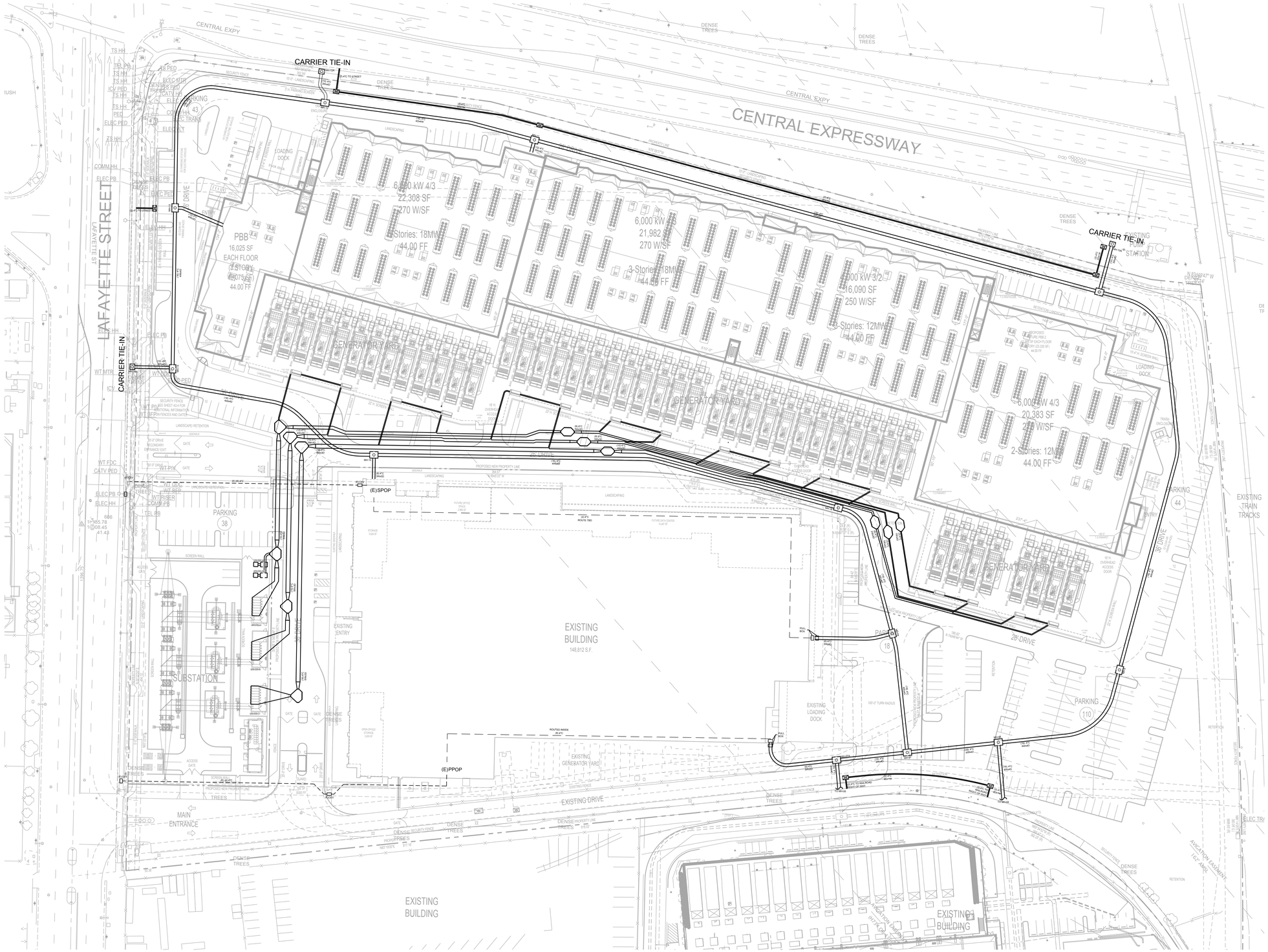
DOCKETED	
Docket Number:	20-SPPE-02
Project Title:	Lafayette Backup Generating Facility
TN #:	234293
Document Title:	Digital Realty Responses to Data Request Set 1 - LBGF (Part 3)
Description:	N/A
Filer:	Scott Galati
Organization:	DayZenLLC
Submitter Role:	Applicant Representative
Submission Date:	8/12/2020 11:50:24 AM
Docketed Date:	8/12/2020

ELECTRICAL DRAWING SET

E1.1 through E7.7



1 ELECTRICAL SITE PLAN
1" = 40'-0"

0 20 40 80
1" = 40'

GENERAL NOTES:

1. NOT USED.

KEYNOTES:

1. NOT USED.

LEGEND

- POWER MANHOLE
- POWER MANHOLE
- CAMPUS COMMUNICATION MANHOLE 10FT x 8FT
- SVP COMMUNICATION HANDHOLE 8FT x 4FT
- SVP COMMUNICATION MANHOLE 10FT x 5FT

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NO.	RECORD	DATE
02	PCC ISSUANCE	06.19.20
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MASTER PLAN

ELECTRICAL SITE PLAN

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER
SCALE NONE	**E1.1**

T:\2825 Lafayette\2825 Lafayette Street -Master Plan\DWGS\CAD\Elec\ep_site-2020.dwg 6/18/2020 4:38 PM vnemad

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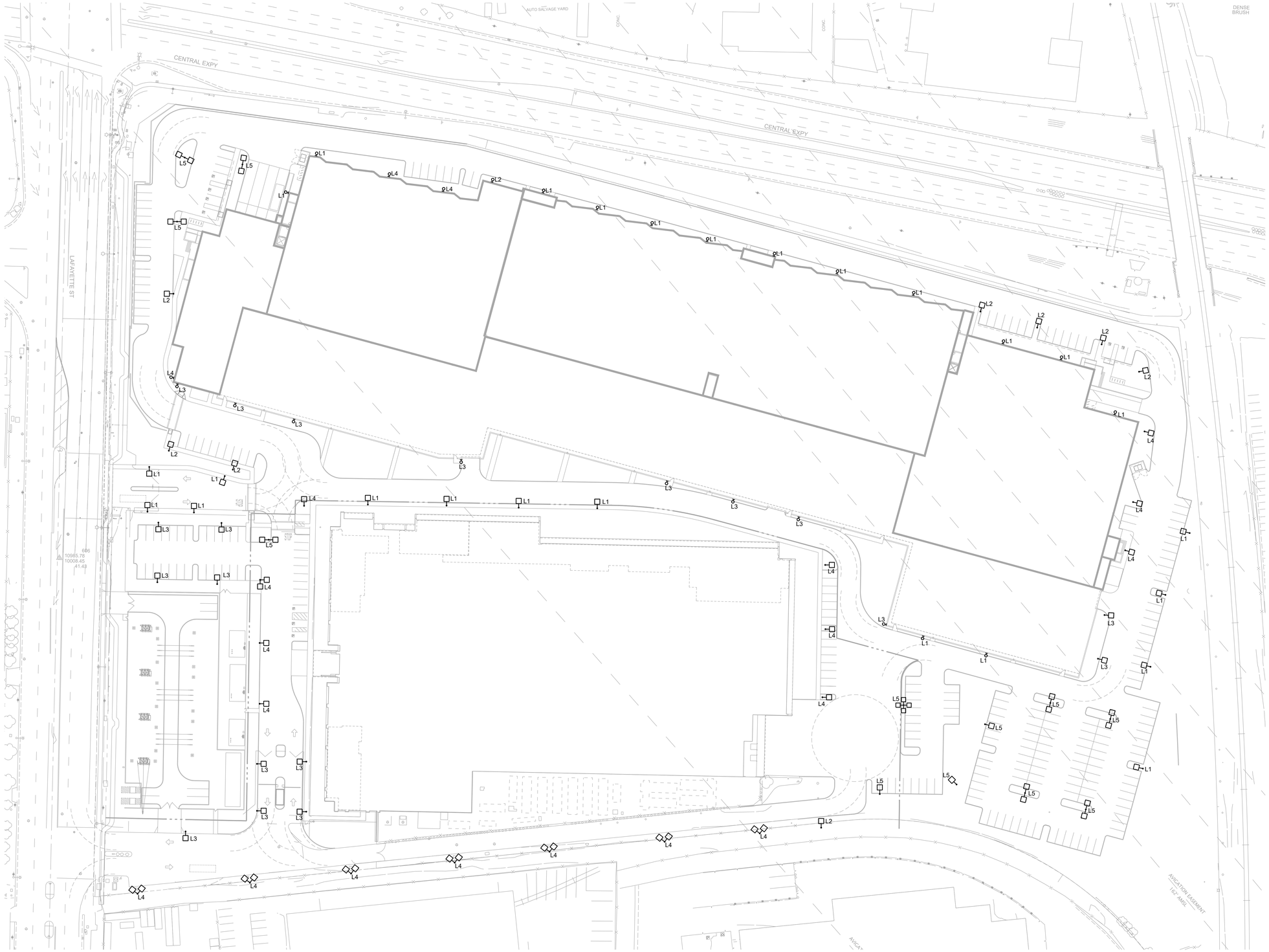

1 ELECTRICAL SITE PLAN - LIGHTING
1" = 40'-0"

N

0 20 40 80
1" = 40'

GENERAL NOTES:

1. SEE DETAIL 2/5.1 FOR LED LUMINARIES CUT SHEET
2. MAXIMUM HEIGHT FROM FINISHED GRADE TO OF THE POLE AND OF THE WALL MOUNTED LUMINARIES SHALL NOT EXCEED 25 FEET.

KEYNOTES:

1. NOT USED.

EXTERIOR LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	LAMPS/ LUMINAIRE QUANTITY	LAMPS/ LUMINAIRE TYPE	BALLAST TYPE	LUMINAIRE MAX VA	LUMINAIRE VOLTS	MOUNTING	MANUFACTURER	CATALOG SERIES	REMARKS
L1		48	LED		105	480	POLE/ WALL	PHILLIPS	GL18-2-105LA-4870-NW	
L2		48	LED		160	480	POLE	PHILLIPS	GL18-2-160LA-481A-NW	
L3		48	LED		105	480	POLE/ WALL	PHILLIPS	GL18-4-105LA-4870-NW	
L4		64	LED		180	480	POLE/ WALL	PHILLIPS	GL18-4-180LA-6490-NW	
L5		64	LED		180	480	POLE	PHILLIPS	GL18-5-180LA-6490-NW	

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MASTER PLAN

ELECTRICAL SITE PLAN - LIGHTING OVERALL

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER
SCALE NONE	**E2.2**

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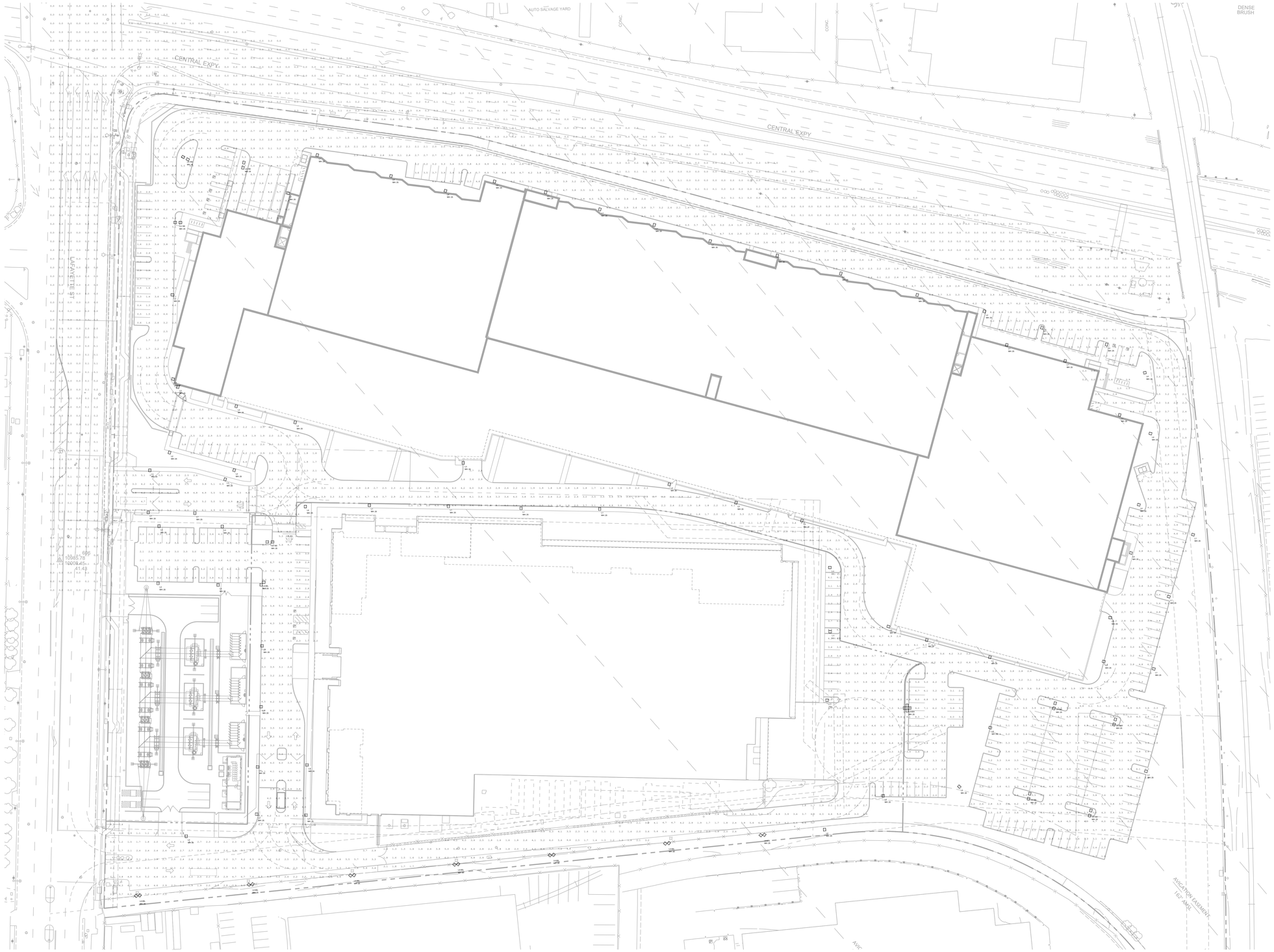

1 ELECTRICAL SITE PLAN - PHOTOMETRIC
1" = 40'-0"

N

0 20 40 80
1" = 40'

GENERAL NOTES:

1. SEE DETAIL 2/5.1 FOR LED LUMINARIES CUT SHEET
2. NOT USED.

KEYNOTES:

1. NOT USED.

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min
2805 S Entrance	Illuminance	Fc	3.27	9.2	0.3
2805 SE Parking_Drive	Illuminance	Fc	3.84	9.7	0.7
2805 South	Illuminance	Fc	3.22	7.7	1.0
2805 W Parking	Illuminance	Fc	3.40	5.2	2.1
2805 West Drive	Illuminance	Fc	3.76	9.3	1.2
2825 East Driveway	Illuminance	Fc	3.41	7.1	1.3
2825 N Driveway	Illuminance	Fc	3.65	9.8	0.7
2825 NW	Illuminance	Fc	3.54	7.5	0.3
2825 SE Parking	Illuminance	Fc	3.74	7.0	1.5
2825 South Driveway_1	Illuminance	Fc	3.26	9.0	1.5
East PPB Truck	Illuminance	Fc	0.63	1.5	0.0
NW Entrace	Illuminance	Fc	4.44	7.1	1.3
Outside of Property	Illuminance	Fc	0.04	0.9	0.0

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MASTER PLAN

ELECTRICAL SITE PLAN - PHOTOMETRIC OVERALL

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E2.3**
SCALE NONE	

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GARDCO by Signify

Site & Area

Gullwing LED

Large, GL18

Gardco Gullwing LED luminaires combine LED performance excellence and advanced Gardco LED thermal management technology with the distinct Gullwing style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing.

