUCKS, THE

MINIMUM REQUIREMENTS OF 12'x14' PREVIOUSLY DESCRIBED MAY NEED TO BE

A. A SURFACE CAPABLE OF WITHSTANDING TRUCK WEIGHT OF 24 TONS AND

16. RETAINING WALLS GREATER THAN 2 FEET IN HEIGHT WILL REQUIRE A DRAIN PIPE AS SHOWN IN SHT. 8 OF THIS DOCUMENT. DRAIN PIPE SHALL BE A 3" PERFORATED PLASTIC PIPE, COVERED FIRST BY MARAFI DRAIN CLOTH, THEN BY DRAIN ROCK AND FINALLY

SE	CTION 26 05 73	3.05 Clean Up:A. Upon completion of electric
<u>PA</u>	RT 1 - GENERAL	Architect.
1.0	 Description of Work: A. Furnish and install all required in-place equipment, conduits, conductors, cables and any miscellaneous materials for the satisfactory interconnection and operation of all associated electrical materials 	 3.06 Mechanical and Plumbing Ele A. The requirements for electri supplied and/or installed und 1. Mechanical and Plumbin
1.0	 2 Submittals: A. As specified in Division 1. Submit to the Architect shop drawings, manufacturer's data and certificates for equipment, materials and finish, and pertinent details for each system specified. 	 Mechanical and Plumbin Manufacturers of the Me B. The coordination and verific disconnect, control, and con coordination and verification
	Information to be submitted includes manufacturer's descriptive literature of cataloged products, equipment, drawings, diagrams, performance and characteristic curves as applicable, test data and catalog cuts. Obtain written approval before procurement, fabrication, or delivery of the items to the job site.	C. The Electrical Contractor sh equipment:1. Line voltage conduit and2. Disconnect switches.
	 B. Proposed substitutions of products will not be reviewed or approved prior to awarding of the Contract. C. Substitutions shall be proven to the Architect or Engineer to be equal or superior to the specified product. Architect's decision is final. The Contractor shall pay all costs incurred by the Architect and Engineer and Engineer and an extinct and the titritien whether any state and any statement of the specified and the statement of the specified and t	 Manual line motor starte Automatic line voltage cont Plumbing Contractor and in for by the Mechanical and/o
	and Engineer in reviewing and processing any proposed substitutions whether or not a proposed substitution is accepted.D. If a proposed substitution is rejected, the contractor shall furnish the specified product at no increase in contract price.	Electrical Contractor shall b E. All low voltage control wiri conduit. Furnishing, installa controls shall be by the Mec
	dimensional changes, electrical changes, or changes to other work which are a result of the substitution. The accepted substitution shall be made at no additional cost to the owner or design consultants.	F. Manual motor starters, when alloy type overload relays, S FS-1P (flush) or ITE, WEST
1.0.	3 Quality Assurance: A. Codes: All electrical equipment and materials, including installation and testing, shall conform to	GROUNDING
	 the latest editions of the following applicable codes: California Electrical Code (CEC). Occupational Sofety and Health Act (OSHA) standards 	PART 1 - EXECUTION
	 Occupational safety and realth Act (OSTA) standards. All applicable local codes, rules and regulations. Electrical Contractor shall posses a C-10 license and all other licenses as may be required. Licenses shall be in effect at start of this contract and be maintained throughout the duration of this contract. 	 Grounding and Bonding: Grounding and bonding sha All electrical equipment sha cabinets and outlet boxes.
	 B. Variances: In instances where two or more codes are at variance, the most restrictive requirement shall apply. C. Standards: Equipment shall conform to applicable standards of American National Standards Institute (ANSI), Electronics Industries Association (EIA), Institute of Electrical and Electronics 	C. The ground pole of receptac wire connecting to a screw iD. A green insulated copper gr runs.
	Engineers (IEEE), and National Electrical Manufacturers Association (NEMA).D. Underwriter Laboratories (UL) listing is required for all equipment and materials where such listing is offered by the Underwriters Laboratories. Provide service entrance labels for all equipment required by the NEC to have such labels.	E. All metal parts of pull boxesF. All ground conductors shall
	E. The electrical contractor shall guarantee all work and materials installed under this contract for a period of one (1) year from date of acceptance by owner.F. All work and materials covered by this specification shall be subject to inspection at any and all times by representatives of the owner. Work shall not be closed in or covered before inspection and	SECTION 26 05 42 CONDUITS, RACEWAYS AND FI
	approval by the owner or his representative. Any material found not conforming with these specifications shall, within 3 days after being notified by the owner, be removed from premises; if said material has been installed, entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the contractor.	PART 1 - EXECUTION 1.01 Conduit, Raceway and Fitting A. For conduit runs exposed to
1.04	 4 Contract Documents: A. Drawings: The Electrical Drawings shall govern the general layout of the completed construction. 1. Locations of equipment, panels, pullboxes, conduits, stub-ups, ground connections are 	 B. For conduit run underground minimum ¼" size nonmetall underground or under slab t C. For conduit runs concealed