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

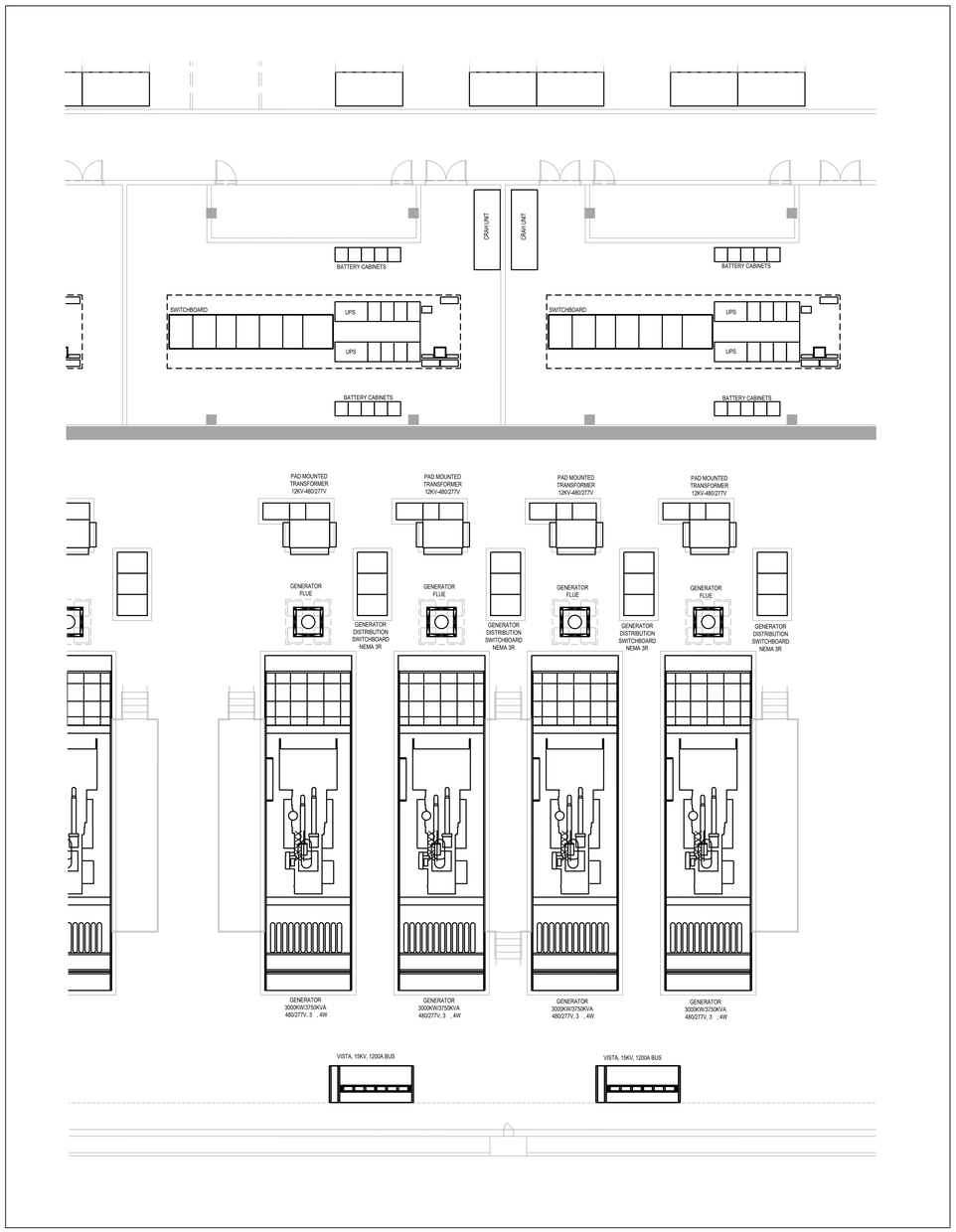
Ordering guide

Example: GL18-APD-1-4-80LA-4853-NW-120-BRP-LF

Prefix	Controls	Mounting	Optical System[8]	Wattage	LED Color	Voltage	Finish	Options
GL18 18" Gullwing LED Luminaire Constant Wattage **GL18-RK** 18" Gullwing LED Retrofit Kit	**—** Gullwing Standard Luminaire **GL18-DIM** 18" Gullwing LED with 0-10V Dimming **GL18-APD**[1] 18" Gullwing LED with Automatic Profile Dimming **GL18-MR50**[2,3,4] 18" Gullwing LED with Motion Response - 50% Low (pole mounted sensor) **GL18-APD-MRO**[2,3,4] 18" Gullwing LED with APD with Motion Response Override (pole mounted sensor) **GL18-MRI**[1,4] 13" Gullwing LED with Motion Response at 50% Low (luminaire mounted sensor) **GL18-APD-MRI**[1,4] 13" Gullwing LED with APD with Motion Response Override (luminaire mounted sensor) **Wireless systems** (Remote wireless controller available.) **LLC2**[1,4,5] #2 lens for 8' mounting heights **LLC3**[1,4,5] #3 lens for 9-20' mounting heights **LLC4**[1,4,5] #4 lens for 21-40' mounting heights **Network system (SiteWise)** **SW** Integral module[2,12] **SW-MRI3** luminaire mounted sensor option Type 3 **SW-MRI7** luminaire mounted sensor option Type 7 **SW-MRO** pole mounted sensor option	**1** Single **2** 2 @ 180° **2@90** 2 @ 90° **3** 3@90° **3@120** 3@120° **4** 4@90° **W** Wall Mount, Recessed J-Box **WS** Wall Mount, Surface Conduit	**2** Type 2 **2-90** Type 2@90° **2-270** Type 2@270° **3** Type 3 **3-90** Type 3@90° **3-270** Type 3@270° **4** Type 4 **4-90** Type 4@90° **4-270** Type 4@270° **5** Type 5	**50LA-4835** 48 LEDs, 350mA **80LA-4853** 48 LEDs, 530mA **105LA-4870** 48 LEDs, 700mA **160LA-481A** 48 LEDs, 1A **180LA-6490** 64 LEDs, 900mA **210LA-641A** 64 LEDs, 1A **200LA-9670** 96 LEDs, 700mA **230LA-9680** 96 LEDs, 800mA **265LA-9690** 96 LEDs, 900 mA **310LA-961A** 96 LEDs, 1A	**NW** Neutral White 4000K, 70 min. CRI **CW** Cool White 5700K, 70 min. CRI **WW** Warm White 3000K, 70 min. CRI	**120** **208** **240** **277** **347** **480** **UNV** (120-277V) **HVU** (347-480V)	**BLP** Black Paint **WP** White Paint **BRP** Bronze Paint **NP** Natural Aluminum Paint **OC** Optional Color *Specify optional color or RAL ex: OC-LGP or OC-RAL7024.* **SC** Special Color Specify. *Must supply color chip. Requires factory quote.*	**F**[4] Fusing **LF**[4] In-Line/In-Pole Fusing **PC**[4,5,7] Photocontrol and Receptacle (Includes PCR5) **PCR5**[4,5,7,8] Photocell Receptacle only with 2 dimming connections **PCR7**[4,5,8,9] Photocell Receptacle only with 2 dimming and 2 auxiliary connections **HS** External Houseside Shield **IS** Internal Houseside Shield (types 2, 3, 4 only) **CLR**[6] Clear Glass Lens (reduces performance) **RPA1** 3" Round Pole Adapter Required for 3" O.D. round or tapered round poles where top O.D. is less than 4" **RPA2** 4" and 5" Round Pole Adapter Required for 4"- 5" O.D. round poles **MA** Mast Arm Fitter - Mounts to a 2-3/8" O.D. mast arm. **TR1**[10] Single Transition **TR2**[10] Twin Transition **PTF2**[11] Pole Top Fitter 2 3/8" - 3" Dia. Tenon **PTF3**[11] Pole Top Fitter 3" - 3 1/2" Dia. Tenon **PTF4**[11] Pole Top Fitter 3 1/2" - 4" Dia. Tenon

1. Available **120-277V** only.
2. Available **120** or **277V** only.
3. **MR50** and **APD-MRO** luminaires require one motion sensor per pole, ordered separately. See page 2 for accessories.
4. Not available with Retrofit Kits (**GL18-RK**).
5. **LLC2**/**LLC3**/**LLC4**/**LLP** wireless system not configurable with **PC**/**PCR5**/**PCR7** Options. See pages 5-6 for more info.
6. Luminaire door frame and optic assembly provided standard without glass lens. Specify **CLR** option for clear glass lens.
7. Works with 3-pin or 5-pin NEMA photocell/dimming device.
8. If ordered with **DIM**, **APD**, **MRI**, **MR50**, **APD-MRI**, **APD-MRO**, dimming will not be connected to NEMA receptacle.
9. Works with 3-pin or 5-pin NEMA photocell/dimming device and auxiliary connections are not connected (for future use only).
10. Mounts to a 2-3/8" Top Tenon. Specify a round pole with a 4.50" O.D. for a smooth transition.
11. Not available in 120° mounting configurations.
12. **SW** option is not available with any other control options with the exception of **SW-MRI3**, **SW-MRI7** and **SW-MRO** motion response options.

2 **LED LUMINAIRE CUT SHEET**
NOT TO SCALE



1 **PARTIAL ELECTRICAL SITE PLAN**
NOT TO SCALE

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01	PCC ISSUANCE	10.07.19

MASTER PLAN

ELECTRICAL DETAILS

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E5.1**
SCALE NONE	

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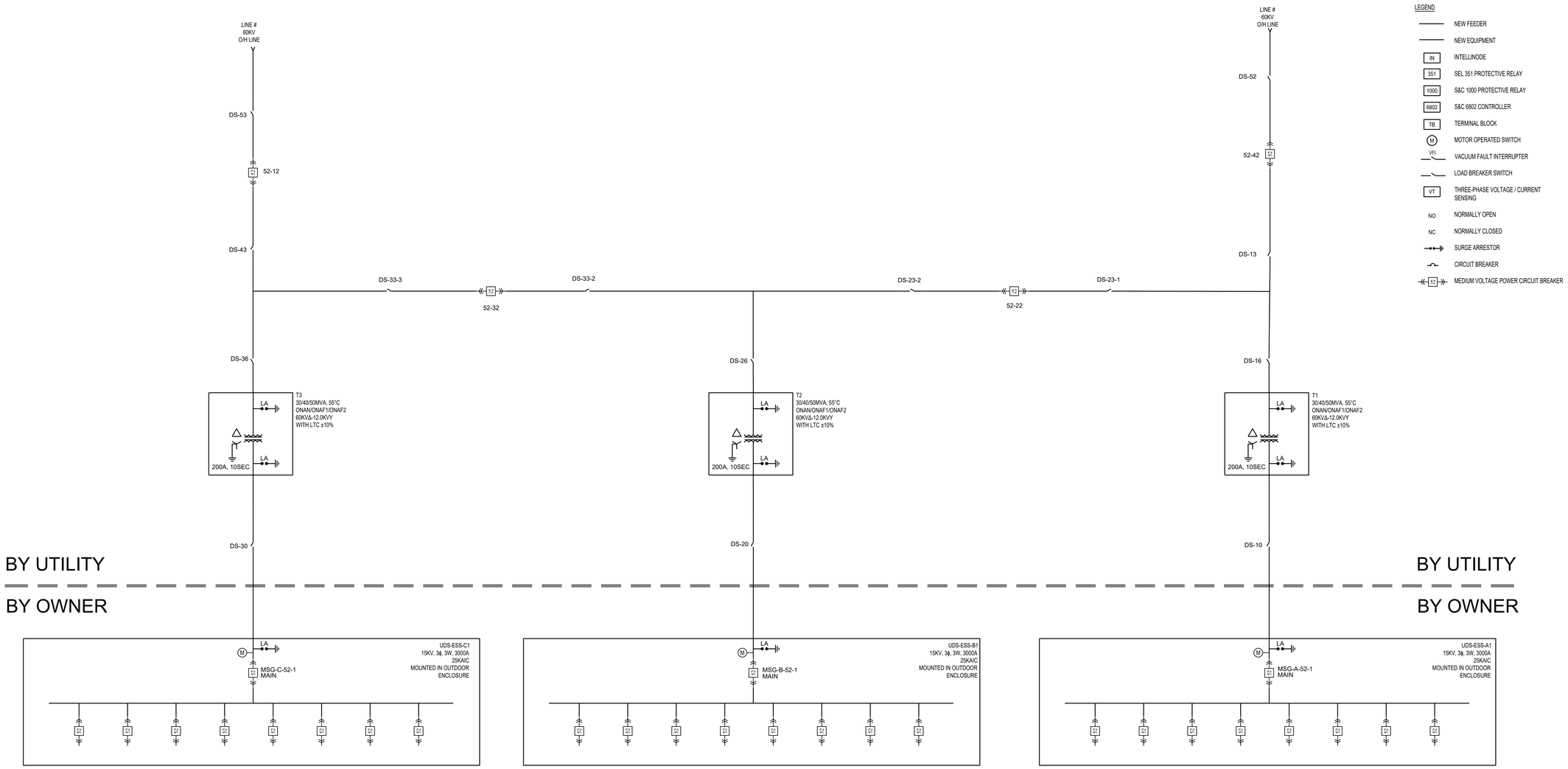

LEGEND

- NEW FEEDER
- NEW EQUIPMENT
- IN — INTELLINODE
- 351 — SEL 351 PROTECTIVE RELAY
- 1000 — S&C 1000 PROTECTIVE RELAY
- 6802 — S&C 6802 CONTROLLER
- TB — TERMINAL BLOCK
- M — MOTOR OPERATED SWITCH
- VFI — VACUUM FAULT INTERRUPTER
- LOAD BREAKER SWITCH
- VT — THREE-PHASE VOLTAGE / CURRENT SENSING
- NO — NORMALLY OPEN
- NC — NORMALLY CLOSED
- SURGE ARRESTOR
- CIRCUIT BREAKER
- 52 — MEDIUM VOLTAGE POWER CIRCUIT BREAKER

2825 LAFAYETTE STREET SUBSTATION - LOAD BALANCING

	SUITE	A-B PAIR		A-C PAIR		B-C PAIR		A-B PAIR		A-C PAIR		B-C PAIR		A-C PAIR		B-C PAIR	
		A1	B1	C1	A2	B2	C2	A3	B3	C3	A4	B4	C4	A5	C5	B5	C6
SOURCE OF 12KV SWITCHGEAR		A	B	C	D	A	B	C	D		A	B	C	A	B	C	D
SUITE CAPACITY GROUP	PBB			800													
	110	2,250	2,250	2,250	2,250												
	210	2,250	2,250	2,250	2,250												
	310	2,250	2,250	2,250	2,250												
	120					2,250	2,250	2,250	2,250								
	220					2,250	2,250	2,250	2,250								
	320					2,250	2,250	2,250	2,250								
	130									2,250	2,250	2,250	2,250				
	230									2,250	2,250	2,250	2,250				
	330									2,250	2,250	2,250	2,250				
	140													2,250	2,250	2,250	2,250
	240													2,250	2,250	2,250	2,250
TOTAL TRANSFORMERS		6		7		6		6		6		6		4		4	
TOTAL TRANSFORMERS		A-B PAIR	12	A-C PAIR	17	B-C PAIR	16										

NORMAL LOADS (ALL SVP TRANSFORMER AVAILABLE)

SOURCE OF 12KV SWITCHGEAR	TOTAL (KW)	A-B PAIR A1	A-B PAIR B1	A-C PAIR C1	A-C PAIR A2	B-C PAIR B2	B-C PAIR C2	A-B PAIR A3	A-B PAIR B3	A-C PAIR C3	A-C PAIR A4	B-C PAIR B4	B-C PAIR C4	A-C PAIR A5	A-C PAIR C5	B-C PAIR B5	B-C PAIR C6
NORMAL - A	31,500	6,750			6,750			6,750			6,750			4,500			
NORMAL - B	31,500		6,750			6,750			6,750			6,750				4,500	
NORMAL - C	36,800			7,550			6,750			6,750			6,750		4,500		4,500
TOTAL	99,800																

SVP 60KV-12KV TRANSFORMER RATING: at 55 Deg C: 30.0 MVA - 40.0 MVA - 50.0 MVA (Air - Fan 1 - Fan 2)

FAIL SCENARIOS (SINGLE SVP TRANSFORMER NOT AVAILABLE)

SOURCE OF 12KV SWITCHGEAR	Load Factor	TOTAL (KW)	A-B PAIR A1	A-B PAIR B1	A-C PAIR C1	A-C PAIR A2	B-C PAIR B2	B-C PAIR C2	A-B PAIR A3	A-B PAIR B3	A-C PAIR C3	A-C PAIR A4	B-C PAIR B4	B-C PAIR C4	A-C PAIR A5	A-C PAIR C5	B-C PAIR B5	B-C PAIR C6
A FAIL - LOAD ON B	100%	45,000		13,500			6,750			13,500			6,750				4,500	
A FAIL - LOAD ON C	91%	54,800			14,300			6,750			13,500			6,750		9,000		4,500
TOTAL		99,800																
B FAIL - LOAD ON A	100%	48,375	13,500			6,750			13,500			10,125			4,500			
B FAIL - LOAD ON C	97%	51,425			7,550			13,500			6,750			10,125		4,500		9,000
TOTAL		99,800																
C FAIL - LOAD ON A	99%	50,300	6,750			14,300			6,750			13,500			9,000			
C FAIL - LOAD ON B	100%	49,500		6,750			13,500			6,750			13,500				9,000	
TOTAL		99,800																

2825 LAFAYETTE STREET
ELECTRICAL LOAD CALCULATION
PER CAPACITY GROUP - BASED ON NORMAL OPERATION

LOAD	AMPS	kVA	kW	COMMENTS
LIGHTING	10	8	7	
RECEPTACLES	12	10	9	
EXHAUST FANS	3	2	2	
AIR COOLED CHILLER WITH WATER AT 75 LOAD STAGE 3 OF 4 ON	471	392	353	
CRAH (DATA HALL) - ALL UNITS	404	336	302	
CRAH (UPS ROOM)	40	34	30	
GENERATOR ENCLOSURE	6	9	9	
SUB-TOTAL - Full CRAC / ACC with Water	940	781	703	
UPS (75%, 0.99pf)	1,860	1,545	1,530	
TOTAL	2,800	2,326	2,233	

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01	PCC ISSUANCE	10.07.19

MASTER PLAN

ELECTRICAL ONE-LINE DIAGRAM MV SERVICE

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E7.1**
SCALE NONE	

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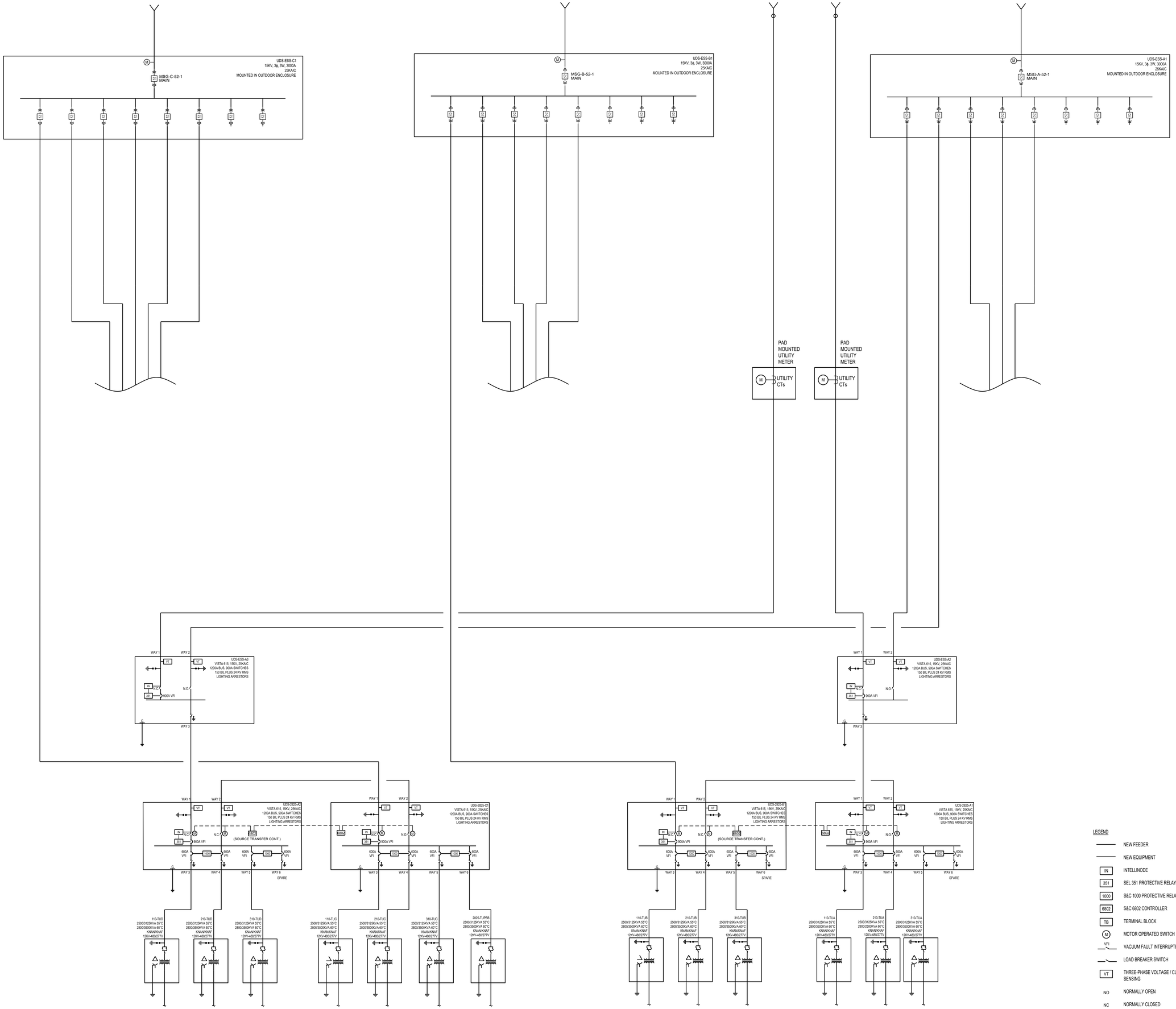

LEGEND

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- CIRCUIT BREAKER
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MASTER PLAN

ELECTRICAL ONE-LINE DIAGRAM MV DISTRIBUTION

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E7.2**
SCALE NONE	

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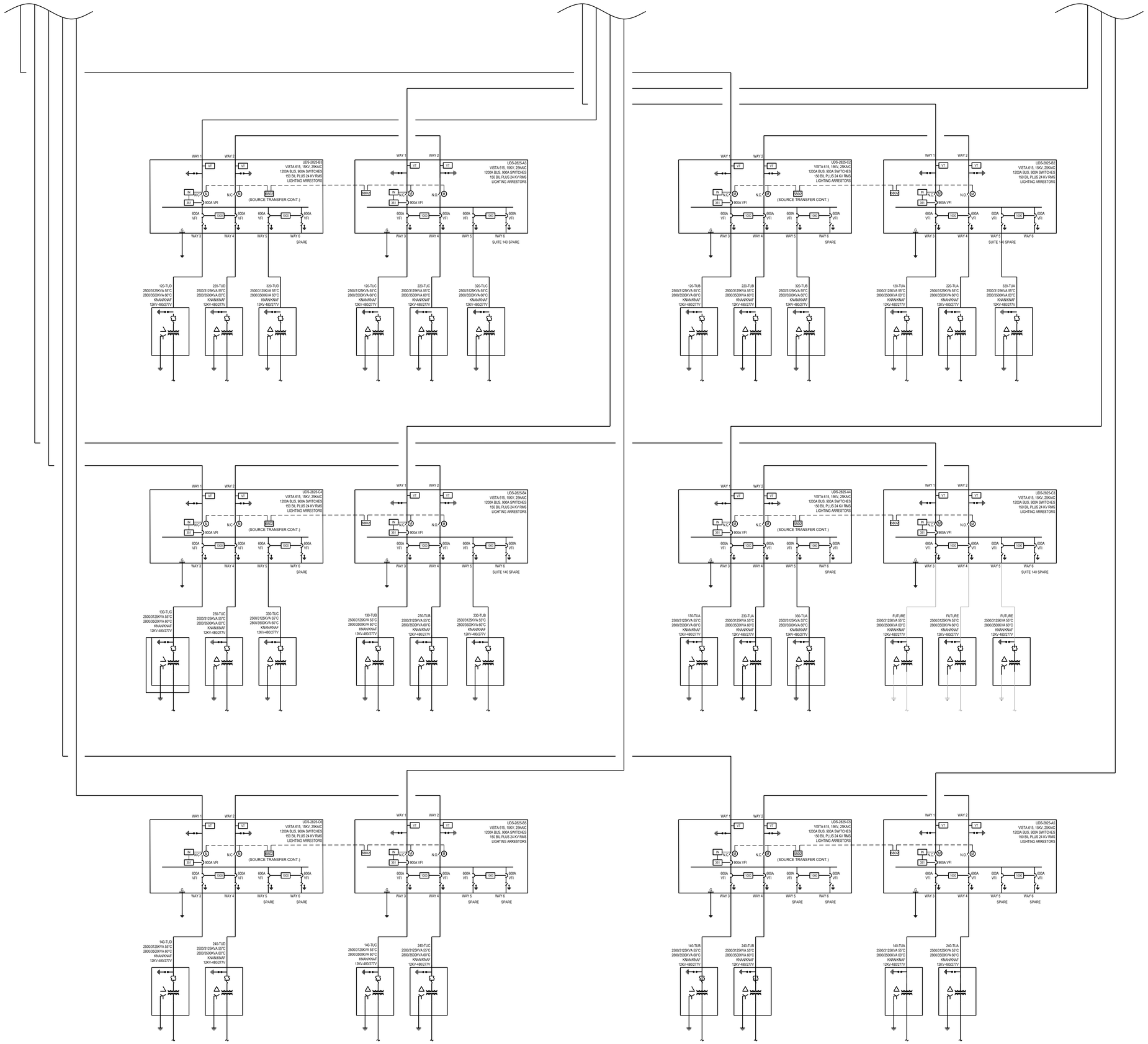