	approximate unless dimensioned; verify locations with the Architect prior to installation.2. The general arrangement and location of existing conduits, piping, apparatus, etc., is approximate. The drawings and specifications are for the assistance and guidance of the contractor, exact locations, distances and elevations are governed by actual field conditions.	spaces above six feet over th D. Flexible metal conduit shall connections unless otherwis used for motor connections.
	Accuracy of data given herein and on the drawings is not guaranteed. Minor changes may be necessary to accommodate work. The contractor is responsible for verifying existing conditions. Should it be necessary to deviate from the design due to interference with existing conditions or work in progress, claims for additional compensation shall be limited to those for work required	E. The minimum size racewayF. Installation shall comply wiG. From pull point to pull point 360 degrees.
	by unforeseen conditions as determined by the Architect.3. All drawings and divisions of these specifications shall be considered as whole. The contractor shall report any apparent discrepancies to the Architect prior to submitting bids.4. The contractor shall be held responsible to have examined the site and compared it with the	 H. Conduit Supports: Properly concealed except where other 1. Exposed Conduits: Supp at intervals not exceeding
	specifications and plans and to have satisfied himself as to the conditions under which the work is to be performed. He shall be held responsible for knowledge of all existing conditions whether or not accurately described. No subsequent allowance shall be made for any extra expense due to failure to make such examination.	support on common support structure by one-hole cla a. Conduits attached to windows. Run all exp
1.0:	 Closeout Submittals: A. Manuals: Furnish manuals for equipment where manuals are specified in the equipment specifications or are specified in Division 1. 	 b. Group exposed condu 2. Support all conduits with 3. Support conduit risers in I. Moisture Seals: Provide in
1.00	6 Coordination:A. Coordinate the electrical work with the other trades, code authorities, utilities and the Architect.B. Provide and install all trenching, backfilling, conduit, pull boxes, splice boxes, etc. for all Utility	 J. Where PVC conduit transiti- risers. Rigid steel shall be had K. Provide a nylon pull cord in L. Provide galvanized rigid ste
	Company services to the locations indicated on the Drawings. Prior to performing any work, the Electrical Contractor shall coordinate with the various Utility Companies to verify that all such work and materials shown on the Drawings are of sufficient sizes and correctly located to provide services on the site.	M. Slope all underground racew located inside a building to t N. Conduits shall be blown out
	 C. Utility Company charges shall be paid by the Owner. D. Contractor shall pay all inspection and other applicable fees and procure all permits necessary for the completion of this work. E. Where connections must be made to existing installations, properly schedule all the required work, 	LINE VOLTAGE WIRE AND CAE
	F. When two trades join together in an area, make certain that no electrical work is omitted.	1.01 Conductors:
1.0'	 7 Job Conditions: A. Operations: Perform all work in compliance with Division 1 1. Keep the number and duration of power shutdown periods to a minimum. 2. Show all proposed shutdowns and their expected duration on the construction schedule. 	A. Conductors shall be copper, rated insulation.B. Conductors shall be stranded C. Minimum power and control
	 Schedule and carry out shutdowns so as to cause the least disruption to operation of the Owner's facilities. Carry out shutdown only after the schedule has been approved, in writing, by the owner. Submit power interruption schedule 15 days prior to date of interruption. 	 D. All conductors used on this 1.02 Terminations: A. Manufacturer - Terminals as B. Wire Terminations: Strend
1.0	 B. Construction Power: Onless otherwise noted in Division 1 of these specifications, contractor shall make all arrangements and provide all necessary facilities for temporary construction power from the owner's on site source. Energy costs shall be paid for by the Owner. Safety and Indempity: 	serve to contain all the stran type terminal is not allowed the stranded conductor. Use
1.0	 A. The Contractor is solely and completely responsible for conditions of the job site including safety of all persons and property during performance of the work. This requirement will apply continually and not be limited to normal working hours. The contractor shall provide and maintain throughout the work site proper safeguards including but not limited to enclosures barriers 	 1.03 Tape: A. Tape used for terminations a the cable and shall be of pla
	warning signs, lights, etc. to prevent accidental injury to people or damage to property.B. The Contractor performing work under this Division of the Specifications shall hold harmless, indemnify, and defend the Owner, the Engineer, their consultants, and each of their officers, agents and employees from any and all liability claims, losses, or damage arising out of or alleged to arise	PART 2 - EXECUTION 2.01 Cable Installation:
	from bodily injury, sickness, or death of a person or persons and for all damages arising out of injury to or destruction of property arising directly or indirectly out of or in connection with the performance of the work under this Division of the Specifications, and from the Contractor's negligence in the performance of the work described in the construction contract documents, but	 A. Clean Raceways - Clean all - Conduits Raceway and Fit B. All wiring including low vo C. All feeder conductors shall
	not including liability that may be due to the sole negligence of the Owner, the Engineer, their Consultants or their officers, agents and employees.C. If a work area is encountered that contains hazardous materials, the contractor is advised to coordinate with the owner and it's abatement consultant for abatement of hazardous material by the	permitted unless specifically D. All branch circuit wiring sha spaces unless noted otherwin
	Owner's Representative. "Hazardous materials" means any toxic substance regulated or controlled by OSHA, EPA, State of California or local rules, regulations and laws. Nothing herein shall be construed to create a liability for Aurum Consulting Engineers regarding hazardous materials abatement measures, or discovery of hazardous materials.	 2.02 Cable Terminations and Splic A. Splices - UL Listed wirenuts B. Terminations - Shall comply 1. Make up and form cable terminated on.
1.0	 Access Doors: A. The contractor shall install access panels as required where floors, walls or ceilings must be penetrated for access to electrical, control, fire alarm or other specified electrical devices. The minimum size panel shall be 14" x 14" in usable opening. Where access by a service person is 	 Burnish oxide from cond Circuit and Conductor Identif Color Coding - Provide color
1.10	 Arc Flash: A. The contractor shall install a clearly visible arc flash warning to the inside door of all panelboards 	VOLTAGE 208/120V Phase A Black Phase C Blue
	 and industrial control panels, as well as to the front of all switchboards and motor control centers that are a part of this project. B. The warning shall have the following wording: line 1 "WARNING" (in large letters), line 2 "Potential Arc Flash Hazard" (in medium letters), line 3 & 4 "Appropriate Personal Protective Expirement and Table acquired when working on this conjugate." 	Neutral White Ground Green B. Color coding shall be in the larger conductors, color shal
<u>PA</u> 2.0	Equipment and Tools required when working on this equipment". <u>RT 2 - PRODUCTS</u>	C. Circuit Identification - All u plastic identification tags in source transformer of the ci
2.0	 A. Identify each piece of equipment and related controls with a rigid laminated engraved plastic nameplate. Unless otherwise noted, nameplates shall be melamine plastic 0.125 inch thick, white with black center core. Surface shall be matte finish. Corners shall be square. Accurately align lettering and engrave into the core. Minimum size of nameplates shall be 0.5 by 2.5 inches unless 	2.04 Field Tests:A. All systems shall test free fr electrical defects, and shall s
	otherwise noted. Where not otherwise specified, lettering shall be a minimum of 0.25 inch high normal block style. Engrave nameplates with the inscriptions indicated on the Drawings and, if not so indicated, with the equipment name. Securely fasten nameplates in place using two stainless steel or brass screws	not less than the requiremen
2.0	2 Finish requirements:	OUTLET, JUNCTION AND PULL
	 A. Equipment: Refer to each electrical equipment section of these Specifications for painting requirements of equipment enclosures. Repair any final paint finish which has been damaged or is otherwise unsatisfactory, to the satisfaction of the Architect. B. Wiring System: In finished areas, paint all exposed conduits, boxes and fittings to match the color 	1.01 Outlet boxes, Junction and Pu A. Standard Outlet Boxes: Galv
<u>PA</u>	of the surface to which they are affixed. <u>RT 3 - EXECUTION</u>	the application indicated on most light fixtures) by 1-1/2 larger shall be minimum 2" B. Switch boxes: Minimum box
3.0	 Workmanship: A. All electrical equipment and materials shall be installed in a neat and workmanship manner in accordance with the "NECA-1 Standard Practices For Good Workmanship in Electrical Contracting". Workmanship of the entire job shall be first class in every respect. 	required. Install multiple sw application indicated. C. Conduit bodies: Cadmium p neoprene gasketed, cast iron
3.0	 2 Equipment Installations: A. Provide the required inserts, bolts and anchors, and securely attach all equipment and materials to their supports. 	make changes in conduit dir Form 8 Condulets, Appletor D. Sheet Metal Boxes: Use star minimum 16 gauge galvaniz
	 B. Do all the cutting and patching necessary for the proper installation work and repair any damage done. C. Earthquake restraints: all electrical equipment, including conduits over 2 inches in diameter, shall be braced or anchored to resist a horizontal force acting in any direction as per CBC Section 1616A. 	secured by cadmium plated Hoffman Engineering Comp E. Flush Mounted Pull boxes a retaining screws, prime coat
	Title 24, part 2 and ASCE7-10, section 13.3 and 13.6 and table 13.6-1.D. Structural work: All core drilling, bolt anchor insertion, or cutting of existing structural concrete shall be approved by a California registered structural consulting engineer prior to the execution of	PART 2 - EXECUTION
	any construction. At all floor slabs and structural concrete walls to be drilled, cut or bolt anchors inserted, the contractor shall find and mark all reinforcing in both faces located by means of x-ray, pach-ometer, or prof-ometer. Submit sketch showing location of rebar and proposed cuts, cores, or bolt anchor locations for approval.	 2.01 Outlet Boxes A. General: All outlet boxes shall fin and electrical rooms abo Drawings