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ELECTRICAL ONE-LINE DIAGRAM MV DISTRIBUTION

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E7.3**
SCALE NONE	

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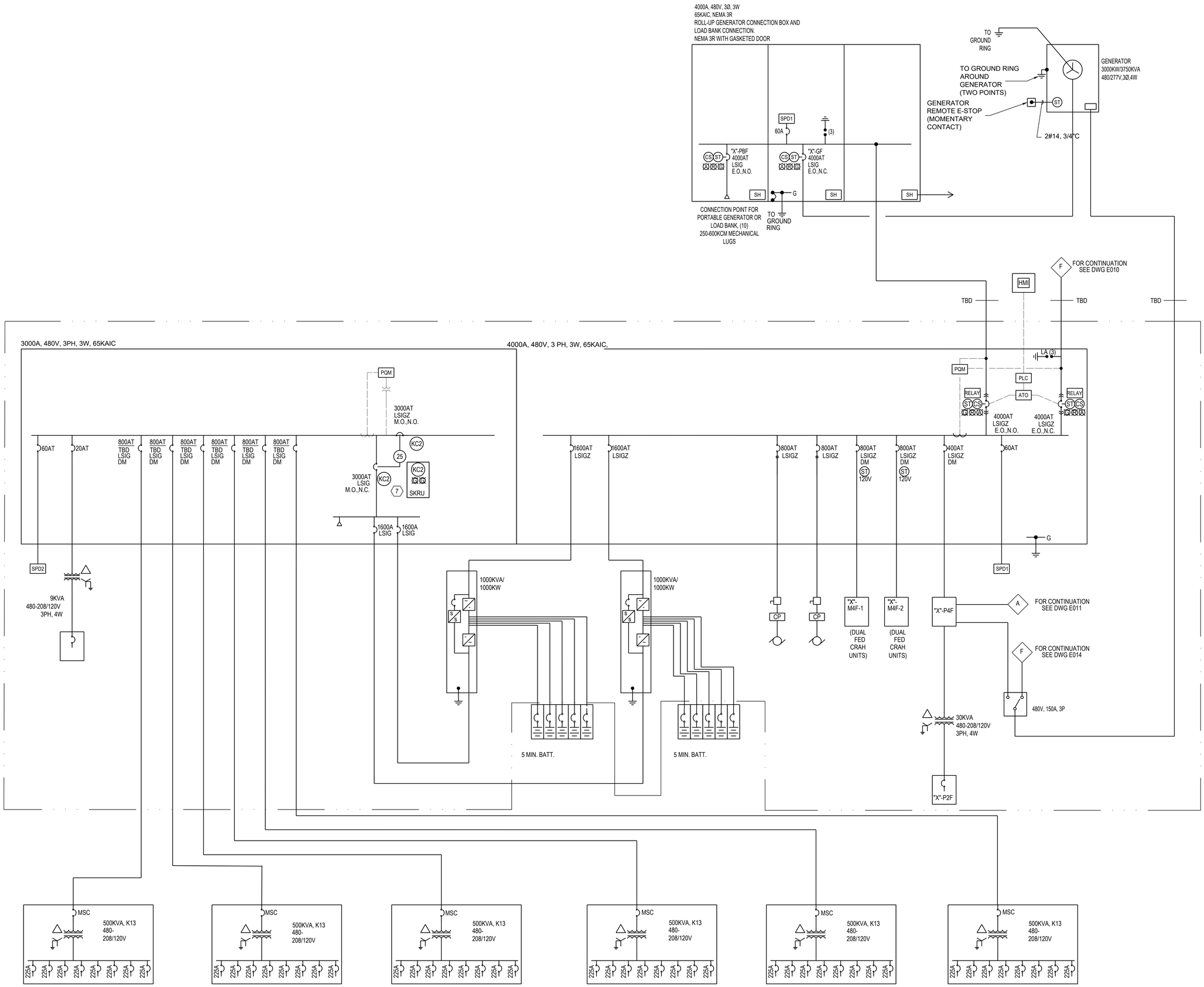

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NO.	RECORD	DATE
02	PCC ISSUANCE	06.19.20
01	PCC ISSUANCE	10.07.19

MASTER PLAN

ELECTRICAL ONE-LINE DIAGRAM SUITE

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E7.4**
SCALE NONE	

T:\2825 Lafayette\2825 Lafayette Street -Master Plan\DWGS\CAD\Elec\eg_02-One Lines.dwg 6/18/2020 10:50 AM vnemad

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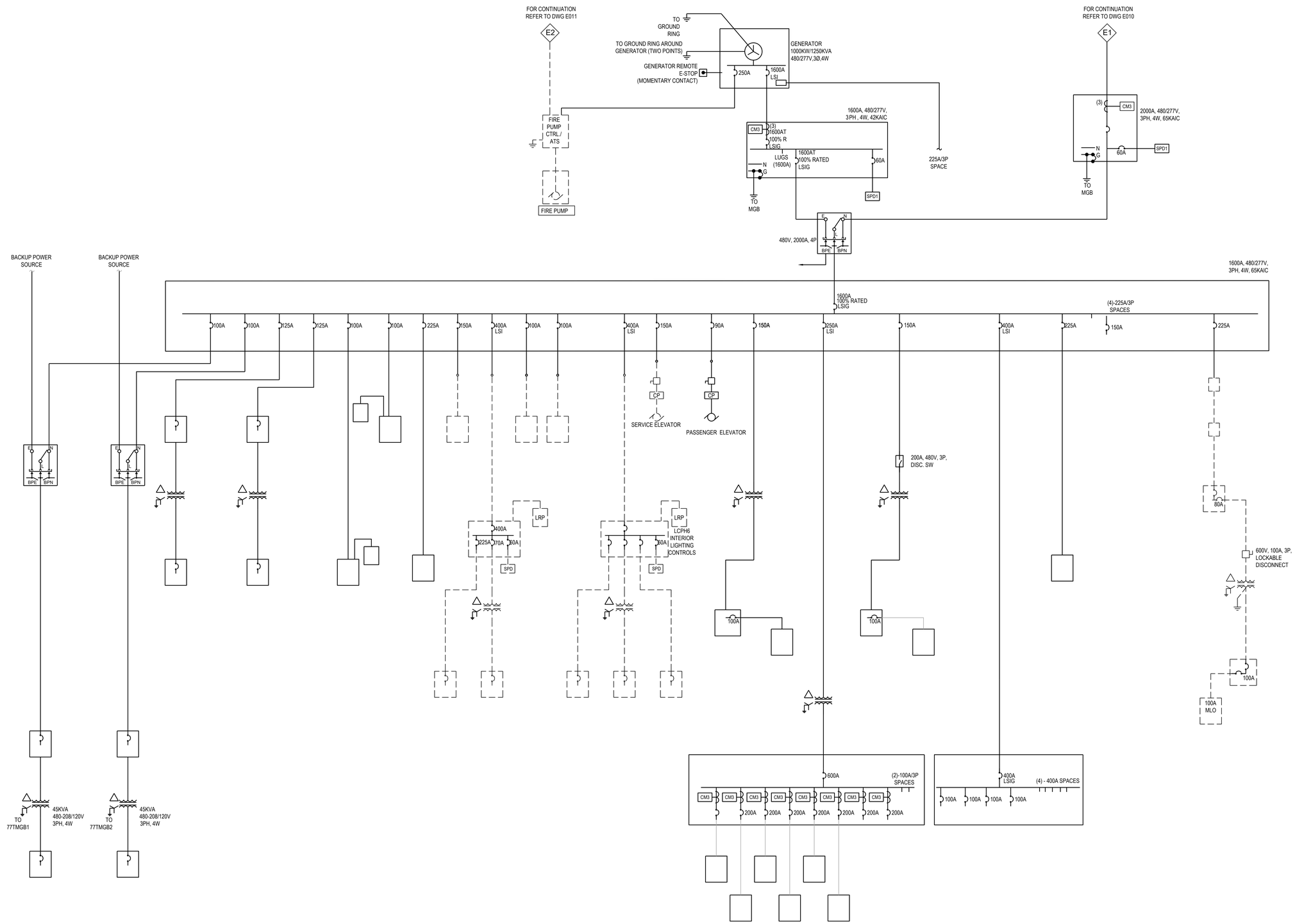

DIGITAL REALTY
Data Center Solutions

2825 LAFAYETTE STREET
SANTA CLARA, CA
95050-2627

MEP ENGINEER

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MASTER PLAN

ELECTRICAL ONE-LINE DIAGRAM PBB

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E7.5**
SCALE NONE	

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ELECTRICAL REDUNDANCY AND CONTROL OF PEAK LOAD

THERE WILL BE ELEVEN DATA CENTER SUITES WITHIN IN 2825 LAFAYETTE STREET DATA CENTER. EACH DATA CENTER SUITE WILL BE DESIGNED TO HANDLE 6.0 MW OF IT EQUIPMENT LOAD. THE TOTAL LOAD OF EACH DATA CENTER SUITE WILL BE 9.0 MW WHICH INCLUDES THE IT EQUIPMENT LOAD, MECHANICAL EQUIPMENT TO COOL THE IT EQUIPMENT LOAD, LIGHTING AND DATA CENTER MONITORING EQUIPMENT. THE SUM OF THE ELEVEN DATA CENTER SUITE WILL RESULT IN 66.0 MW OF IT EQUIPMENT LOAD AND 99.0 OF TOTAL ELECTRICAL LOAD.

THE IT EQUIPMENT WILL HAVE DUAL CORDS THAT WILL TAKE POWER FROM TWO DIFFERENT CAPACITY GROUPS. THE DUAL CORDED IT EQUIPMENT IS TYPICALLY DESIGNED TO EVENLY DRAW POWER FROM BOTH CORDS WHEN POWER IS AVAILABLE ON BOTH CORDS, AND AUTOMATICALLY DRAWS ALL OF ITS POWER FROM A SINGLE CORD WHEN POWER BECOME UN-AVAILABLE ON THE OTHER CORD.

THE DATA CENTER SUITE WILL BE DESIGNED TO CONTINUE SUPPORTING ALL OF THE IT EQUIPMENT LOAD IN THE SUITE WHEN ONE OF THE FOUR CAPACITY GROUPS IS EITHER SCHEDULED TO BE OUT-OF-SERVICE FOR MAINTENANCE OR BECOMES UN-AVAILABLE DUE TO EQUIPMENT FAILURE. THEREFORE, THE 12.0 MW OF TOTAL POWER INSTALLED FOR EACH DATA CENTER SUITE EFFECTIVELY PROVIDES ONLY 9.0 MW OF TOTAL POWER (A 4-TO-MAKE-3 DESIGN).

THE DUAL CORDED IT EQUIPMENT LOAD GETS POWER FROM TWO DIFFERENT CAPACITY GROUPS. SIX DIFFERENT CORD CONFIGURATIONS ARE USED TO EVENLY BALANCE THE LOADS BETWEEN THESE PAIRS OF CAPACITY GROUPS: A-B, A-C, A-D, B-C, B-D AND C-D.

AS AN EXAMPLE OF THE ELECTRICAL SYSTEM DESIGN, WHEN ELECTRICAL CAPACITY GROUP A BECOMES UN-AVAILABLE, THE IT EQUIPMENT CONNECTED TO THE A AND B ELECTRICAL CAPACITY GROUP WILL AUTOMATICALLY SHIFT ITS ENTIRE LOAD TO THE B ELECTRICAL CAPACITY GROUP. IT EQUIPMENT CONNECTED BETWEEN THE A-C AND A-D ELECTRICAL CAPACITY GROUPS ALSO PERFORM A SIMILAR POWER TRANSFER IN THE EVENT OF AN A CAPACITY GROUP FAILURE.

AS PART OF THE ELECTRICAL DESIGN, THE IT EQUIPMENT LOAD THAT STARTED ON ELECTRICAL CAPACITY GROUP A IS EVENLY TRANSFERRED TO THE B CAPACITY GROUP (750 KW), C CAPACITY GROUP (750 KW) AND D CAPACITY GROUP (750 KW). TO ALLOW FOR THIS POWER TRANSFER, EACH ELECTRICAL CAPACITY GROUP CAN ONLY BE LOADED TO 75% (2,250 KW OF THE 3,000 KW ELECTRICAL CAPACITY GROUP CAPACITY).

THE ELECTRICAL LOAD ON EACH ELECTRICAL CAPACITY GROUP IS MONITORED BY THE BUILDING AUTOMATION SYSTEM. WHEN THE ANY OF THE ELECTRICAL CAPACITY GROUPS REACH 67.5% LOADED (BASED ON 90% OF THE 75% MAXIMUM LOADING UNDER NORMAL OPERATION), AN ALARM IS ACTIVATED IN THE ENGINEERING OFFICE. THE OPERATIONS STAFF WILL WORK WITH THE TENANTS TO ENSURE THAT THE LEASED POWER LEVELS ARE NOT EXCEEDED.

THE CONSEQUENCE OF ELECTRICAL CAPACITY GROUPS EXCEEDING 75% LOADED COULD LEAD TO DROPPING IT EQUIPMENT WHEN COUPLED WITH A CAPACITY GROUP FAILURE EVENT. IF ALL THE ELECTRICAL CAPACITY GROUPS SERVING A DATA CENTER SUITE (4 CAPACITY GROUPS) ARE LOADED OVER 75% AND AN ELECTRICAL CAPACITY GROUP FAILS, THE RESULTING LOAD TRANSFERRING TO THE THREE AVAILABLE CAPACITY GROUP WOULD EXCEED THE RATING OF THE ELECTRICAL CAPACITY GROUPS AND WOULD LEAD TO OVER-CURRENT PROTECTION DEVICES TRIPPING OPEN DUE TO THE OVERLOAD CONDITION. THEREFORE, IT IS VITAL TO THE RELIABILITY OF THE DATA CENTER TO MAKE SURE THAT ALL CAPACITY GROUPS REMAIN BELOW 75% LOADED.

IN ADDITION TO ELECTRICAL REDUNDANCY REQUIREMENTS WITHIN THE LDC THAT WILL SELF-REGULATE THE TOTAL AMOUNT OF POWER USED BY EACH DATA CENTER SUITE TO 9.0 MW (99.8 MW TOTAL FOR THE BUILDING), THE SVP ELECTRICAL SUBSTATION WILL PROVIDE A MORE STRINGENT LIMITATION ON THE LDC.

THE NEW SVP ELECTRICAL SUBSTATION WILL BE RATED FOR 100 MVA (MEGA VOLT-AMPERE) ELECTRICAL SUBSTATION ALONG LAFAYETTE STREET (THE WESTERN SIDE OF THE SITE). THE THREE-BAY SUBSTATION (THREE 50 MVA 60 KV-12KV STEP-DOWN TRANSFORMERS) WILL BE DESIGNED TO ALLOW ONE OF THE THREE TRANSFORMERS TO BE TAKEN OUT OF SERVICE, EFFECTIVELY PROVIDING 100 MVA OF TOTAL POWER (A 3-TO-MAKE-2 DESIGN).

NOTE: THE RELATIONSHIP BETWEEN MVA AND MW IS MW = MVA X POWER FACTOR. A TYPICAL FACTOR FOR A DATA CENTER IS AROUND 0.95. POWER FACTOR IS A FUNCTION OF THE LOADS, NOT THE UTILITY SUBSTATION. AT 0.95 POWER FACTOR, A 100 MVA SUBSTATION CAN PROVIDE 95 MW OF POWER. THEREFORE, THE SVP UTILITY SUBSTATION WILL LIMIT THE LDC TO BELOW 100 MW OF TOTAL LOAD.

ELECTRICAL SYSTEM SEQUENCE OF OPERATIONS

SCENARIO - 60 KV CIRCUIT FAULT OR 60KV SOURCE FAILURE:

IN THE EVENT OF A 60KV CIRCUIT FAULT, AUTOMATIC ISOLATION SWITCHES IN THE SVP 60KV LOOP WILL ISOLATE THE LINE FAULT AND CONTINUE TO PROVIDE POWER TO BOTH SIDES OF THE ISOLATED PORTION OF THE 60KV CIRCUIT. NO POWER INTERRUPTIONS AT THE 2825 LAFAYETTE SITE ARE EXPECTED IN THIS SCENARIO.

A SVP 115KV-TO-60KV SUBSTATION (SOURCE) OUTAGE WOULD ALSO RESULT IN A SIMILAR SEQUENCE.

SCENARIO - 12KV EQUIPMENT OR CABLE FAULT ON SITE:

IN THE EVENT OF EQUIPMENT OR CABLE FAILURE BETWEEN THE NEW 60KV-TO-12KV SVP LAFAYETTE STREET SUBSTATION AND THE ELECTRICAL CAPACITY GROUPS WITHIN THE 2825 LAFAYETTE STREET BUILDING, THE MAIN-TIE-TIE-MAIN TRANSFER IN THE 15KV VISTA SWITCHGEAR PAIRS IN THE EQUIPMENT YARD WILL WAIT 3 SECONDS AND WILL THEN OPEN THE MAIN SWITCH / WAY WITH THE DE-ENERGIZED UTILITY SOURCE AND WILL THEN CLOSE THE TIES SWITCHES. THE OPEN AND CLOSE SEQUENCES WILL TAKE 4 TO 7 SECONDS. THEREFORE, POWER IS EXPECTED TO BE RESTORED IN APPROXIMATELY 10 SECONDS IF THE FAILURE IS UPSTREAM OF THE 15KV VISTA SWITCHGEAR PAIRS.

AS PART OF THIS SAME SCENARIO, THE TRANSFER CONTROL PLCS IN ELECTRICAL CAPACITY GROUPS THAT EXPERIENCE THE POWER INTERRUPTION WILL START THEIR GENERATORS AFTER 3 SECONDS. IT WILL TAKE APPROXIMATELY 10 SECONDS FOR THE GENERATORS TO GET UP TO RATED VOLTAGE AND FREQUENCY, RESULTING IN GENERATOR POWER BEING AVAILABLE AFTER 13 SECONDS AFTER THE INITIAL POWER INTERRUPTION. IF POWER HAS NOT BEEN RESTORED TO THE ELECTRICAL CAPACITY GROUP AFTER 15 SECONDS, THEN THE TRANSFER CONTROL PLC WILL START A UTILITY-TO-GENERATOR TRANSFER. IF POWER IS RESTORED TO THE ELECTRICAL CAPACITY GROUP IS LESS THAN 15 SECONDS, THEN THE GENERATORS WILL BE PUT IN COOLDOWN MODE AND WILL TURN OFF AFTER A MINUTE. IN THIS SCENARIO, APPROXIMATELY ONE THIRD OF THE GENERATORS ON THE SITE WILL TYPICALLY START.

THE ELECTRICAL CAPACITY GROUP TRANSFER SYSTEM HAS A UTILITY MAIN CIRCUIT BREAKER AND A GENERATOR MAIN CIRCUIT BREAKER. WHEN A UTILITY-TO-GENERATOR TRANSFER IS INITIATED, THE UTILITY MAIN CIRCUIT BREAKER IS IMMEDIATELY OPENED, THE SYSTEM WAITS 5 SECONDS, THEN THE GENERATOR MAIN CIRCUIT BREAKER IS CLOSED. THEREFORE, POWER IS EXPECTED TO BE RESTORED IN APPROXIMATELY 20 SECONDS IN THIS SCENARIO.

RESTORING UTILITY POWER:

WHEN BOTH UTILITY SOURCES ARE RESTORED TO THE 12KV VISTA SWITCHGEAR PAIRS (MAIN-TIE-TIE-MAIN TRANSFER SYSTEM), THE BUILDING OPERATIONS TEAM WILL MONITOR THE UTILITY POWER TO MAKE SURE THAT IS STABLE BEFORE RESTORING THE TRANSFER CONTROL SYSTEMS TO THEIR NORMAL STATE.

WHEN BOTH UTILITY SOURCES ARE DETERMINED TO BE STABLE, THE BUILDING OPERATIONS TEAM WILL FIRST MANUALLY RE-CONFIGURE THE MAIN-TIE-TIE-MAINS TO HAVE BOTH TIES OPEN AND THEN BOTH MAINS CLOSED AND THEN RESTORE THE VISTA SWITCHGEAR TRANSFER CONTROLLER TO AUTOMATIC OPERATION. COMMANDING THE MAINS AND TIES OPEN AND CLOSED CAN BE PERFORMED FROM A REMOTE OPERATOR WORKSTATION OR AT EACH VISTA SWITCHGEAR.

THE BUILDING OPERATIONS TEAM WILL THEN MANUALLY INITIATE A RE-TRANSFER AT EACH OF THE CAPACITY GROUP TRANSFER CONTROLLERS TO TRANSFER FROM GENERATOR POWER TO UTILITY POWER. RE-TRANSFER IS INITIATED BY SELECTING THE RE-TRANSFER OPTION ON THE OPERATOR INTERFACE SCREEN IN EACH OF THE DATA CENTER SUITES. WHEN THE RE-TRANSFER IS INITIATED, THE GENERATOR MAIN CIRCUIT BREAKER WILL OPEN, THE SYSTEM WILL WAIT 5 SECONDS, THEN THE UTILITY MAIN CIRCUIT BREAKER WILL CLOSE. THE GENERATOR WILL AUTOMATICALLY CHANGE TO THE COOLDOWN MODE AND WILL TURN OFF AFTER ONE MINUTE.

IF THE SOURCE OF THE UTILITY FAILURE RESULTS IN A PORTION OF THE ELECTRICAL DISTRIBUTION REMAINING WITHOUT UTILITY POWER FOR AN EXTENDED PERIOD OF TIME, THE BUILDING OPERATIONS TEAM WILL RESTORE UTILITY POWER TO AS MANY OF THE ELECTRICAL CAPACITY GROUPS AS POSSIBLE.

UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEMS:

DURING THE UTILITY POWER OUTAGES BETWEEN THE UTILITY-TO-GENERATOR AND GENERATOR-TO-UTILITY TRANSFERS, THE UNINTERRUPTABLE POWER SUPPLY (UPS) SYSTEM WILL CONTINUE TO PROVIDE POWER TO THE IT EQUIPMENT IN THE DATA CENTER WITHOUT AN INTERRUPTION TO THE IT EQUIPMENT. EACH ELECTRICAL CAPACITY GROUP HAS A UPS SYSTEM WITH 5 MINUTES OF BATTERY BACK-UP.

MECHANICAL COOLING EQUIPMENT:

MECHANICAL COOLING EQUIPMENT WILL TURN OFF AND THEN AUTOMATICALLY TURN BACK ON WHEN POWER IS RESTORED (UTILITY OR GENERATOR POWER).

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MASTER PLAN

ELECTRICAL SEQUENCE OF OPERATIONS

PRINCIPAL IN CHARGE MC	PROJECT NUMBER C190280
PROJECT MANAGER CM	DATE XXX
PROJECT ENGINEER XXX	SHEET NUMBER **E7.7**
SCALE NONE	

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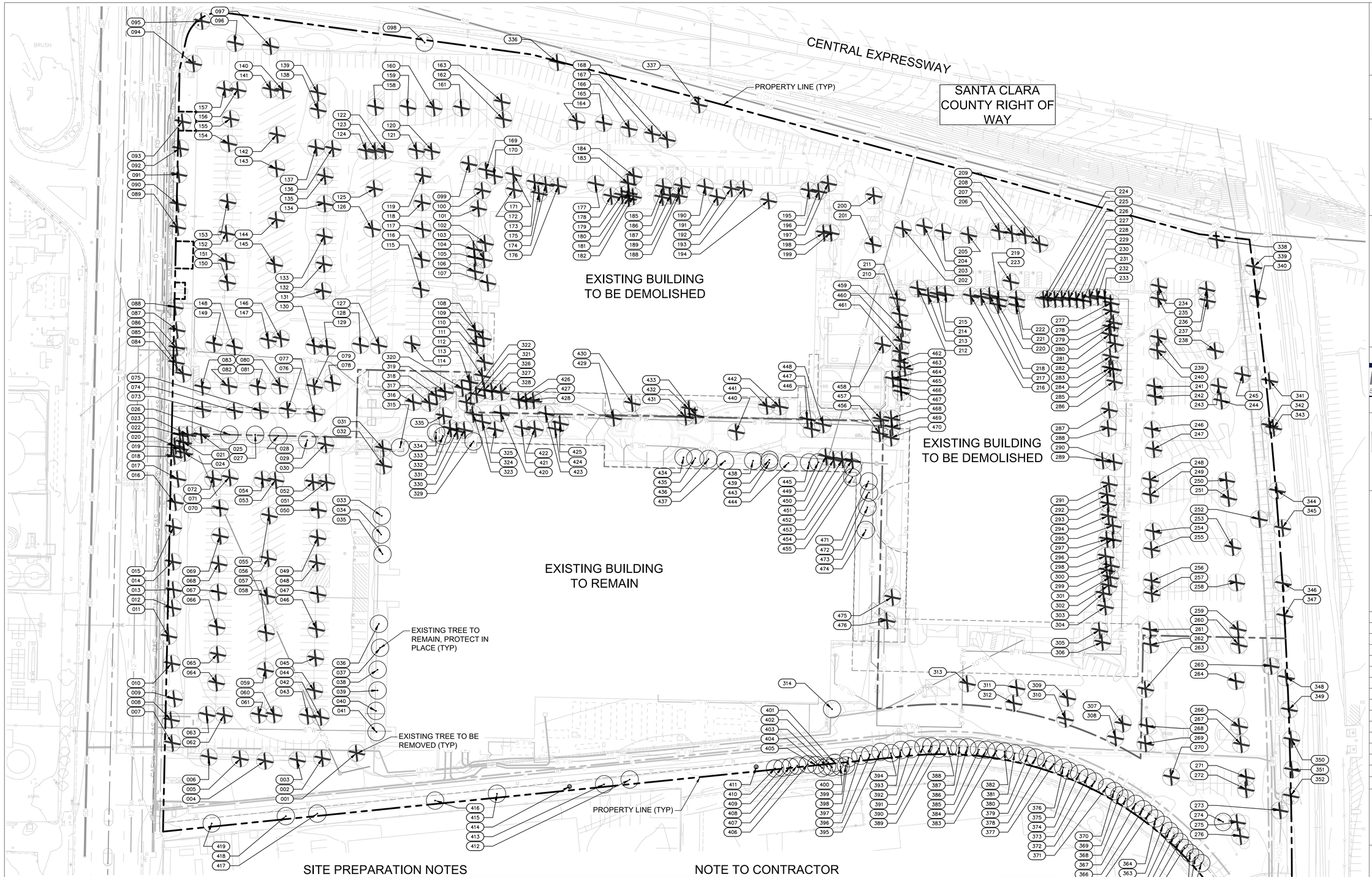
LANDSCAPE DRAWING SET

L1.0 through L2.3



TREE DISPOSITION

TREES	CODE	QTY	DESCRIPTION
	ER	375	EXISTING TREE - TO BE REMOVED
	EP	99	EXISTING TREE - TO REMAIN PROTECT IN PLACE
	ES	2	EXISTING STUMP / TO BE REMOVED

TREE REPLACEMENT REQ.	
24" BOX TREE REPLACEMENT REQ.	750
OR.	
36" BOX TREE REPLACEMENT REQ.	375

NOTE:
TREES TO BE REPLACED AT A 2:1 RATIO AT 24" BOX SIZE. TREES MAY BE REPLACED AT A 1:1 RATIO USING A 36" BOX SIZE. CURRENT MITIGATION INFORMATION IS SUBJECT TO CHANGE BASED ON FUTURE PLAN UPDATES.

SITE PREPARATION NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET THE OWNER OR OWNER'S REPRESENTATIVE AND IDENTIFY TREES WHICH ARE TO BE REMOVED. DO NO CLEARING WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.
2. IF, IN ORDER TO PERFORM EXCAVATION WORK, IT BECOMES NECESSARY TO CUT ROOTS OF PLANTS TO BE SAVED WITHIN THE PROPERTY LIMITS OR LOCATED ON ADJACENT PROPERTY, SUCH ROOTS SHOULD BE CUT NEATLY, COVERED WITH BURLAP AND KEPT MOIST UNTIL ROOTS ARE BACK FILLED.
3. TREE REMOVAL SHALL INCLUDE THE FILLING, CUTTING, GRUBBING OUT OF ENTIRE ROOTBALLS AND SATISFACTORY OFF-SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS, VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED BY THE REMOVAL OPERATIONS.
4. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE INSIDE AND OUTSIDE THE LIMITS OF WORK DUE TO HIS CONTRACT OPERATIONS.
5. ALL REFUSE, DEBRIS, UNSUITABLE MATERIALS AND MISCELLANEOUS MATERIALS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR.
6. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE TO CONTRACTOR

1. PER COUNTY OF SANTA CLARA TREE PRESERVATION AND REMOVAL GUIDELINES, TREES OF SIGNIFICANT STATUS OR CIRCUMFERENCE (37.7") WITHIN PROJECT LIMITS THAT ARE TO BE REMOVED SHALL REQUIRE A TREE REMOVAL PERMIT. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS, PRIOR TO BEGINNING ANY CONSTRUCTION WORK.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL TREES NOT CALLED OUT FOR REMOVAL AND NOT SPECIFICALLY SHOWN ON THESE PLANS IN THE NEARBY VICINITY OF THIS PROJECT. IF THE LIMITS OF DISTURBANCE AFFECT NEARBY TREES TO REMAIN, THE CONTRACTOR SHALL IMPLEMENT TREE PROTECTION MEASURES TO ENSURE EXISTING TREES TO REMAIN ARE PRESERVED THROUGH CONSTRUCTION. REFER TO SHEET L1.1 FOR TREE DISPOSITION DETAILS.
3. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR A 90-DAY MAINTENANCE PERIOD FOR ALL PROPOSED AND EXISTING PLANT MATERIAL TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY DEAD OR IN-DECLINE PLANT MATERIAL AFFECTED BY CONSTRUCTION OR INSTALLED DURING THIS PROJECT FOR AN ADDITIONAL ONE-YEAR GUARANTEE PERIOD. PLANTS THAT DIE DURING THE ONE-YEAR PERIOD SHALL BE REPLACED PROMPTLY IN-KIND AND OF A COMPARABLE SIZE.

DIGITAL REALTY
Data Center Solutions

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LANDSCAPE ARCHITECT OF RECORD SEAL
LICENSED LANDSCAPE ARCHITECT
Michael Alan Jon Lewis No. 4297
Signature
Renewal Date
Date
STATE OF CALIFORNIA

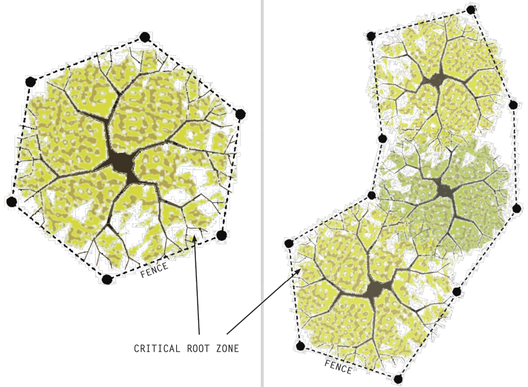
NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

DLR DATA CENTER
2825 LAFAYETTE STREET
SANTA CLARA, CA, 95050

TREE DISPOSITION PLAN

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	06/19/20
PROJECT ENGINEER	SHEET NUMBER
KN	L1.0
SCALE	
AS SHOWN	

K:\BAY_LDEV\197250001 - DLR Data Center (Lafayette St.) - MRJ\CAD\Exhibits\Entitlement Drawings\L1.0 PRELIM TREE DISPOSITION PLAN OPT 2.dwg 6/19/2020 2:08 PM Michael.Thomsen



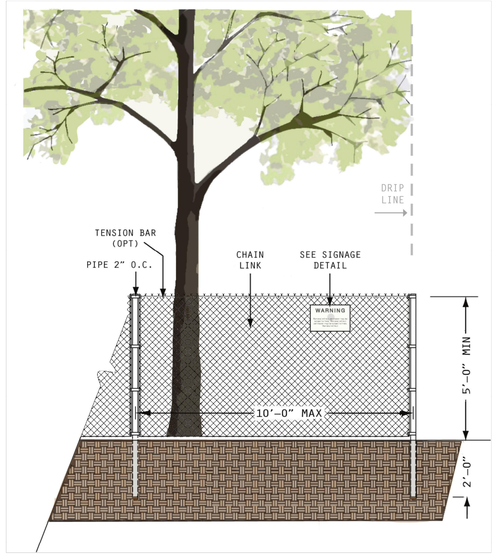
SINGLE TREE

MULTIPLE TREES

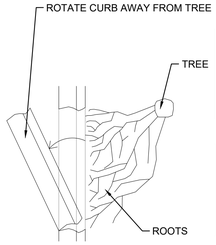
NOTES:

1. Tree protection fencing shall be erected at the edge of the critical root zone or beyond prior to the start of any clearing, grading or other construction activity.
2. Fence shall be minimum 5 feet tall constructed of sturdy material (chain-link or equivalent strength/ durability).
3. Fence shall be supported by vertical posts driven 2 feet (min) into the ground and spaced not more than 10 feet apart.
4. A sign that includes the words, "WARNING: This fence shall not be removed without the expressed permission of the Santa Clara County Planning Office," shall be securely attached to the fence in a visually prominent location.

TREE PROTECTION FENCE DETAIL
PLAN VIEW



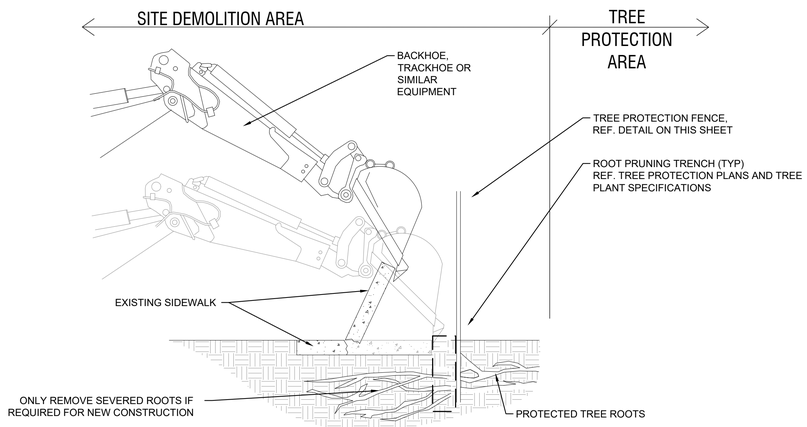
TREE PROTECTION FENCE DETAIL
ELEVATION VIEW



DEMOLITION SEQUENCE:
1. PERFORM ANY ROOT PRUNING.
2. INSTALL TREE PROTECTION FENCING
3. CAREFULLY REMOVE SIDEWALK AND BASE MATERIAL, COORDINATE ALL DEMOLITION OPERATIONS AROUND PROTECTED TREES WITH ENGINEER AND PROJECT ARBORIST.

NOTES:
1. PRIOR TO DEMOLITION ACTIVITIES, COORDINATE WITH OWNER'S REPRESENTATIVE.
2. ALL TREE PROTECTION MEASURES MUST BE IN PLACE AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION ACTIVITIES.
3. OWNER'S REPRESENTATIVE TO APPROVE ANY CANOPY THINNING AND/OR CANOPY RAISING PRUNING TO ALLOW FOR DEMOLITION ACTIVITIES PRIOR TO CONSTRUCTION.

PLAN VIEW



A CURB AND SIDEWALK DEMOLITION W/ LANDSCAPE PROTECTION

NTS

COUNTY OF SANTA CLARA TREE DISPOSITION NOTES

1. FENCING:
   ALL TREES TO BE RETAINED SHALL BE PROTECTED WITH CHAIN LINK FENCING OR OTHER RIGID FENCE ENCLOSURE ACCEPTABLE BY THE PLANNING OFFICE. FENCED ENCLOSURES FOR TREES TO BE PROTECTED SHALL BE ERECTED AT THE DRIPLINE OF TREES OR AS ESTABLISHED BY THE ARBORIST TO ESTABLISH THE TREE PROTECTIVE ZONE (TPZ) IN WHICH NO SOIL DISTURBANCE IS PERMITTED AND ACTIVITIES ARE RESTRICTED.
   ALL TREES TO BE PRESERVED SHALL BE PROTECTED WITH MINIMUM 5-FOOT HIGH FENCES ARE TO BE MOUNTED ON 2-INCH DIAMETER GALVANIZED IRON POSTS, DRIVEN INTO THE GROUND TO A DEPTH OF AT LEAST 2 FEET, AT NO MORE THAN 10-FOOT SPACING (SEE DETAIL, AVAILABLE AT WWW.SCCPLANNING.ORG). THIS DETAIL SHALL APPEAR ON GRADING, DEMOLITION AND BUILDING PERMIT PLANS.
   TREE FENCING SHALL BE ERECTED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS AND REMAIN IN PLACE UNTIL THE FINAL INSPECTION.
2. "WARNING" SIGNS (SEE SAMPLE SIGNAGE DESIGN THIS SHEET):
   A WARNING SIGN SHALL BE PROMINENTLY DISPLAYED ON EACH TREE PROTECTIVE FENCE PER THE REQUIREMENTS OF DEVELOPMENT PURSUANT TO THE SANTA CLARA COUNTY PLANNING OFFICE. (SEE ATTACHED EXAMPLE). THE SIGNS ARE AVAILABLE AT THE PLANNING AND BUILDING INSPECTION OFFICES OR AT WWW.SCCPLANNING.ORG.
3. IRRIGATION PROGRAM:
   IRRIGATE TO WET THE SOIL WITHIN THE TPZ DURING THE DRY SEASON AS SPECIFIED BY THE PROJECT ARBORIST.
4. DUST CONTROL PROGRAM:
   DURING PERIODS OF EXTENDED DROUGHT, OR GRADING, SPRAY TRUNK, LIMBS AND FOLIAGE TO REMOVE ACCUMULATED CONSTRUCTION DUST.