3.03 Field Test:

- A. Perform equipment field tests and adjustments. Properly calibrate, adjust and operationally check all circuits and components, and demonstrate as ready for service. B. Operational Tests: Operationally test all circuits to demonstrate that the circuits and equipment have been properly installed and adjusted and are ready for full-time service. Demonstrate the proper functioning of circuits in all modes of operation, including alarm conditions.
- 3.04 Records: A. Maintain one copy of the contract Drawing Sheets on the site of the work for recording the "as built" condition. After completion of the work, the Contractor shall carefully mark the work as actually constructed, revising, deleting and adding to the Drawing Sheets as required. As built Drawings shall be delivered to the Architect within ten (10) days of completion of construction.

cal work, remove all surplus materials, rubbish, and debris that nstruction work. Leave the entire area neat, clean, and acceptable to the

lectrical Work: ical power and/or devices for all mechanical and plumbing equipment nder this Contract shall be coordinated and verified with the following: ng Drawings. ng sections of these Specifications.

echanical and Plumbing equipment supplied. ication shall include the voltage, ampacity, phase, location and type of nnection required. Any changes that are required as a result of this on shall be a part of this Contract. hall furnish and install the following for all mechanical and plumbing d wiring.

trols and magnetic starters shall be furnished by the Mechanical and/or nstalled and connected by the Electrical Contractor. When subcontracted r Plumbing Contractor, all line voltage control wiring installed by the be done per directions from the Mechanical and/or Plumbing Contractor. ing for Mechanical and Plumbing equipment shall be installed in ation and connection of all low voltage conduit, boxes, wiring and chanical and/or Plumbing Contractor. ere required, shall have toggle type operators with pilot light and melting SQUARE D COMPANY, Class 2510, Type FG-1P (surface) or Type TINGHOUSE or GENERAL ELECTRIC equal.

all be as required by codes and local authorities. all be grounded, including, but not limited to, panel boards, terminal cles shall be connected to their outlet boxes by means of a copper ground

in the back of the box. round wire, sized to comply with codes, shall be installed in all conduit es shall be grounded per code requirements. l be green insulated copper.

ITTINGS

g Installation: o weather provide rigid metal (GRS). nd, in concrete or masonry block wall and under concrete slabs, install llic (PVC) with PVC elbows. Where conduits transition from to above grade install wrapped rigid metal (GRS) elbows and risers.

in steel or wood framed walls or in ceiling spaces or exposed in interior the finished floor, install EMT. l be used only for the connection of recessed lighting fixtures and motor se noted on the Drawings. Liquid-tight steel flexible conduit shall be y shall be 1/2-inch unless indicted otherwise on the Drawings.

ith the CEC. nt, the sum of the angles of all of the bends and offset shall not exceed y support all conduits as required by the NEC. Run all conduits

- nerwise shown on the drawings. port exposed conduits within three feet of any equipment or device and ng NEC requirements; wherever possible, group conduits together and ports. Support exposed conduits fastened to the surface of the concrete amps, or with channels. Use conduit spacers with one-hole clamps. walls or columns shall be as unobtrusive as possible and shall avoid
- posed conduits parallel or at right angles to building lines. luits together. Arrange such conduits uniformly and neatly. hin three feet of any junction box, coupling, bend or fixture. n shafts with Unistrut Superstrut, or approved equal, channels and straps.
- accordance with NEC paragraphs 230-8 and 300-5(g). ions from underground to above grade, provide rigid steel 90's with half-lap wrapped with 20 mil tape and extend minimum 12" above grade. n each empty raceway. eel factory fittings for galvar
- ways to provide drainage; for example, slope conduit from equipment the pull box or manhole located outside the building. t and swabbed prior to pulling wires.

BLE

- ; type THHN/THWN/MTW oil and gasoline resistant, 90°C, 600 volt
- ol wire size shall be No. 12 AWG unless otherwise noted. Project shall be of the same type and conductor material.
- s manufactured by T&B, Burndy or equal. led conductors shall be terminated in clamping type terminations which nds of the conductor. Curling of a stranded conductor around a screw d. For screw type terminations, use a fork type stake-on termination on e only a stake-on tool approved for the fork terminals selected. stic caps of proper size for the wire on which used.

and cable marking shall be compatible with the insulation and jacket of <u>PART 3 - EXECUTION</u> astic material.

l raceways prior to installation of cables as specified in Section 26 05 42 3.02 Mounting: oltage wiring shall be installed in conduit, U.O.N. be continuous from equipment to equipment. Splices in feeders are not ly noted or approved by the Electrical Engineer. hall be run concealed in ceiling spaces, walls, below floors or in crawl

y with the following: e and orient terminals to minimize cable strain and stress on device being ductor prior to inserting in oxide breaking compound filled terminal.

or coding for all circuit conductors. Insulation color shall be white for nding conductors. Conductor colors shall be as follows: 480/277V Brown

Orange Yellow Grev Greet e conductor insulation for all conductors #10 AWG and smaller; for all be either in the insulation or in colored plastic tape applied at every

or is readily accessible. underground distribution and service circuits shall be provided with n each secondary box and at each termination. Tags shall identify the ircuit and the building number(s) serviced by the circuit.

rom short circuits and grounds, shall be free from mechanical and show an insulation resistance between phase conductors and ground of nts of the CEC. All circuits shall be tested for proper neutral connections.

L BOXES

B. Box Layout:

equipment served.