WARNING

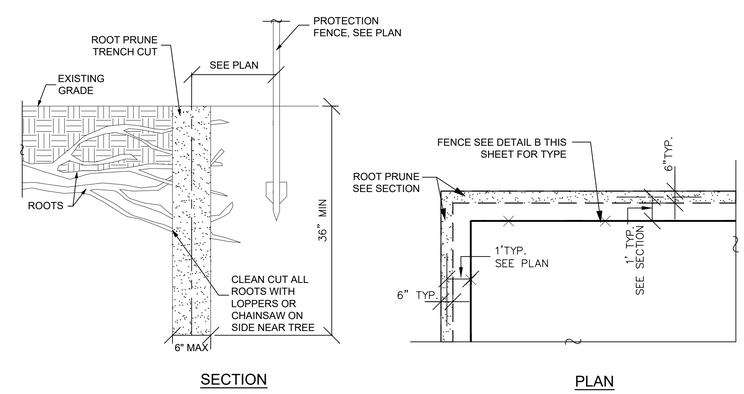
This fencing shall not be removed without permission from the Santa Clara County Planning Office: (408) 299-5770

REMOVAL WITHOUT PERMISSION MAY BE SUBJECT TO FINES

Santa Clara County Ordinance Code Chapter C16

County of Santa Clara tree protection measures may be found at:
http://www.sccplanning.gov

WARNING SIGN ON TREE PROTECTIVE FENCE



SECTION

PLAN

B ROOT PRUNING

NTS

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LANDSCAPE ARCHITECT OF RECORD SEAL

LICENSED LANDSCAPE ARCHITECT
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

DLR DATA CENTER
2825 LAFAYETTE STREET
SANTA CLARA, CA, 95050

TREE DISPOSITION DETAILS

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 06/19/20
PROJECT ENGINEER KN	SHEET NUMBER
SCALE AS SHOWN	L1.1

TREE INVENTORY

Tree #	Species	Latin Name	DBH (in.)	TPZ radius (ideal; feet)	Project Feature(s) Impacting	Disposition
1	Evergreen pear	Pyrus kawakamii	17	21.3	Driveway	REMOVE
2	London plane	Platanus x acerifolia	8.9	8.9	Driveway	REMOVE
3	London plane	Platanus x acerifolia	8.5	8.5	Driveway	REMOVE
4	London plane	Platanus x acerifolia	11.9	11.9	Driveway	REMOVE
5	London plane	Platanus x acerifolia	8.2	8.2	Driveway	REMOVE
6	London plane	Platanus x acerifolia	8.6	8.6	Driveway	REMOVE
7	London plane	Platanus x acerifolia	13.4	13.4	Transmission Lines	REMOVE
8	London plane	Platanus x acerifolia	12.8	12.8	Transmission Lines	REMOVE
9	London plane	Platanus x acerifolia	9.2	9.2	Transmission Lines	REMOVE
10	London plane	Platanus x acerifolia	8.8	8.8	Transmission Lines	REMOVE
11	London plane	Platanus x acerifolia	11	11	Transmission Lines	REMOVE
12	London plane	Platanus x acerifolia	12.9	12.9	Transmission Lines	REMOVE
13	London plane	Platanus x acerifolia	13.1	13.1	Transmission Lines	REMOVE
14	London plane	Platanus x acerifolia	11.6	11.6	Transmission Lines	REMOVE
15	London plane	Platanus x acerifolia	12	12	Concrete Path	REMOVE
16	London plane	Platanus x acerifolia	11.9	11.9	Transmission Lines	REMOVE
17	London plane	Platanus x acerifolia	13.3	13.3	Transmission Lines	REMOVE
18	Purple-leaf plum	Prunus cerasifera	5.9	5.9	Transmission Lines	REMOVE
19	Purple-leaf plum	Prunus cerasifera	5.3	5.3	Transmission Lines	REMOVE
20	Purple-leaf plum	Prunus cerasifera	6.3	6.3	Transmission Lines	REMOVE
21	Purple-leaf plum	Prunus cerasifera	4.8	4.8	Substation	REMOVE
22	Purple-leaf plum	Prunus cerasifera	6.7	6.7	Transmission Lines	REMOVE
23	Purple-leaf plum	Prunus cerasifera	6.8	6.8	Substation	REMOVE
24	London plane	Platanus x acerifolia	13.1	13.1	Substation	REMOVE
25	London plane	Platanus x acerifolia	9.2	9.2	Substation	REMOVE
26	London plane	Platanus x acerifolia	8	8	None	Retain
27	London plane	Platanus x acerifolia	6.9	6.9	None	Retain
28	London plane	Platanus x acerifolia	11.1	11.1	None	Retain
29	London plane	Platanus x acerifolia	11	11	None	Retain
30	London plane	Platanus x acerifolia	11	11	None	REMOVE
31	London plane	Platanus x acerifolia	14.4	14.4	None	REMOVE
32	London plane	Platanus x acerifolia	12.5	15.6	None	REMOVE
33	London plane	Platanus x acerifolia	15.4	15.4	None	Retain
34	London plane	Platanus x acerifolia	13	13	None	Retain
35	London plane	Platanus x acerifolia	15.7	15.7	None	Retain
36	London plane	Platanus x acerifolia	15	15	None	Retain
37	London plane	Platanus x acerifolia	14.8	14.8	None	Retain
38	London plane	Platanus x acerifolia	14.1	14.1	None	Retain
39	London plane	Platanus x acerifolia	14.9	14.9	None	Retain
40	London plane	Platanus x acerifolia	11.1	11.1	None	Retain
41	London plane	Platanus x acerifolia	12.8	12.8	None	Retain
42	London plane	Platanus x acerifolia	5.9	5.9	Driveway	REMOVE
43	London plane	Platanus x acerifolia	7.6	7.6	Substation	REMOVE
44	Raywood ash	Fraxinus angustifolia 'Raywood'	10.4	13	Substation	REMOVE
45	Raywood ash	Fraxinus angustifolia 'Raywood'	13.5	16.9	Substation	REMOVE
46	Raywood ash	Fraxinus angustifolia 'Raywood'	10.8	13.5	Substation	REMOVE
47	Raywood ash	Fraxinus angustifolia 'Raywood'	12.1	15.1	Substation	REMOVE
48	Raywood ash	Fraxinus angustifolia 'Raywood'	12	15	Substation	REMOVE
49	Raywood ash	Fraxinus angustifolia 'Raywood'	10.1	12.6	Substation	REMOVE
50	Raywood ash	Fraxinus angustifolia 'Raywood'	12.6	15.8	Substation	REMOVE
51	London plane	Platanus x acerifolia	8.7	10.9	Substation	REMOVE
52	London plane	Platanus x acerifolia	7.2	9	Substation	REMOVE
53	London plane	Platanus x acerifolia	9.3	9.3	Substation	REMOVE
54	London plane	Platanus x acerifolia	6.8	6.8	Substation	REMOVE
55	Raywood ash	Fraxinus angustifolia 'Raywood'	9.8	12.3	Substation	REMOVE
56	Raywood ash	Fraxinus angustifolia 'Raywood'	13.4	16.8	Substation	REMOVE
57	Raywood ash	Fraxinus angustifolia 'Raywood'	13.1	16.4	Substation	REMOVE
58	Raywood ash	Fraxinus angustifolia 'Raywood'	7.5	9.4	Substation	REMOVE
59	Raywood ash	Fraxinus angustifolia 'Raywood'	2.1	2.1	Substation	REMOVE
60	London plane	Platanus x acerifolia	5.8	5.8	Substation	REMOVE
61	London plane	Platanus x acerifolia	5.1	5.1	Substation	REMOVE
62	London plane	Platanus x acerifolia	5.6	5.6	Substation	REMOVE
63	London plane	Platanus x acerifolia	7.5	7.5	Substation	REMOVE
64	Raywood ash	Fraxinus angustifolia 'Raywood'	3.8	4.8	Substation	REMOVE
65	Raywood ash	Fraxinus angustifolia 'Raywood'	3	3.8	Substation	REMOVE
66	Raywood ash	Fraxinus angustifolia 'Raywood'	5.6	7	Substation	REMOVE
67	Raywood ash	Fraxinus angustifolia 'Raywood'	7.8	9.8	Substation	REMOVE
68	Raywood ash	Fraxinus angustifolia 'Raywood'	8.7	10.9	Substation	REMOVE
69	Raywood ash	Fraxinus angustifolia 'Raywood'	8.1	10.1	Substation	REMOVE
70	Raywood ash	Fraxinus angustifolia 'Raywood'	9.2	11.5	Driveway	REMOVE
71	London plane	Platanus x acerifolia	6.4	8	Driveway	REMOVE
72	London plane	Platanus x acerifolia	8	8	Driveway	REMOVE
73	London plane	Platanus x acerifolia	9.5	9.5	Driveway	REMOVE
74	London plane	Platanus x acerifolia	8.7	8.7	Driveway	REMOVE
75	London plane	Platanus x acerifolia	6.9	6.9	Driveway	REMOVE
76	London plane	Platanus x acerifolia	9.9	9.9	Driveway	REMOVE
77	London plane	Platanus x acerifolia	9	9	Driveway	REMOVE
78	London plane	Platanus x acerifolia	7.7	7.7	Driveway	REMOVE
79	London plane	Platanus x acerifolia	10.1	10.1	Driveway	REMOVE
80	London plane	Platanus x acerifolia	10.9	10.9	Pedestrian path	REMOVE
81	London plane	Platanus x acerifolia	8.1	8.1	Driveway	REMOVE
82	London plane	Platanus x acerifolia	8.5	8.5	Driveway; PL fence	REMOVE
83	London plane	Platanus x acerifolia	8	8	Driveway; PL fence	REMOVE
84	London plane	Platanus x acerifolia	10	10	Transmission Lines	REMOVE
85	London plane	Platanus x acerifolia	9.6	9.6	Transmission Lines	REMOVE
86	London plane	Platanus x acerifolia	9.2	9.2	Transmission Lines	REMOVE
87	London plane	Platanus x acerifolia	10.9	10.9	Transmission Lines	REMOVE
88	London plane	Platanus x acerifolia	14.9	14.9	Transmission Lines	REMOVE
89	London plane	Platanus x acerifolia	8.2	8.2	Transmission Lines	REMOVE
90	London plane	Platanus x acerifolia	12.4	12.4	Transmission Lines	REMOVE
91	London plane	Platanus x acerifolia	14.6	14.6	Transmission Lines	REMOVE
92	London plane	Platanus x acerifolia	15	15	Transmission Lines	REMOVE
93	London plane	Platanus x acerifolia	15.6	15.6	Transmission Lines	REMOVE
94	London plane	Platanus x acerifolia	16.2	16.2	Transmission Lines	REMOVE
95	London plane	Platanus x acerifolia	19	19	Transmission Lines	REMOVE
96	London plane	Platanus x acerifolia	12	12	Driveway	REMOVE
97	London plane	Platanus x acerifolia	16	16	Driveway	REMOVE
98	Weeping willow	Salix babylonica	35.5	26.6	Property line fence	Retain
99	Hackberry	Celtis sp.	9.4	7.1	Building	REMOVE
100	Crape myrtle	Lagerstroemia indica	6.8	5.1	Building	REMOVE
101	Crape myrtle	Lagerstroemia indica	6.8	5.1	Building	REMOVE
102	Callery pear	Pyrus calleryana	8.5	6.4	Building	REMOVE
103	African fern pine	Afrocarpus gracilior	9.7	4.9	Building	REMOVE
104	Callery pear	Pyrus calleryana	7.4	5.6	Building	REMOVE
105	Callery pear	Pyrus calleryana	7.3	5.5	Building	REMOVE
106	Crape myrtle	Lagerstroemia indica	3.6	3.6	Building	REMOVE
107	Ornamental cherry	Prunus sp.	4.6	5.8	Building	REMOVE
108	Crape myrtle	Lagerstroemia indica	5.5	4.1	Generator yard	REMOVE
109	African fern pine	Afrocarpus gracilior	8.4	4.2	Generator yard	REMOVE
110	Crape myrtle	Lagerstroemia indica	5.4	4.1	Generator yard	REMOVE
111	Callery pear	Pyrus calleryana	7.8	5.9	Generator yard	REMOVE
112	Crape myrtle	Lagerstroemia indica	6.2	4.7	Generator yard	REMOVE
113	Callery pear	Pyrus calleryana	10.3	7.7	Generator yard	REMOVE
114	London plane	Platanus x acerifolia	15.5	19.4	Generator yard	REMOVE
115	London plane	Platanus x acerifolia	10	10	Generator yard	REMOVE
116	London plane	Platanus x acerifolia	14.9	18.6	Building	REMOVE
117	London plane	Platanus x acerifolia	10.2	12.8	Building	REMOVE
118	London plane	Platanus x acerifolia	9.7	9.7	Building	REMOVE
119	London plane	Platanus x acerifolia	8.9	8.9	Building	REMOVE
120	Green ash	Fraxinus pennsylvanica	12.8	9.6	Building	REMOVE
121	Green ash	Fraxinus pennsylvanica	12.8	9.6	Building	REMOVE
122	Green ash	Fraxinus pennsylvanica	10.7	8	Building	REMOVE
123	Green ash	Fraxinus pennsylvanica	8.4	6.3	Building	REMOVE
124	Green ash	Fraxinus pennsylvanica	8.5	6.4	Building	REMOVE
125	London plane	Platanus x acerifolia	4.8	7.2	Building	REMOVE
126	London plane	Platanus x acerifolia	14.7	14.7	Building	REMOVE
127	London plane	Platanus x acerifolia	13.1	13.1	Generator yard	REMOVE
128	London plane	Platanus x acerifolia	13.2	13.2	Generator yard	REMOVE
129	London plane	Platanus x acerifolia	7.9	7.9	Generator yard	REMOVE
130	London plane	Platanus x acerifolia	9.2	9.2	Building	REMOVE
131	London plane	Platanus x acerifolia	14.6	14.6	Generator yard	REMOVE
132	London plane	Platanus x acerifolia	11.9	11.9	Generator yard	REMOVE
133	London plane	Platanus x acerifolia	8.3	8.3	Building	REMOVE
134	London plane	Platanus x acerifolia	13	13	Building	REMOVE
135	London plane	Platanus x acerifolia	11.9	11.9	Building	REMOVE
136	Green ash	Pinus sabiniana	11.6	8.7	Building	REMOVE
137	Green ash	Fraxinus pennsylvanica	13.5	10.1	Building	REMOVE
138	Green ash	Fraxinus pennsylvanica	9.9	7.4	Building	REMOVE
139	Green ash	Fraxinus pennsylvanica	18.3	9.2	Building	REMOVE
140	Green ash	Fraxinus pennsylvanica	12.3	9.2	Driveway	REMOVE
141	Green ash	Fraxinus pennsylvanica	12.8	9.6	Driveway	REMOVE
142	London plane	Platanus x acerifolia	10	10	Driveway	REMOVE
143	London plane	Platanus x acerifolia	15.3	15.3	Building	REMOVE
144	London plane	Platanus x acerifolia	7.2	7.2	Building	REMOVE
145	London plane	Platanus x acerifolia	12.3	12.3	Building	REMOVE
146	London plane	Platanus x acerifolia	9.5	9.5	Driveway	REMOVE
147	London plane	Platanus x acerifolia	8.9	8.9	Driveway	REMOVE
148	London plane	Platanus x acerifolia	9.9	9.9	Driveway	REMOVE
149	London plane	Platanus x acerifolia	9.5	9.5	Driveway	REMOVE
150	London plane	Platanus x acerifolia	13.9	13.9	Building	REMOVE
151	London plane	Platanus x acerifolia	10.1	10.1	Driveway	REMOVE
152	London plane	Platanus x acerifolia	10.5	10.5	Driveway	REMOVE
153	London plane	Platanus x acerifolia	12.1	12.1	Driveway	REMOVE
154	London plane	Platanus x acerifolia	6.3	6.3	Driveway	REMOVE
155	London plane	Platanus x acerifolia	10.3	10.3	Driveway	REMOVE
156	Green ash	Fraxinus pennsylvanica	15.3	7.7	Driveway	REMOVE
157	Green ash	Fraxinus pennsylvanica	6.4	4.8	Driveway	REMOVE
158	London plane	Platanus x acerifolia	11.2	11.2	Building	REMOVE
159	London plane	Platanus x acerifolia	7.5	7.5	Building	REMOVE
160	London plane	Platanus x acerifolia	12.2	12.2	Building	REMOVE
161	London plane	Platanus x acerifolia	13.9	13.9	Building	REMOVE
162	London plane	Platanus x acerifolia	13.7	13.7	Building	REMOVE
163	London plane	Platanus x acerifolia	8.7	8.7	Driveway	REMOVE
164	London plane	Platanus x acerifolia	15.9	15.9	Building	REMOVE
165	London plane	Platanus x acerifolia	11.9	11.9	Building	REMOVE
166	London plane	Platanus x acerifolia	8.5	8.5	Building	REMOVE
167	London plane	Platanus x acerifolia	15.4	15.4	Building	REMOVE
168	London plane	Platanus x acerifolia	11	11	Building	REMOVE
169	Crape myrtle	Lagerstroemia indica	5.2	3.9	Building	REMOVE
170	Crape myrtle	Lagerstroemia indica	5.9	4.4	Building	REMOVE
171	African fern pine	Afrocarpus gracilior	10	5	Building	REMOVE
172	Bay laurel	Laurus nobilis	12.8	9.6	Building	REMOVE
173	Eastern redbud	Cercis canadensis	9.7	7.3	Building	REMOVE
174	Eastern redbud	Cercis canadensis	12.3	9.2	Building	REMOVE
175	Hackberry	Celtis sp.	7	5.3	Building	REMOVE
176	Hackberry	Celtis sp.	6.8	5.1	Building	REMOVE
177	Japanese maple	Acer palmatum	4.5	3.4	Building	REMOVE
178	Japanese maple	Acer palmatum	5	3.8	Building	REMOVE
179	Japanese maple	Acer palmatum	6.7	5	Building	REMOVE
180	Japanese maple	Acer palmatum	8.8	6.6	Building	REMOVE
181	Philodendron	Philodendron sp.	9	6.8	Building	REMOVE
182	Japanese maple	Acer palmatum	4.5	3.4	Building	REMOVE
183	Weeping cherry	Prunus subhirtella 'Pendula'	5	6.3	Building	REMOVE
184	Weeping cherry	Prunus subhirtella 'Pendula'	6	0	N/A (dead)	REMOVE
185	Weeping cherry	Prunus subhirtella 'Pendula'	4.8	3.6	Building	REMOVE
186	Japanese maple	Acer palmatum	4.9	3.7	Building	REMOVE
187	Japanese maple	Acer palmatum	6.3	4.7	Building	REMOVE
188	Japanese maple	Acer palmatum	6.7	5	Building	REMOVE
189	Hackberry	Celtis sp.	5.4	4.1	Building	REMOVE
190	Hackberry	Celtis sp.	7.8	5.9	Building	REMOVE
191	Hackberry	Celtis sp.	4.2	3.2	Building	REMOVE
192	Eastern redbud	Cercis canadensis	11.5	8.6	Building	REMOVE
193	Eastern redbud	Cercis canadensis	11	8.3	Building	REMOVE
194	bay laurel	Laurus nobilis	7.3	5.5	Building	REMOVE
195	Crape myrtle	Lagerstroemia indica	6.6	5	Building	REMOVE
196	Crape myrtle	Lagerstroemia indica	6.6	5	Building	REMOVE
197	Hackberry	Celtis sp.	7	5.3	Building	REMOVE
198	African fern pine	Afrocarpus gracilior	9.9	5	Building	REMOVE
199	Hackberry	Celtis sp.	11	8.3	Building	REMOVE
200	Evergreen pear	Pyrus kawakamii	13.1	16.4	Building	REMOVE
201	Evergreen pear	Pyrus kawakamii	12.7	15.9	Building	REMOVE
202	Raywood ash	Fraxinus angustifolia 'Raywood'	10	12.5	Building	REMOVE
203	Chinese pistache	Pistacia chinensis	9.3	4.7	Building	REMOVE
204	Raywood ash	Fraxinus angustifolia 'Raywood'	8.5	10.6	Building	REMOVE
205	Raywood ash	Fraxinus angustifolia 'Raywood'	9.5	11.9	Building	REMOVE
206	Evergreen pear	Pyrus kawakamii	11.8	17.7	Building	REMOVE
207	Evergreen pear	Pyrus kawakamii	10.1	12.6	Building	REMOVE
208	Evergreen pear	Malus, sp.	11.9	14.9	Building	REMOVE
209	Evergreen pear	Pyrus kawakamii	10.2	15.3	Building	REMOVE
210	Unknown	Unknown sp.	6.3	6.3	Building	REMOVE
211	Unknown	Unknown sp.	5.1	5.1	Building	REMOVE
212	White birch	Betula pendula	7.2	9	Building	REMOVE
213	White birch	Betula pendula	9.1	9.1	Building	REMOVE
214	White birch	Betula pendula	5.4	5.4	Building	REMOVE
215	White birch	Betula pendula	7	7	Building	REMOVE
216	Japanese maple	Acer palmatum	6	4.5	Building	REMOVE
217	Japanese maple	Acer palmatum	5.4	4.1	Building	REMOVE
218	Japanese maple	Acer palmatum	6	4.5	Building	REMOVE
219	Weeping cherry	Prunus subhirtella 'Pendula'	6	4.5	Building	REMOVE
220	Japanese maple	Acer palmatum	4.3	3.2	Building	REMOVE
221	Japanese maple	Pinus sabiniana	7	5.3	Building	REMOVE
222	Weeping cherry	Prunus subhirtella 'Pendula'	4.5	3.4	Building	REMOVE
223	Ornamental cherry	Prunus sp.	4.8	4.8	Building	REMOVE
224	White birch	Betula pendula	6.6	6.6	Building	REMOVE
225	White birch	Betula pendula	8.1	8.1	Building	REMOVE
226	Japanese maple	Acer palmatum	5	3.8	Building	REMOVE
227	White birch	Betula pendula	6.6	6.6	Building	REMOVE
228	White birch	Betula pendula	7.1	7.1	Building	REMOVE
229	Japanese maple	Acer palmatum	5.9	5.9	Building	REMOVE
230	Japanese maple	Acer palmatum	4.4	4.4	Building	REMOVE
231	Japanese maple	Acer palmatum	6	4.5	Building	REMOVE
232	Crape myrtle	Lagerstroemia indica	5.8	4.4	Building	REMOVE
233	Crape myrtle	Lagerstroemia indica	5.6	4.2	Building	REMOVE
234	Raywood ash	Fraxinus angustifolia 'Raywood'	9.8	12.3	Building	REMOVE
235	Raywood ash	Fraxinus angustifolia 'Raywood'	13.2	16.5	Building	REMOVE
236	Raywood ash	Fraxinus angustifolia 'Raywood'	8.2	10.3	Driveway	REMOVE
237	Raywood ash	Fraxinus angustifolia 'Raywood'	8.5	10.6	Driveway	REMOVE
238	Evergreen pear	Pyrus kawakamii	5.3	6.6	Building	REMOVE
239	Evergreen pear	Pyrus kawakamii	12	15	Building	REMOVE
240	Evergreen pear	Pyrus kawakamii	12.8	16	Building	REMOVE
241	Raywood ash	Fraxinus angustifolia 'Raywood'	14.7	18.4	Building	REMOVE
242	Raywood ash	Fraxinus angustifolia 'Raywood'	12.9	16.1	Building	REMOVE
243	Green ash	Fraxinus pennsylvanica	8	4	Driveway	REMOVE
244	Raywood ash	Fraxinus angustifolia 'Raywood'	5.5	6.9	Driveway	REMOVE
245	London plane	Platanus x acerifolia	16.8	16.8	Driveway	REMOVE
246	Evergreen pear	Pyrus kawakamii	13.2	16.5	Building	REMOVE
247	Chinese pistache	Pistacia chinensis	4.8	2.4	Building	REMOVE
248	Chinese pistache	Pistacia chinensis	5.6	2.8	Building	REMOVE
249	Chinese pistache	Pistacia chinensis	5.6	2.8	Generator yard	REMOVE
250	Raywood ash	Fraxinus angustifolia 'Raywood'	10.7	13.4	Driveway	REMOVE
251	Raywood ash	Fraxinus angustifolia 'Raywood'	12.2	15.3	Driveway	REMOVE
252	London plane	Platanus x acerifolia	9.7	12.1	Demolition	REMOVE
253	Evergreen pear	Pyrus kawakamii	8.7	10.9	Driveway	REMOVE
254	Chinese pistache	Pistacia chinensis	3.5	1.8	Generator yard	REMOVE
255	Chinese pistache	Pistacia chinensis	4.6	2.3	Generator yard	REMOVE