100 square feet of wall area.

ull boxes lvanized, steel, knock-out type of size and configuration best suited to n the Drawings. Minimum box size shall be 4 inches square (octagon for 2 inches deep with mud rings as required. Boxes used with conduit 1" or ox size shall be 4 inches square by 1-1/2 inches deep with mud rings as witches in standard gang boxes with raised device covers suitable for the

plated, cast iron alloy. Conduit bodies with threaded conduit hubs and n covers. Bodies shall be used to facilitate pulling of conductors or to irection only. Splices are not permitted in conduit bodies. Crouse-Hinds n Form 35 Unilets or equal. indard outlet or concrete ring boxes wherever possible; otherwise use a SECTION 26 28 16 ized sheet metal, NEMA I box sized to Code requirements with covers machine screws located six inches on centers. Circle AW Products, CIRCUIT BREAKERS pany or equal. and Junction boxes: Provide overlapping covers with flush head cover PART 1 - PRODUCTS

nish flush with building walls, ceilings and floors except in mechanical ove accessible ceiling or where exposed work is called for on the 2. Install raised device covers (plaster rings) on all switch and receptacle outlet boxes installed in masonry or stud walls or in furred, suspended or exposed concrete ceilings. Covers shall be of a depth to suit the wall or ceiling finish.

3. Leave no unused openings in any box. Install close-up plugs as required to seal openings. 1. Outlet boxes shall be installed at the locations and elevations shown on the drawings or specified herein. Make adjustments to locations as required by structural conditions and to suit coordination requirements of other trades.

2. Locate switch outlet boxes on the latch side of doorways. 3. Outlet boxes shall not be installed back to back nor shall through-wall boxes be permitted. Outlet boxes on opposite sides of a common wall shall be separated horizontally by at least one stud or vertical structural member. 4. For outlets mounted above counters, benches or backsplashes, coordinate location and mounting heights with built-in units. Adjust mounting height to agree with required location for 5. On fire rated walls, the total face area of the outlet boxes shall not exceed 100 square inches per

C. Supports:

1. Outlet Boxes installed in metal stud walls shall be equipped with brackets designed for attaching directly to the studs or shall be mounted on specified box supports. 2. Fixture outlet boxes installed in suspended ceiling of gypsum board or lath and plaster

- construction shall be mounted to 16 gauge metal channel bars attached to main ceiling runners. 3. Fixture outlet boxes installed in suspended ceilings supporting acoustical tiles or panels shall be
- supported directly from the structure above where pendant mounted lighting fixture are to be installed on the box. 4. Fixture Boxes above tile ceilings having exposed suspension systems shall be supported directly
- from the structure above. 5. Outlet and / or junction boxes shall not be supported by grid or fixture hanger wires at any locations.

2.02 Junction And Pull Boxes A. General:

- 1. Install junction or pull boxes where required to limit bends in conduit runs to not more than 360 degrees or where pulling tension achieved would exceed the maximum allowable for the cable to be installed. Note that these boxes are not shown on the Drawings.
- 2. Locate pull boxes and junction boxes in concealed locations above accessible ceilings or exposed in electrical rooms, utility rooms or storage areas.
- 3. Install raised covers (plaster rings) on boxes in stud walls or in furred, suspended or exposed concrete ceilings. Covers shall be of a depth to suit the wall or ceiling finish.
- 4. Leave no unused openings in any box. Install close-up plugs as required to seal openings. 5. Identify circuit numbers and panel on cover of junction box with black marker pen.
- B. Box Layouts: 1. Boxes above hung ceilings having concealed suspension systems shall be located adjacent to openings for removable recessed lighting fixtures.
- Supports 1. Boxes installed in metal stud walls shall be equipped with brackets designed for attaching
- directly to the studs or shall be mounted on specified box supports. 2. Boxes installed in suspended ceilings of gypsum board or lath and plaster construction shall be
- mounted to 16 gauge metal channel bars attached to main ceiling runners. 3. Boxes installed in suspended ceilings supporting acoustical tiles or panels shall be supported directly from the structure above.
- 4. Boxes mounted above suspended acoustical tile ceilings having exposed suspension systems shall be supported directly from the structure above.

SECTION 26 24 13

SWITCHBOARDS, 600 VOLTS AND BELOW PART 1 - GENERAL

1.01 Submittals:

- A. Shop Drawings For each switchboard furnished under this Contract, submit manufacturer's information on the switchboard. B. Before construction of the main (service) switchboard, the contractor shall deliver two or more
- copies of the switchboard submittal to P.G.&E. for their approval. The contractor shall deliver one P.G.&E. approved copy of the submittal to the Electrical Engineer for record.
- C. Submit operation and maintenance data for switchboards, and circuit breakers including nameplate data, parts lists, manufacturer's circuit breaker time current coordination curves, factory and field test reports, recommended maintenance procedures and typewritten as-built panel and switchboard schedules. Submit in accordance with Division 1.
- 1.02 Warranty A. Manufacturer shall warrant equipment to be free from defects in materials and workmanship for the lesser of one (1) year from date of installation or eighteen (18) months from date of purchase PART 2 - PRODUCTS

2.01 Switchboards:

- A. General: Switchboards shall be designed, built and tested in accordance with applicable portions of the latest NEMA, EUSERC, and Underwriter Laboratories standards and the latest requirements of the California Electrical Code. All sections and devices shall be UL listed and labeled. 1. Switchboards shall be dead front, completely self-supporting structure of the required number of
- vertical sections bolted together to form one metal, totally enclosed, switchboard. Sides, top, and rear covers shall be code gauge steel, bolted to the switchboard structure. 2. The switchboard shall be furnished with phase and neutral busses of the amps, volts and phase shown on the Drawings. The bus shall extend the full length of the switchboard. Tapered bus is not acceptable. The switchboard sections, when called for on the plans, shall be as follows: a. Metering Section and landing lugs; Fully Pacific Gas & Electric Company compatible. b. All sections shall include full capacity busing between sections.
- c. All sections shall be front aligned and shall have front-connected devices. 3. All buses shall be silver plated copper, supported with high impact, non-tracking insulating material, braced to withstand the mechanical forces exerted during short circuit conditions. The current density of the bus shall not exceed 1000 amperes per square inch of cross section area or the switchboard bussing shall be of sufficient cross-sectional area to meet UL standard 891 for temperature rise. Provisions shall be provided for future splicing of additional sections from either end. The neutral bus shall be 100% rated. 4. A ground bus shall be furnished secured to each vertical section structure, and shall extend the
- length of the main and distribution sections of the switchboard. The ground bus shall be sized per UL standard 891 and be of the same material as the through bus. 5. Vertical main bus bars shall be furnished full height to accommodate future branch devices. 6 The switchboard shall be furnished and installed complete with all underground pull sections utility sections, main device and feeder sections as indicated on the Drawings. Underground pull sections, utility cable termination, transformer and metering sections shall be in accordance
- with Pacific Gas and Electric Company requirements. 7. The main device, where indicated to be individually mounted, shall be completely isolated from the utility and the feeder sections of the switchboard, both in the device section and the cable section of the switchboard cubicle. The cable section shall also be isolated from the main
- horizontal bus. The main device cubicle shall have UL service equipment label. 8. Feeder devices shall be group-mounted and be front accessible, furnished with vertical wiring gutter on the front of the distribution sections. Wiring gutters shall be furnished with hinged, code gauge steel formed covers. Unused device space shall be covered with blank code gauge steel covers. 9. All vertical sections comprising the switchboard shall be aligned front and rear.
- 10. Switchboards for outdoor installation shall be furnished in NEMA 3R non-walk-in enclosures provided with thermostatically controlled space heaters in each vertical section. Space heaters shall be powered from a circuit breaker protected circuit originating within the switchboard and shall be sized adequately to prevent the formation of condensation. Space heater shall be suitable for operation at 120V AC. B. Circuit Breakers
- 1. Circuit breakers, unless otherwise indicated, shall be the molded case type with ratings as indicated on the Drawings. 2. Main circuit breakers, where indicated to be Molded case type, shall be 80 [100] percent rated,
- with the frame size and trip plug ratings shown. 3. Manufacturer a. The switchboard shall be Square D, Siemens or I.E.M., no other switchboard manufacturers are acceptable.

- 3.01 Installation: A. Switchboards shall be installed where indicated on the Drawings, and in accordance with the manufacturer's instructions.
- A. Switchboards shall be mounted on a concrete pad, as indicated on the drawings. Reinforcing shall be as shown on the Drawings. The top surface of the pad shall be 2 inches above the surrounding
- surface B. The switchboard shall be bolted to the pad with $\frac{1}{2}$ inch diameter bolts minimum at each corner of each section unless otherwise noted. C. The switchboard shall be seismically qualified to withstand potential seismic forces up to UBC Seismic Zone 4.