DIGITAL REALTY
Data Center Solutions

2825 LAFAYETTE STREET
SANTA CLARA, CA
95050-2627

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PLEASANTON, CA 94588
PHONE: 925-398-4840 FAX: 714-938-9488

LANDSCAPE ARCHITECT OF RECORD SEAL

LICENSED LANDSCAPE ARCHITECT
Matthew Alan Jones No. 4505
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

DLR DATA CENTER
2825 LAFAYETTE STREET
SANTA CLARA, CA, 95050

TREE INVENTORY

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	06/19/20
PROJECT ENGINEER	SHEET NUMBER
KN	L1.2
SCALE	
AS SHOWN	

256	Raywood ash	Fraxinus angustifolia 'Raywood'	16.8	21	Generator yard	REMOVE
257	Raywood ash	Fraxinus angustifolia 'Raywood'	13.1	16.4	Generator yard	REMOVE
258	Raywood ash	Fraxinus angustifolia 'Raywood'	6.8	8.5	Retention area	REMOVE
259	Evergreen pear	Pyrus kawakamii	14.7	18.4	Civil Improvement	REMOVE
260	Evergreen pear	Pyrus kawakamii	11.6	14.5	Civil Improvement	REMOVE
261	Evergreen pear	Pyrus kawakamii	16.6	20.8	Driveway	REMOVE
262	Evergreen pear	Pyrus kawakamii	15.8	19.8	Driveway	REMOVE
263	Raywood ash	Fraxinus angustifolia 'Raywood'	16.6	20.8	Driveway	REMOVE
264	Raywood ash	Fraxinus angustifolia 'Raywood'	8.2	10.3	Transmission Lines	REMOVE
265	London plane	Platanus x acerifolia	8.2	10.3	Transmission Lines	REMOVE
266	Evergreen pear	Pyrus kawakamii	15.1	18.9	Transmission Lines	REMOVE
267	Evergreen pear	Pyrus kawakamii	12.6	15.8	Transmission Lines	REMOVE
268	Evergreen pear	Pyrus kawakamii	4.8	6	Driveway	REMOVE
269	Evergreen pear	Pyrus kawakamii	14.3	17.9	Driveway	REMOVE
270	Raywood ash	Fraxinus angustifolia 'Raywood'	16.1	20.1	Driveway	REMOVE
271	Raywood ash	Fraxinus angustifolia 'Raywood'	13.8	20.7	Transmission Lines	REMOVE
272	Raywood ash	Fraxinus angustifolia 'Raywood'	13.6	17	Transmission Lines	REMOVE
273	London plane	Platanus x acerifolia	8.9	8.9	Transmission Lines	REMOVE
274	Raywood ash	Fraxinus angustifolia 'Raywood'	13	16.3	Retention area	Retain
275	Raywood ash	Fraxinus angustifolia 'Raywood'	9.2	13.8	Transmission Lines	REMOVE
276	Raywood ash	Fraxinus angustifolia 'Raywood'	12.1	15.1	Transmission Lines	REMOVE
277	Crape myrtle	Lagerstroemia indica	5.1	3.8	Building	REMOVE
278	Crape myrtle	Lagerstroemia indica	5.4	4.1	Building	REMOVE
279	Crape myrtle	Lagerstroemia indica	5.9	4.4	Building	REMOVE
280	Crape myrtle	Lagerstroemia indica	4.3	3.2	Building	REMOVE
281	Crape myrtle	Lagerstroemia indica	5.5	4.1	Building	REMOVE
282	African fern pine	Afrocarpus gracilior	6.2	3.1	Building	REMOVE
283	African fern pine	Afrocarpus gracilior	8.1	4.1	Building	REMOVE
284	African fern pine	Afrocarpus gracilior	8.5	4.3	Building	REMOVE
285	African fern pine	Afrocarpus gracilior	8.9	4.5	Building	REMOVE
286	African fern pine	Afrocarpus gracilior	7.7	3.9	Building	REMOVE
287	Ornamental cherry	Prunus sp.	4	4	Building	REMOVE
288	Ornamental cherry	Prunus sp.	4.4	4.4	Building	REMOVE
289	Smoke tree	Cotinus coggygria	5.8	4.4	Building	REMOVE
290	Smoke tree	Cotinus coggygria	6	4.5	Building	REMOVE
291	Crape myrtle	Lagerstroemia indica	6.1	4.6	Building	REMOVE
292	Crape myrtle	Lagerstroemia indica	5.1	3.8	Building	REMOVE
293	Crape myrtle	Lagerstroemia indica	6	4.5	Generator yard	REMOVE
294	African fern pine	Afrocarpus gracilior	9	4.5	Generator yard	REMOVE
295	Crape myrtle	Lagerstroemia indica	5.8	4.4	Generator yard	REMOVE
296	Crape myrtle	Lagerstroemia indica	7.2	5.4	Generator yard	REMOVE
297	African fern pine	Afrocarpus gracilior	8.9	4.5	Generator yard	REMOVE
298	African fern pine	Afrocarpus gracilior	9	4.5	Generator yard	REMOVE
299	African fern pine	Afrocarpus gracilior	6.9	3.5	Generator yard	REMOVE
300	Crape myrtle	Lagerstroemia indica	5.7	4.3	Generator yard	REMOVE
301	Crape myrtle	Lagerstroemia indica	5.1	3.8	Generator yard	REMOVE
302	Crape myrtle	Lagerstroemia indica	5.2	3.9	Generator yard	REMOVE
303	Ornamental cherry	Prunus sp.	4.2	3.2	Generator yard	REMOVE
304	African fern pine	Afrocarpus gracilior	10.8	5.4	Driveway	REMOVE
305	Pygmy date palm	Phoenix robelenii	4.6	4.6	Driveway	REMOVE
306	Pygmy date palm	Phoenix robelenii	4.5	4.5	Driveway	REMOVE
307	Raywood ash	Fraxinus angustifolia 'Raywood'	8.2	10.3	Driveway	REMOVE
308	Chinese pistache	Pistacia chinensis	14.1	7.1	Driveway	REMOVE
309	Evergreen pear	Pyrus kawakamii	14.7	18.4	Driveway	REMOVE
310	Evergreen pear	Pyrus kawakamii	15	18.8	Driveway	REMOVE
311	Evergreen pear	Pyrus kawakamii	10.8	13.5	Driveway	REMOVE
312	Evergreen pear	Pyrus kawakamii	15.4	19.3	Driveway	REMOVE
313	Raywood ash	Fraxinus angustifolia 'Raywood'	18.3	22.9	Driveway	REMOVE
314	Chinese pistache	Pistacia chinensis	5.1	2.6	None	Retain
315	Crape myrtle	Lagerstroemia indica	4.5	3.4	None	Retain
316	Weeping willow	Salix babylonica	15.8	11.9	Driveway	REMOVE
317	Ornamental cherry	Prunus sp.	8.9	6.7	Driveway	REMOVE
318	Ornamental cherry	Prunus sp.	11.2	8.4	Driveway	REMOVE
319	Ornamental cherry	Prunus sp.	7.4	5.6	Driveway	REMOVE
320	Ornamental cherry	Prunus sp.	6.2	4.7	Concrete path	REMOVE
321	Ornamental cherry	Prunus sp.	5.4	4.1	Civil Improvement	REMOVE
322	Ornamental cherry	Prunus sp.	9	6.8	Driveway	REMOVE
323	Ornamental cherry	Prunus sp.	8.8	6.6	Driveway	REMOVE
324	Ornamental cherry	Prunus sp.	10.1	7.6	Driveway	REMOVE
325	White birch	Betula pendula	10.3	10.3	Driveway	REMOVE
326	China doll tree	Radermachera sinica	5.5	5.5	Driveway	REMOVE
327	China doll tree	Radermachera sinica	4.8	4.8	Driveway	REMOVE
328	China doll tree	Radermachera sinica	6	6	Civil Improvement	REMOVE
329	Ornamental cherry	Prunus sp.	11.1	8.3	None	Retain
330	Ornamental cherry	Prunus sp.	17.8	13.4	Concrete path	REMOVE
331	Ornamental cherry	Prunus sp.	7.9	5.9	Concrete path	REMOVE
332	Ornamental cherry	Pinus thunbergii	7.8	5.9	Concrete path	REMOVE
333	Ornamental cherry	Prunus sp.	12	9	Concrete path	Retain
334	Ornamental cherry	Prunus sp.	12.5	9.4	Concrete path	Retain
335	Ornamental cherry	Prunus sp.	8.5	6.4	Driveway	REMOVE
336	Hackberry	Celtis sp.	4.1	3.1	Driveway	REMOVE
337	Peruvian pepper	Schinus molle	12	9	Driveway	REMOVE
338	London plane	Platanus x acerifolia	24	24	Driveway	Retain
339	Red ironbark	Eucalyptus sideroxylon	15.1	15.1	Transmission Lines	REMOVE
340	Red ironbark	Eucalyptus sideroxylon	19	0	N/A (dead)	REMOVE
341	Holly oak	Quercus ilex	10.2	5.1	Transmission Lines	REMOVE
342	Red ironbark	Eucalyptus sideroxylon	18.8	18.8	Transmission Lines	REMOVE
343	Peruvian pepper	Schinus molle	11.2	8.4	Transmission Lines	REMOVE
344	Red ironbark	Eucalyptus sideroxylon	19.2	19.2	Transmission Lines	REMOVE
345	Red ironbark	Eucalyptus sideroxylon	19.3	14.5	Transmission Lines	REMOVE
346	Red ironbark	Eucalyptus sideroxylon	23.7	11.9	Transmission Lines	REMOVE
347	Red ironbark	Eucalyptus sideroxylon	24.7	12.4	Transmission Lines	REMOVE
348	Blackwood acacia	Acacia melanoxylon	15.6	7.8	Transmission Lines	REMOVE
349	Red ironbark	Eucalyptus sideroxylon	25.1	12.6	Transmission Lines	REMOVE
350	Red ironbark	Eucalyptus sideroxylon	18.9	14.2	Transmission Lines	REMOVE
351	Red ironbark	Eucalyptus sideroxylon	30	15	Transmission Lines	REMOVE
352	Red ironbark	Eucalyptus sideroxylon	25.6	19.2	Transmission Lines	REMOVE
353	Evergreen pear	Pyrus kawakamii	18	18	Transmission Lines	REMOVE
354	Italian cypress	Cupressus sempervirens	12	9	Transmission Lines	REMOVE
355	Italian cypress	Cupressus sempervirens	13.8	10.4	Demolition	Retain
356	Italian cypress	Cupressus sempervirens	12.5	9.4	Demolition	Retain
357	Italian cypress	Cupressus sempervirens	11.5	8.6	Demolition	Retain
358	Italian cypress	Cupressus sempervirens	9.5	7.1	Demolition	Retain
359	Italian cypress	Cupressus sempervirens	8	6	Demolition	Retain
360	Red ironbark	Eucalyptus sideroxylon	32.1	16.1	Demolition	Retain
361	Italian cypress	Cupressus sempervirens	8	6	Demolition	Retain
362	Italian cypress	Cupressus sempervirens	10	7.5	Demolition	Retain
363	Italian cypress	Cupressus sempervirens	12	9	Demolition	Retain
364	Italian cypress	Cupressus sempervirens	2	1.5	Demolition	Retain
365	Italian cypress	Cupressus sempervirens	3	2.3	Demolition	Retain
366	Italian cypress	Cupressus sempervirens	2	1.5	None	Retain
367	Italian cypress	Cupressus sempervirens	12	9	None	Retain
368	Italian cypress	Cupressus sempervirens	13	9.8	None	Retain
369	Italian cypress	Cupressus sempervirens	12	9	None	Retain
370	Italian cypress	Cupressus sempervirens	2	1.5	None	Retain
371	Italian cypress	Cupressus sempervirens	2	1.5	None	Retain
372	Italian cypress	Cupressus sempervirens	13.5	10.1	None	Retain
373	Italian cypress	Cupressus sempervirens	12.3	9.2	None	Retain
374	Italian cypress	Cupressus sempervirens	11.3	8.5	None	Retain
375	Italian cypress	Cupressus sempervirens	11.7	8.8	None	Retain
376	Italian cypress	Cupressus sempervirens	12.1	9.1	None	Retain
377	Italian cypress	Cupressus sempervirens	12.2	9.2	None	Retain
378	Italian cypress	Cupressus sempervirens	11.1	8.3	None	Retain
379	Italian cypress	Cupressus sempervirens	10.9	8.2	None	Retain
380	Italian cypress	Cupressus sempervirens	10.5	7.9	None	Retain
381	Italian cypress	Pinus sabiniana	12	9	None	Retain
382	Italian cypress	Cupressus sempervirens	11.2	8.4	None	Retain
383	Italian cypress	Cupressus sempervirens	12	9	None	Retain
384	Italian cypress	Cupressus sempervirens	11.5	8.6	None	Retain
385	Italian cypress	Cupressus sempervirens	9.9	7.4	None	Retain
386	Italian cypress	Cupressus sempervirens	6.7	5	None	Retain
387	Italian cypress	Cupressus sempervirens	7.4	5.6	None	Retain
388	Italian cypress	Cupressus sempervirens	8.9	6.7	None	Retain
389	Italian cypress	Cupressus sempervirens	10.4	7.8	None	Retain
390	Italian cypress	Cupressus sempervirens	11.5	8.6	None	Retain
391	Italian cypress	Cupressus sempervirens	12	9	None	Retain
392	Italian cypress	Cupressus sempervirens	11.7	8.8	None	Retain
393	Italian cypress	Cupressus sempervirens	13	9.8	None	Retain
394	Italian cypress	Cupressus sempervirens	11.4	8.6	None	Retain
395	Italian cypress	Cupressus sempervirens	12.5	9.4	None	Retain
396	Italian cypress	Cupressus sempervirens	11	8.3	None	Retain
397	Italian cypress	Cupressus sempervirens	11.5	8.6	None	Retain
398	Italian cypress	Cupressus sempervirens	8.7	6.5	None	Retain
399	Blackwood acacia	Acacia melanoxylon	12	6	None	Retain
400	Blackwood acacia	Acacia melanoxylon	8	4	None	Retain
401	Blackwood acacia	Acacia melanoxylon	14.6	7.3	None	Retain
402	Italian cypress	Cupressus sempervirens	7.1	5.3	None	Retain
403	Blackwood acacia	Acacia melanoxylon	11.1	5.6	None	Retain
404	Blackwood acacia	Acacia melanoxylon	4.6	2.3	None	Retain
405	Blackwood acacia	Acacia melanoxylon	7.3	3.7	None	Retain
406	Blackwood acacia	Acacia melanoxylon	6.2	3.1	None	Retain
407	Red ironbark	Eucalyptus sideroxylon	31.2	15.6	None	Retain
408	Blackwood acacia	Acacia melanoxylon	5.7	2.9	None	Retain
409	Blackwood acacia	Acacia melanoxylon	18.8	9.4	None	Retain
410	Blackwood acacia	Acacia melanoxylon	8.7	4.4	None	Retain
411	Red ironbark	Eucalyptus sideroxylon	24	0	N/A (dead)	REMOVE
412	Red ironbark	Eucalyptus sideroxylon	23.4	11.7	None	Retain
413	Blackwood acacia	Acacia melanoxylon	21.8	10.9	None	Retain
414	Red ironbark	Eucalyptus sideroxylon	24	0	N/A (dead)	REMOVE
415	Blackwood acacia	Acacia melanoxylon	22.5	11.3	None	Retain
416	Red ironbark	Eucalyptus sideroxylon	28.7	14.4	None	Retain
417	London plane	Platanus x acerifolia	8.4	8.4	None	Retain
418	London plane	Platanus x acerifolia	10.5	10.5	None	Retain
419	London plane	Platanus x acerifolia	10.2	10.2	None	Retain
421	Callery pear	Pyrus calleryana	10.5	7.9	Driveway	REMOVE
422	Callery pear	Pyrus calleryana	10.7	8	Driveway	REMOVE
423	Callery pear	Pyrus calleryana	10	10	Driveway	REMOVE
424	Callery pear	Pyrus calleryana	8.4	6.3	Driveway	REMOVE
425	Callery pear	Pyrus calleryana	11.6	8.7	Driveway	REMOVE
426	Crape myrtle	Lagerstroemia indica	7.6	5.7	Driveway	REMOVE
427	Crape myrtle	Lagerstroemia indica	7.3	5.5	Driveway	REMOVE
428	Crape myrtle	Lagerstroemia indica	6.5	4.9	Driveway	REMOVE
429	Crape myrtle	Lagerstroemia indica	7.6	5.7	Driveway	REMOVE
430	Ornamental cherry	Prunus sp.	4.1	5.1	Driveway	REMOVE
431	Crape myrtle	Lagerstroemia indica	7.4	5.6	Driveway	REMOVE
432	Crape myrtle	Lagerstroemia indica	5.4	4.1	Driveway	REMOVE
433	Crape myrtle	Lagerstroemia indica	7.1	5.3	Driveway	REMOVE
434	White birch	Betula pendula	6.4	6.4	None	Retain
435	White birch	Betula pendula	8.8	8.8	None	Retain
436	Japanese maple	Acer palmatum	6.1	4.6	None	Retain
437	White birch	Betula pendula	8.1	8.1	None	Retain
438	White birch	Betula pendula	9.9	9.9	None	Retain
439	White birch	Betula pendula	10.6	10.6	None	Retain
440	Weeping willow	Salix babylonica	21.8	16.4	None	Retain
441	Eastern redbud	Cercis canadensis	6.2	4.7	None	Retain
442	Eastern redbud	Cercis canadensis	6.5	4.9	None	Retain
443	Eastern redbud	Cercis canadensis	5.3	4	None	Retain
444	Eastern redbud	Cercis canadensis	6.2	4.7	None	Retain
445	Japanese maple	Acer palmatum	4.7	3.5	None	Retain
446	Ornamental cherry	Prunus sp.	9.2	6.9	Generator yard	REMOVE
447	Ornamental cherry	Prunus sp.	5.9	4.4	Generator yard	REMOVE
448	Weeping willow	Salix babylonica	21.4	16.1	Generator yard	REMOVE
449	White birch	Betula pendula	12.8	12.8	Driveway	Retain
450	Ornamental cherry	Prunus sp.	7.8	5.9	Driveway	REMOVE
451	Ornamental cherry	Prunus sp.	7.5	5.6	Driveway	REMOVE
452	Ornamental cherry	Prunus sp.	7.4	5.6	Driveway	REMOVE
453	Ornamental cherry	Prunus sp.	5.4	4.1	Driveway	REMOVE
454	Eastern redbud	Cercis canadensis	6.8	5.1	Concrete path	Retain
455	Eastern redbud	Cercis canadensis	5.2	3.9	None	Retain
456	Ornamental cherry	Prunus sp.	6	4.5	Generator yard	REMOVE
457	Ornamental cherry	Prunus sp.	7	5.3	Generator yard	REMOVE
458	White birch	Betula pendula	4.8	4.8	Building	REMOVE
459	White birch	Betula pendula	7.1	7.1	Building	REMOVE
460	White birch	Betula pendula	4.7	4.7	Building	REMOVE
461	Eastern redbud	Cercis canadensis	5.5	4.1	Building	REMOVE
462	Eastern redbud	Cercis canadensis	4.2	3.2	Building	REMOVE
463	Eastern redbud	Cercis canadensis	4.9	3.7	Generator yard	REMOVE
464	Ornamental cherry	Prunus sp.	7.5	5.6	Generator yard	REMOVE
465	Crape myrtle	Lagerstroemia indica	5.1	3.8	Generator yard	REMOVE
466	Crape myrtle	Lagerstroemia indica	5	3.8	Generator yard	REMOVE
467	Crape myrtle	Lagerstroemia indica	4.9	3.7	Generator yard	REMOVE
468	Ornamental cherry	Prunus sp.	6.1	4.6	Generator yard	REMOVE
469	Ornamental cherry	Prunus sp.	5.1	3.8	Generator yard	REMOVE
470	Ornamental cherry	Prunus sp.	9.1	6.8	Generator yard	REMOVE
471	White birch	Betula pendula	7.4	7.4	None	Retain
472	Crape myrtle	Lagerstroemia indica	5	3.8	None	Retain
473	Crape myrtle	Lagerstroemia indica	5.1	3.8	None	Retain
474	Crape myrtle	Lagerstroemia indica	5.1	3.8	None	Retain
475	Crape myrtle	Lagerstroemia indica	5.9	4.4	Driveway	REMOVE
476	Crape myrtle	Lagerstroemia indica	6.3	4.7	Driveway	REMOVE

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LICENSED LANDSCAPE ARCHITECT
WITHOLD M. BURGEN LICENSE NO. 4193
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

DLR DATA CENTER
2825 LAFAYETTE STREET
SANTA CLARA, CA, 95050

TREE INVENTORY

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 06/19/20
PROJECT ENGINEER KN	SHEET NUMBER
SCALE AS SHOWN	L1.3

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10/3/2019

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Re: Tree Impacts from Proposed Development Project at 2825 Lafayette Street in Santa Clara

Dear Chad,

At your request, I have visited the property referenced above to evaluate the trees present with respect to the proposed construction project. The report below contains my analysis.

Summary

There are 476 trees on the project site, of which 321 are recommended for removal. Three hundred seventeen of these conflict directly with project features, two are dead, and two are stumps of trees which were removed in the past, not in connection with this project.

Other trees may need to be removed for utility installation; however, no utilities are shown on the plans provided to me.

Assignment:

We have been asked to write a report detailing impacts to trees from construction of the proposed building, substation, and parking lot redesign at this address.

Introduction:

Many factors influence how a tree will respond to impacts from construction activities, including the extent of the activity; tree species; and tree vigor. Construction plans should accommodate trees insofar as practical, with the intent of preserving as many trees as reasonably possible.

Limits of the Assignment:

All observations were made from the ground. No root collar excavations or aerial inspections were performed.

No utilities, grading, or feature specifications are shown on the plans provided to me. I expect additional tree impacts will result from some or all of these factors.

No project features had been staked at the time of my site visit.

Purpose & Use of the Report:

This report is intended to inform tree management decisions for this project.

Observations:

Trees

Four hundred seventy-six trees are present. The five most common species are: London plane (*Platanus* x *acerifolia*), with 121 (25%); Italian cypress (*Cupressus sempervirens*), with 44 (9%); Raywood ash (*Fraxinus angustifolia* 'Raywood'), with 44 (9%); crape myrtle (*Lagerstroemia indica*), with 41 (9); and ornamental cherries (*Prunus* spp.), with 32 (7%).

Four trees are dead. Two of these were removed prior to my site visit, though their stumps remain.

Many trees are in small planters surrounded by hardscape.

Orange tape was present around several tree trunks at the time of my site visit, as noted in the Tree Table. I do not know the significance of this tape; it is possible that the trees are slated for removal or pruning by others.

Project Features

A new building will be constructed in the north part of the property, with a generator yard to the south. A new substation will be constructed in the southwest part of the property. Most parking lot and driving areas will be redesigned.

The existing building in the south part of the property will remain.

Tree Impacts

Three hundred seventeen trees conflict directly with proposed project features (not including dead trees). Conflicting features are listed in the following table:

Conflicting Feature	Live Trees to be Removed	%
Building	137.0	43%
Concrete path	5.0	2%
Driveway	93.0	29%
Generator yard	42.0	13%
Retention area	13.0	4%
Substation	27.0	9%

Of the 155 trees to remain, most are in good condition, as shown in the following table:

Vigor Rating (1 = low, 3 = high)	Trees to be Retained	%
3	137	88%
2	13	8%
1	5	3%

Many of the trees to remain will likely be impacted by project activities as detailed in the following tables:

Impacting Feature	Trees to be Retained	%
Concrete path	3.0	2%
Demolition	24.0	15%
Driveway	12.0	8%
None	104.0	67%
Property line fence	1.0	1%
Retention area	11.0	7%

Likely Impact level	Trees to be Retained	%
Minor	142	92%
Minor-moderate	1	1%
Moderate	1	1%
Unknown	11	7%

Please note that all trees with "unknown" impacts are in or near retention areas. As details for retention areas have not been provided, it is unclear whether these trees will undergo impacts, and if so, how severe the impacts will be.

Testing & Analysis:

Tree DBHs[1] were taken using a diameter tape measure if trunks were accessible. The DBHs of trees with non-accessible trunks were estimated visually. All trees over four inches in DBH were inventoried, with some smaller trees included if prominently located.

Vigor ratings are based on tree appearance and experiential knowledge of each species.

Tree location data was collected using a GPS smartphone application and processed in GIS software to create the maps included in this report. Due to slight differences between GPS data and CAD drawings, tree locations shown on the map below are approximate.

I visited the site on 5/31/2019, 6/1/2019, and 6/3/2019. All observations and photographs in this report were taken at those site visits.

This report is based on sheet A1.1 of the plan set titled "Master Plan: Proposed New Site Plan," provided to me electronically by the client. No utilities, grading, or feature specifications were provided.

[1] Diameter at breast height, a standard arboricultural metric

Discussion:

Critical Root Zone (CRZ)

Tree roots grow where conditions are favorable, and their spatial arrangement is therefore unpredictable. Favorable conditions vary among species, but generally include the presence of moisture, and soft soil texture with low compaction.

Contrary to popular belief, roots of all tree species grow primarily in the top two feet of soil, with a small number of roots sometimes occurring at greater depths. Some species have taproots when young, but these almost universally disappear with age. At maturity, a tree's root system may extend out from the trunk farther than the tree is tall.

The optimal size of the area around a tree which should be protected from disturbance depends on the tree's size, species, and vigor, as shown in the following table (adapted from *Trees & Construction*, Matheny and Clark, 1998)[2]:

Species tolerance	Tree vigor	Distance from trunk (feet per inch trunk diameter)
Good	High	0.5
	Moderate	0.75
	Low	1
Moderate	High	0.75
	Moderate	1
	Low	1.25
Poor	High	1
	Moderate	1.25
	Low	1.5

Species-Specific Issues

Some tree species on this property exhibit disease symptoms that, while unsightly, indicate common issues which can be managed with proper ongoing care. These trees were given higher health ratings than may appear reasonable without knowledge of these issues.

[2] Matheny and Clark use tree age instead of vigor; however, vigor is a stronger predictor of a tree's response to wounding.

Raywood ash - these trees are susceptible to a syndrome called ash dieback. Though the exact causes remain unknown, disease susceptibility and drought stress appear to be major factors. This syndrome cannot be cured, but can only be managed through irrigation and regular removal of deadwood.

Callery pear - all pear trees, but especially Callery pear (*Pyrus calleryana*), are susceptible to a bacterial disease called fireblight (*Erwinia amylovora*). Fireblight infection causes progressive dieback, starting with buds and spreading to entire limbs.

Evergreen pear - a disease called leaf spot (*Entomosporium mespili*) causes copious black spots on the leaves of evergreen pear trees (*Pyrus kawakamii*). This disease is primarily aesthetic, though some infected trees may drop of one or more crops of leaves per year.

Conclusions:

Three hundred seventeen trees must be removed in order for the project to move forward as currently proposed. Two others must be removed irrespective of project features, as they are dead. Another two were removed prior to my site visit, and only the stumps remain.

The remaining 155 trees can reasonably be protected, with a high likelihood of survival during and after construction.

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PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT
Kimley»Horn

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4637 CHABOT DRIVE, SUITE 300,
PLEASANTON, CA 94588
PHONE: 925-398-4840 FAX: 714-938-9488

LANDSCAPE ARCHITECT OF RECORD SEAL
LICENSED LANDSCAPE ARCHITECT
Michael Jason Lewis No. 4797
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

DLR DATA CENTER
2825 LAFAYETTE STREET
SANTA CLARA, CA, 95050

ARBORIST REPORT

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 06/19/20
PROJECT ENGINEER KN	SHEET NUMBER L1.4
SCALE AS SHOWN	

Recommendations:

1. Remove trees #1-6, 15, 21, 23-25, 42-78, 80-83, 94-97, 99-251, 253-257, 259-263, 268-270, 277-313, 315-328, 330-332, 335-338, 340, 411, 414, 420-433, 446-448, 450-453, 456-470, 475, and 476, upon approval from the City of Santa Clara.
2. Remove deadwood from remaining Callery pears and Raywood ashes. This will benefit both tree health and worker safety.
3. All tree work must be performed by trained tree care personnel under the direction of an International Society of Arboriculture Certified Arborist.
4. Alert the Project Arborist when new drawings are available showing grading, utilities, retention area details, or material changes to project features.
5. Install tree protection fencing prior to any demolition equipment coming onsite.
    a. Install fencing at or outside the tree protection areas of all trees to be retained, shown on the map below.
    b. Where existing pavement is within tree protection zones, install tree protection fencing at the edge of pavement. After demolition, move tree protection fencing to the edge of the tree protection area.
    c. Where proposed features shown on the map included below lie within tree protection areas, install tree protection fencing at the edge of the features.
    d. For areas where no construction will occur, tree protection fencing may be installed at the perimeter of the area instead of around each tree individually.
    e. Spread wood chips at least four inches thick within tree protection fencing.
6. For existing hardscape to be demolished within tree protection zones:
    a. Demolish the area nearest the tree first, and work outwards.
    b. Do not operate machinery on unpaved areas within tree protection zones.
    c. Upon completion of demolition, move tree protection fencing to be at or outside the tree protection area.
7. Minimize grading near trees. Do not perform any grading inside tree protection fencing.
8. If live roots over one inch in diameter are encountered at any time, in any location, they must be pruned with a sharp saw or bypass pruners, as close to the edge of the excavation as possible. If roots over three inches in diameter are encountered, do not prune, but instead contact the Project Arborist to determine the best course of action.
9. Irrigate all trees to be retained on a monthly basis with potable water, in the absence of heavy rain.
    a. Irrigate using a soaker hose placed as close to tree driplines as practical. Irrigate for 2-4 hours at a very low flow. If this causes runoff, reduce the flow rate. If this is impractical for any tree for any reason, contact the Project Arborist.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other government regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
5. Loss, alteration, or reproduction of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.
7. Neither all nor any part of this report, nor any copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or initialed designation conferred upon the consultant/appraiser as stated in his qualification.
8. This report and the values expressed herein represent the opinion of the consult/appraiser, and the consult/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
10. Unless expressed otherwise - 1) information in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in future.

Respectfully submitted,

Katherine Naegele
Consulting Arborist
Anderson's Tree Care Specialists, Inc.
A TCIA Accredited Company
Master of Forestry, UC Berkeley
ISA Certified Arborist #WE-9658A
ISA Tree Risk Assessment Qualified
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ARCHITECT

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LANDSCAPE ARCHITECT OF RECORD SEAL

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
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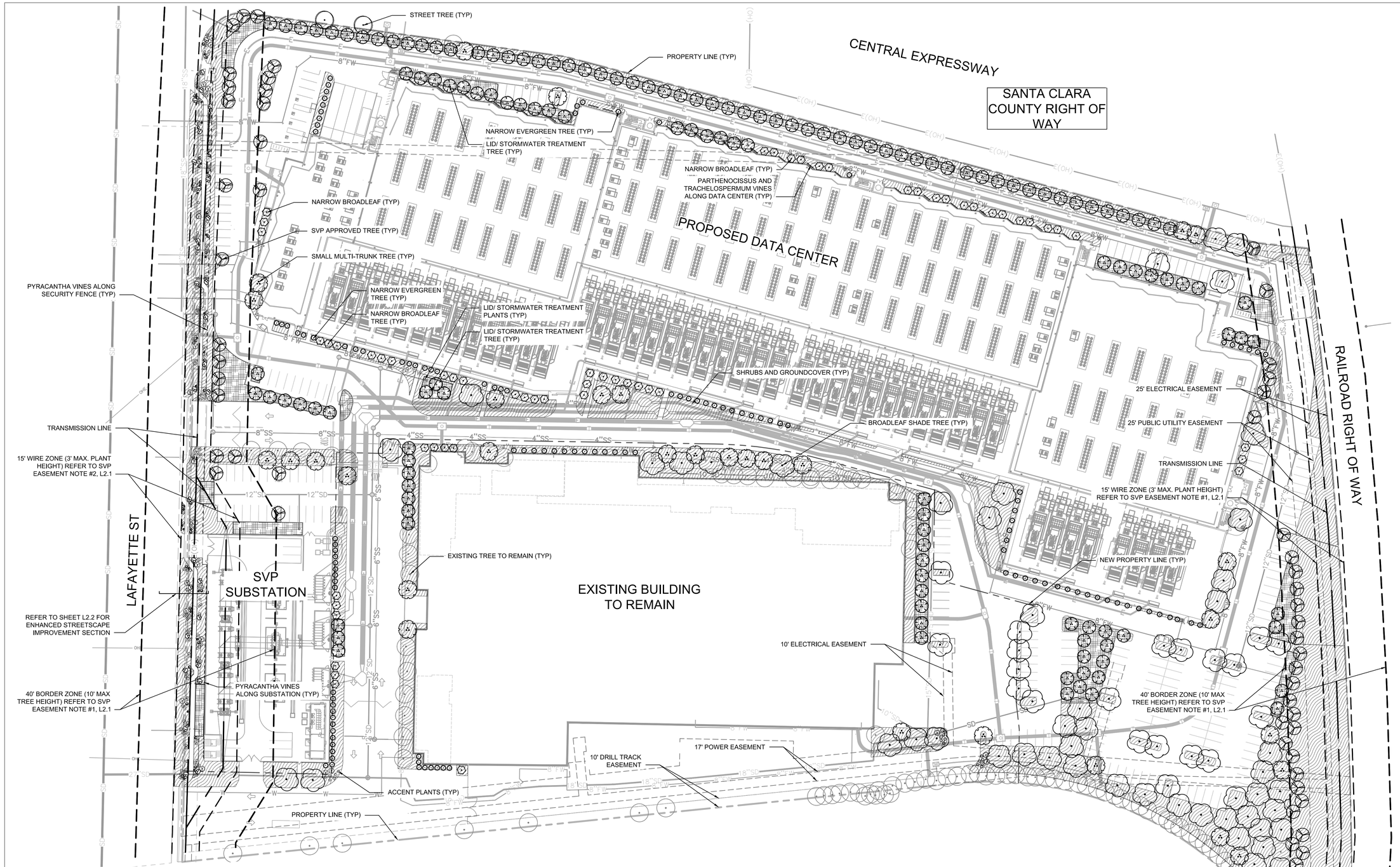
SANTA CLARA, CA, 95050

ARBORIST REPORT

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	06/19/20
PROJECT ENGINEER	SHEET NUMBER
KN	L1.5
SCALE	
AS SHOWN	



PRELIMINARY LANDSCAPE LEGEND: (REFERENCE PLAN L2.1 FOR COMPLETE PLANT SCHEDULE)

TREES	QTY	DESCRIPTION	CONT.
	99	EXISTING TREE TO REMAIN	N/A
	2	STREET TREE	24" BOX
	135	LID/STORMWATER TREATMENT TREE	24" BOX
	70	BROADLEAF SHADE TREE	36" BOX
	60	SVP APPROVED TREE	36" BOX
	124	NARROW EVERGREEN TREE	36" BOX
	34	SMALL MULTI-TRUNK TREE	36" BOX
	58	NARROW BROADLEAF TREE	24" BOX

GROUNDCOVER	QTY	DESCRIPTION	CONT.
		SHRUBS AND GROUNDCOVER	1 GAL
		LID/STORMWATER TREATMENT PLANTS	1 GAL
		ACCENT PLANTS	1 GAL
		VINES	1 GAL
		LANDSCAPE BOULDERS	

TREE MITIGATION / REPLACEMENT	
TREES REMOVED	375
24" BOX SIZED TREES REQUIRED OR 36" BOX SIZED TREES REQUIRED	750 OR 375
NEW 24" BOX SIZED TREES (REPLACES 97 TREES)	195
NEW 36" BOX SIZED TREES (REPLACES 288 TREES)	288
SURPLUS OF ADDITIONAL NEW TREES	10