3.03 Padlocks:

A. Exterior switchboard shall be provided with padlocks keyed as directed by the Owner's Representative. Padlocks shall be supplied by the contractor.

SECTION 26 22 00

TRANSFORMERS

PART 1 - PRODUCTS

- 1.01 Dry Type Transformer: A. Unless otherwise noted on the Drawings, general purpose transformers for supplying lighting and small power loads shall be dry type, two winding, 60 Hertz, aluminum windings, temperature rise not exceeding 150°C under full load in an ambient of 40°C, with Class H 220°C insulation. Capacity rating, number of phases and voltages shall be as shown on the Drawings. Transformer shall comply with all applicable provisions of NEMA Standard ST20 and shall have NEMA Standard taps. Transformers rated below 15 KVA shall have two (2) 5% full capacity taps below rated primary volts and transformers rated 15 KVA and above shall have six (6) 2-1/2% full capacity taps, two above the four below nominal voltage Terminal compartment shall have temperature rise not to exceed 35°C. Provide unit UL listed for indoor/outdoor mounting. Provide dry-type transformer as manufactured by Square D, Siemens, General Electric Company or approved equal.
- B. Transformers shall be low loss type with minimum efficiencies per NEMA TP-1 when operated at 35% of full load capacity. Efficiency shall be tested in accordance with NEMA TP-2. Transformers installed outdoors shall be NEMA 3R, Unless otherwise noted on the Drawings. Transformer sound levels shall not exceed the following values;
- 1. 0-9 KVA 40 decibles 2. 10-50 KVA 45 decibels
- 4. 151-300KVA 55 deciblels 5. 301-500KVA 60 decibels

PART 2 - EXECUTION

- 2.01 Transformer Installation:
- A. Transformer shall be installed where indicated on the Drawings. Indoor transformers shall have code and manufacturers recommended clearances from adjacent walls. In no case should this clearance be less than six inches. B. Transformer shall be connected with flexible liquid tight metallic conduit to prevent the transmission of sound through the conduit system. All transformers shall be installed on resilient
- vibration-isolating mounting pads. Transformer neutral grounding shall be sized in accordance with requirements for separately derived systems and shall be connected to the nearest cold water pipe with supplementary driven ground. Ground rod and connections shall be as detailed in Section 26 05 26.

- 1.01 Circuit Breaker: Each circuit breaker shall consist of the following: A. A molded case breaker with an over center toggle-type mechanism, providing quick-make, quick-break action. Each circuit breaker shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole. Multipole circuit breakers shall have variable
- magnetic trip elements which are set by a single adjustment to assure uniform tripping characteristics in each pole. Circuit breakers shall be of the bolt-on type unless otherwise noted. B. Breaker shall be calibrated for operation in an ambient temperature of 40°C. C. Each circuit breaker shall have trip indication by handle position and shall be trip-free.
- D. Three pole breakers shall be common trip. E. The circuit breakers shall be constructed to accommodate the supply connection at either end of the
- circuit breaker. Circuit breaker shall be suitable for mounting and operation in any position. F. Breakers shall be rated as shown on Drawings. G. Circuit breaker and/or Fuse/circuit breaker combinations for series connected interrupting ratings shall be listed by UL as recognized component combinations for use in the end use equipment in which it is installed. Any series rated combination used shall be marked on the end use equipment
- per CEC section 110-22. H. Breakers shall be UL listed. Circuit breakers shall have removable lugs.
- I. Lugs shall be UL listed for copper and aluminum conductors. J. Breakers shall be UL listed for installation of mechanical screw type lugs.
- K. Circuit breakers serving HACR rated loads shall be HACR type. Circuit breakers serving other motor loads shall be motor rated. L. Breakers indicated as "current limiting " (CL), shall be of the non-fused type; Square D I-Limiter, Westinghouse Limit-R, or ITE Sentron only.

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- D.
- 3. 51-150KVA 50 decibels