NORTH

GRAPHIC SCALE IN FEET
0 25 50 100

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LANDSCAPE ARCHITECT OF RECORD SEAL
REGISTERED LANDSCAPE ARCHITECT
Matthew J. Morgan License No. 4505
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
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2825 LAFAYETTE STREET
SANTA CLARA, CA, 95050

LANDSCAPE PLAN

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 06/19/20
PROJECT ENGINEER KN	SHEET NUMBER
SCALE AS SHOWN	L2.0

PRELIMINARY LANDSCAPE SCHEDULE

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT.	SPACING	WUCOLS
	99	EXISTING TREE TO REMAIN	N/A	N/A	N/A
		STREET TREES MAY CONSIST OF THE FOLLOWING:			
	2	CEDRUS DEODARA / DEODAR CEDAR	24" BOX	AS SHOWN	LOW
		LID/STORMWATER TREATMENT TREE MAY CONSIST OF THE FOLLOWING:			
	135	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	24" BOX	AS SHOWN	V. LOW
		LAURUS NOBILIS 'SARATOGA' / BAY LAUREL	24" BOX	AS SHOWN	LOW
		BROADLEAF SHADE TREE MAY CONSIST OF THE FOLLOWING:			
	70	CINNAMOMUM CAMPHORA / CAMPHOR TREE	36" BOX	AS SHOWN	MOD
		PISTACIA CHINENSIS / CHINESE PISTACHE	36" BOX	AS SHOWN	LOW
		TILIA CORDATA / LITTLELEAF LINDEN	36" BOX	AS SHOWN	MOD
		QUERCUS ILEX / HOLLY OAK	36" BOX	AS SHOWN	LOW
		SVP APPROVED TREE MAY CONSIST OF THE FOLLOWING:			
	60	GLEDITSIA TRIACANTHOS F. INERMIS / THORNLESS HONEY LOCUST	36" BOX	AS SHOWN	LOW
		NARROW EVERGREEN TREE MAY CONSIST OF THE FOLLOWING:			
	124	CUPRESSUS SEMPERVIRENS / ITALIAN CYPRESS	36" BOX	AS SHOWN	LOW
		SMALL TREE MAY CONSIST OF THE FOLLOWING			
	34	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK	36" BOX	AS SHOWN	V. LOW
		LAGERSTROEMIA X 'TUSKEGEE' / TUSKEGEE CRAPE MYRTLE	36" BOX	AS SHOWN	LOW
		LAURUS NOBILIS 'SARATOGA' / BAY LAUREL	36" BOX	AS SHOWN	LOW
		NARROW BROADLEAF TREE MAY CONSIST OF THE FOLLOWING:			
	58	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE	24" BOX	AS SHOWN	MOD
		CARPINUS BETULUS 'FATIGIATA' / FASTIGIATE EUROPEAN HORNBEAM	24" BOX	AS SHOWN	MOD
		GINKGO BILOBA 'PRINCETON SENTRY' / PRINCETON SENTRY GINKGO	24" BOX	AS SHOWN	MOD
		MAGNOLIA GRANDIFLORA 'ALTA' / ALTA MAGNOLIA	24" BOX	AS SHOWN	MOD
		QUERCUS ROBUR FASTIGIATA / FASTIGIATE ENGLISH OAK	24" BOX	AS SHOWN	MOD

SHRUBS	BOTANICAL NAME / COMMON NAME	CONT.	SPACING	WUCOLS
	SHRUBS AND GROUNDCOVERS:			
	SHRUBS MAY CONSIST OF:			
	ASCLEPIAS FASCICULARIS / CALIFORNIA NARROWLEAF MILKWEED	1 GAL	30" OC	LOW
	ERIOPHYLLUM CONFERTIFLORUM / GOLDEN YARROW	1 GAL	30" OC	LOW
	LIGUSTRUM JAPONICUM 'TEXANIUM/ GLOSSY LEAF PRIVET	1 GAL	30" OC	MOD
	MYRTUS COMMUNIS 'COMPACTA' / DWARF MYRTLE	1 GAL	30" OC	MOD
	RHAMNUS CALIFORNICA / CALIFORNIA COFFEEBERRY	1 GAL	30" OC	LOW
	ROSA CALIFORNICA / CALIFORNIA WILD ROSE	1 GAL	30" OC	LOW
	ZAUSCHNERIA CALIFORNICA / CALIFORNIA FUCHSIA	1 GAL	30" OC	LOW
	GROUNDCOVERS MAY CONSIST OF:			
	ARCTOSTAPHYLOS 'EMERALD CARPET'/ EMERALD CARPET MANZANITA	1 GAL	30" OC	LOW
	CARISSA MACROCARPA 'GREEN CARPET' / NATAL PLUM	1 GAL	30" OC	LOW
	MYOPORUM PARVIFOLIUM / MYOPORUM	1 GAL	30" OC	LOW
	SALVIA GRACIAS / GRACIAS SAGE	1 GAL	30" OC	LOW
	SENECIO SERPENS / BLUE CHALK STICKS	1 GAL	30" OC	LOW
	LID/STORMWATER TREATMENT PLANTS MAY CONSIST OF A MIX OF THE FOLLOWING:			
	BOUTELOUA GRACILIS 'BLONDE AMBITION' / BLUE GRAMA OATS	1 GAL	30" OC	MOD
	CAREX TUMULICOLA / BERKELEY SEDGE	1 GAL	30" OC	LOW
	CARPEX PANSA / CALIFORNIA FIELD SEDGE	1 GAL	30" OC	MOD
	CHONDROPETALUM TECTORUM / SMALL CAPE RUSH	1 GAL	30" OC	LOW
	JUNCUS PATENS / CALIFORNIA GRAY RUSH	1 GAL	36" OC	LOW
	MUHLENBERGIA RIGENS / DEER GRASS	1 GAL	30" OC	LOW
	ACCENT PLANTS MAY CONSIST OF THE FOLLOWING: MAY CONSIST OF A MIX OF THE FOLLOWING:			
	AGAVE ATTENUATA / FOXTAIL AGAVE	1 GAL	40" OC	LOW
	AGAVE ATTENUATA 'BOUTIN BLUE' / BLUE FOXTAIL AGAVE	1 GAL	40" OC	LOW
	CARPENTERIA CALIFORNICA / BUSH ANEMONE	1 GAL	40 "OC	MOD
	EUPHORBIA RIGIDA / GOPHER SPURGE	1 GAL	40" OC	LOW
	HESPERALOE PARVIFLORA / RED YUCCA	1 GAL	40" OC	LOW
	PHORMIUM 'DUSKY MAIDEN / DUSKY MAIDEN NZ FLAX	1 GAL	40" OC	LOW
	PHORMIUM 'JACK SPRATT' / JACK SPRATT NZ FLAX	1 GAL	40" OC	LOW
	SALVIA SPATHACEA / HUMMINGBIRD SAGE	1 GAL	40" OC	LOW
	VINES MAY CONSIST OF THE FOLLOWING:			
	PYRACANTHA COCCINEA / SCARLET FIRETHORN	1 GAL	96" OC	LOW
	PARTHENOCISSUS TRICUSPIDATA/BOSTON IVY	1 GAL	72" OC	LOW
	TRACHELOSPERMUM JASMINOIDES/STAR JASMINE	1 GAL	72" OC	LOW
	BOULDERS MAY CONSIST OF THE FOLLOWING:			
	1-2' DIA LANDSCAPE BOULDER			
	3-4' DIA LANDSCAPE BOULDER			
	5-6' DIA LANDSCAPE BOULDER			

SVP EASEMENT NOTES:

1. SVP EASEMENT ALONG EAST SIDE OF PROPERTY:
SVP HAS EXISTING 60KV TRANSMISSION LINE ALONG THE EAST SIDE OF THE 2825 LAFAYETTE STREET PROPERTY. AS PART OF THE ENTITLEMENT APPROVAL PROCESS FOR THE NEW 2825 LAFAYETTE BUILDING, SVP IS REQUIRING EXISTING TREES TO BE REMOVED TO COMPLY WITH SVP STANDARD OH-1230.

SVP STANDARD OH-1230 (TREE CLEARANCES FROM OVERHEAD ELECTRIC LINES, 09/08/16) LIMITS THE TREES AND LANDSCAPING THAT CAN BE LOCATED NEAR TRANSMISSION LINES.
A. WIRE ZONE: TREES / LANDSCAPING ARE LIMITED TO 3 FEET HIGH WITHIN 10 FEET (HORIZONTAL DISTANCE) OF THE TRANSMISSION CONDUCTORS, WHICH RESULTS IN A ZONE EXTENDING APPROXIMATELY 15 FEET ON EITHER SIDE OF THE TRANSMISSION POLES.
B. BORDER ZONE: TREES / LANDSCAPING ARE LIMITED TO 10 FEET HIGH EXTENDING 40 FEET (HORIZONTAL DISTANCE) BEYOND THE WIRE ZONE ON BOTH SIDES OF THE TRANSMISSION POLES.

NEW TREES AND LANDSCAPING WILL BE PLANTED TO OFFSET THE TREES THAT WILL BE REMOVED AS PART OF THE SVP STANDARD OH-1230 REQUIREMENT.

2. SVP EASEMENT ALONG WEST SIDE OF PROPERTY:
SVP WILL BE INSTALLING A 60KV TRANSMISSION LINE ALONG THE WEST SIDE OF THE 2825 LAFAYETTE STREET PROPERTY, ALONG LAFAYETTE STREET. THIS TRANSMISSION LINE WILL SERVE THE PROPOSED 2825 LAFAYETTE STREET BUILDING AND FUTURE DEVELOPMENTS IN THE AREA.

AS PART OF THE ENTITLEMENT APPROVAL PROCESS FOR THE NEW 2825 LAFAYETTE BUILDING, SVP IS REQUIRING EXISTING TREES TO BE REMOVED TO COMPLY WITH SVP STANDARD OH-1230 AND IS REQUIRING NEW TREES BE PLANT IN COMPLIANCE WITH THIS REQUIRMENT.

SVP STANDARD OH-1230 (TREE CLEARANCES FROM OVERHEAD ELECTRIC LINES, 09/08/16) LIMITS THE TREES AND LANDSCAPING THAT CAN BE LOCATED NEAR TRANSMISSION LINES.
A. WIRE ZONE: TREES / LANDSCAPING ARE LIMITED TO 3 FEET HIGH WITHIN 10 FEET (HORIZONTAL DISTANCE) OF THE TRANSMISSION CONDUCTORS, WHICH RESULTS IN A ZONE EXTENDING APPROXIMATELY 15 FEET ON EITHER SIDE OF THE TRANSMISSION POLES.
B. BORDER ZONE: TREES / LANDSCAPING ARE LIMITED TO 10 FEET HIGH EXTENDING 40 FEET (HORIZONTAL DISTANCE) BEYOND THE WIRE ZONE ON BOTH SIDES OF THE TRANSMISSION POLES.

NEW TREES WILL BE PLANTED TO OFFSET THE TREES THAT WILL BE REMOVED AS PART OF THE SVP STANDARD OH-1230 REQUIREMENT. A GREATER NUMBER OF TREES WILL BE PLANTED ALONG THE NORTH SIDE OF THE PROPERTY (CENTERAL EXPRESSWAY), AWAY FROM THE SVP UTILITY LINES.

LANDSCAPE NOTES

1. THE SELECTION OF PLANT MATERIAL IS BASED ON CLIMATIC, AESTHETIC, AND MAINTENANCE CONSIDERATIONS.
2. GROUND COVER SHALL BE PLANTED AT A MAX SPACING OF 12" ON CENTER TO RESULT IN MAX COVERAGE WITHIN ONE YEAR OF INITIAL PLANTING.
3. ALL PLANTING AREAS SHALL BE PREPARED WITH APPROPRIATE SOIL AMENDMENTS, FERTILIZERS AND APPROPRIATE SUPPLEMENTS BASED UPON A SOILS REPORT FROM AN AGRICULTURAL SUITABILITY SOIL SAMPLE TAKEN FROM THE SITE.
4. GROUNDCOVERS OR ORGANIC SHREDDED BARK MULCH SHALL FILL IN BETWEEN SHRUBS TO SHIELD THE SOIL FROM THE SUN, EVAPOTRANSPIRATION, AND RUN-OFF.
5. ALL SHRUB BEDS SHALL BE MULCHED WITH ORGANIC SHREDDED BARK MULCH TO A 3" MINIMUM DEPTH TO HELP CONSERVE WATER, LOWER SOIL TEMPERATURE, AND REDUCE WEED GROWTH. THE SHRUBS SHALL BE ALLOWED TO GROW IN THEIR NATURAL FORMS.
6. ALL LANDSCAPE IMPROVEMENTS SHALL FOLLOW THE GUIDELINES SET FORTH BY THE CITY OF SANTA CLARA AND COUNTY OF SANTA CLARA.
7. ALL VEGETATION SHALL BE MAINTAINED FREE OF PHYSICAL DAMAGE OR INJURY FROM LACK OF WATER, EXCESS CHEMICAL FERTILIZER OR OTHER TOXIC CHEMICAL, BLIGHT OR DISEASE. ANY VEGETATION WHICH SHOWS SIGNS OF SUCH DAMAGE OR INJURY AT ANY TIME SHALL BE REPLACED BY THE SAME, SIMILAR, OR SUBSTITUTE VEGETATION OF A SIZE, FORM, AND CHARACTER WHICH WILL BE COMPARABLE AT FULL GROWTH.
9. ANY COMPACTED SOILS IN PLANTING AREAS SHALL BE RETURNED TO A "FRIABLE" CONDITIONS PRIOR TO THE INSTALLATION OF PLANT MATERIALS. FRIABLE CONDITION IS DEFINED AS AN EASILY CRUMBLED OR LOOSELY COMPACTED CONDITION WHEREBY THE ROOT STRUCTURE OF NEWLY PLANTED MATERIAL WILL BE ALLOWED TO SPREAD UNIMPEDED.
10. APPROXIMATE PLANT QUANTITIES ARE PROVIDED IN THE LEGEND FOR CONVENIENCE ONLY. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE CORRECT QUANTITY OF PLANT MATERIAL REGARDLESS OF THE QUANTITIES INDICATED IN THE LEGEND.
11. PROVIDE WEED CONTROL PER SPECIFICATIONS.
12. PROVIDE AGRICULTURAL SUITABILITY AND FERTILITY TESTS. LANDSCAPE CONTRACTOR SHALL INCORPORATE ALL SOILS LAB RECOMMENDATIONS. FOR BIDDING PURPOSES, ASSUME THE FOLLOWING:
AMEND TOPSOIL TO 6" DEPTH WITH:
A.) 4 CUBIC YARDS NITROLIZED SOIL AMENDMENT
B.) 15 LBS. 6-20-20 COMMERCIAL FERTILIZER
C.) 15 LBS AGRICULTURAL GYPSUM
D.) 10 LBS GRO POWER PLUS SOIL CONDITIONER OR APPROVED EQUAL
PREPARE ALL BACKFILL SOIL AS RECOMMENDED BUT NO LESS PER CUBIC YARD THAN AS FOLLOWS:
A.) 6-20-20 FERTILIZER
B.) 4/5 CUBIC YARD SCREENED TOPSOIL
C.) 1/5 CUBIC YARD NITROLIZED SOIL AMENDMENT
D.) 1 LBS ORGANIC GYPSUM
E.) 2 LBS GRO POWER PLUS SOIL CONDITIONER OR APPROVED EQUAL
13. FOR SOILS LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL AND IRRIGATION SYSTEMS PROPOSED AND EXISTING-TO-REMAIN FOR A PERIOD OF 90-DAYS AFTER COMPLETION OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE EXISTING AND PROPOSED PLANT MATERIAL FOR A ONE-YEAR PERIOD STARTING AT FINAL ACCEPTANCE OF THE IMPROVEMENTS. DURING THIS PERIOD THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY DEAD OR IN-DECLINE PLANT MATERIAL OR DAMAGED IRRIGATION COMPONENTS IN-KIND.

I HAVE COMPLIED WITH THE CRITERIA OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE CONCEPT DESIGN.

MATTHEW J. MORGAN, PLA 6256

STATE OF CALIFORNIA ESTIMATED WATER USE

TOTAL WATER USE IS CALCULATED BY SUMMING THE AMOUNT OF WATER ESTIMATED FOR EACH HYDROZONE. WATER USE FOR EACH HYDROZONE IS ESTIMATED WITH THE FOLLOWING FORMULA:

ESTIMATED TOTAL WATER USE (ETWU) = GAL / YEAR PER HYDROZONE

ET ADJUSTMENT FACTOR (ETAF) =
0.55 ETAF FOR RESIDENTIAL LANDSCAPE
0.45 ETAF FOR NON-RESIDENTIAL LANDSCAPE
0.8 ETAF FOR EXISTING NON-REHABILITATED LANDSCAPE
SPECIAL LANDSCAPE SHALL NOT EXCEED 1.0 ETAF

PLANT FACTOR (PF) = WATER USE CLASSIFICATION OF LANDSCAPE SPECIES

HYDROZONE AREA (HA) = (SF OF LANDSCAPE) OR (32 SF / TREE)

CONVERSION FACTOR (CONVERTS ACRE-INCHES PER ACRE PER YEAR TO GALLONS PER SQUARE FOOT PER YEAR = 0.62

IRRIGATION EFFICIENCY (IE) = 0.75 (OVERHEAD SPRAY) 0.81 (DRIP)

SPECIAL LANDSCAPE AREA (SLA) = SF OF EDIBLE PLANTS, RECREATIONAL AREAS, AREAS IRRIGATED WITH RECYCLED WATER, OR WATER FEATURS USING RECYCLED WATER

EVAPOTRANSPIRATION RATE (ETo) = QUANTITY OF WATER EVAPORATED FROM ADJ. SOIL AND TRANSPIRED BY PLANTS OVER A SPECIFIED TIME

ETWU = [(ETo) * (PF) * (HA) * (0.62)] / (IE)

MAWA = (ETo) * (0.62) [ETAF) * (SUM OF SLA & HA)] + [(1-ETAF) * (SLA)]

HYDROZONE "A" (SUBSURFACE DRIP)

ETO	PF	HA	CONVERSION FACTOR	IE	SLA	ETWU (GAL/YEAR)
45.30	0.30	174,034	0.62	0.81		1,810,340.34

HYDROZONE "B" (BUBBLERS)

ETO	PF	HA	CONVERSION FACTOR	IE	SLA	ETWU (GAL/YEAR)
45.30	0.45	18,624	0.62	0.81		290,596.48
					ESTIMATED TOTAL WATER USE (GAL/YEAR)	**2,100,936.82**

MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

ETO	SUM OF HA	CONVERSION FACTOR	ETAF	SUM OF SLA	MAWA(GAL/YEAR)
45.30	192,658.00	0.62	0.45	-	2,434,946.66
				MAXIMUM APPLIED WATER ALLOWANCE (GAL/YEAR)	**2,434,946.66**
				MAXIMUM APPLIED WATER ALLOWANCE PERCENT OF ESTIMATED TOTAL WATER USE	**86.28%**

NOTE:
SUM OF HYDROZONE AREA INCLUDES TOTAL OF NEW LANDSCAPE AREA TO BE IRRIGATED

LANDSCAPE DATA TABLE

CITY OF SANTA CLARA MUNICIPAL CODE	REQUIRED	PROVIDED
ZONE: LIGHT INDUSTRIAL		
TOTAL SITE AREA: 991, 425 SF (22.76 ACRES)		
TOTAL LANDSCAPE AREA: 174,034 SF (3.99 ACRES)		
TOTAL BUILDING PAD AREA: 369, 811 SF (8.49 ACRES)		
TOTAL VUA (VEHICULAR USE AREA): 213, 418 (4.90 ACRES)		
DEVELOPMENT CRITERIA – LANDSCAPE PROVISIONS		
TOTAL LANDSCAPE AREA COVERAGE	10% (OF TOTAL VUA AREA SPREAD EVENLY ACROSS VUA AND BUILDING FRONTAGE) 213,418 SF X 0.10 = 21,342 SF LANDSCAPE AREA	174,034 SF LANDSCAPE AREA
TREE MITIGATION	375 TREES REMOVED REPLACE AT 2:1 MIN. 24" BOX SIZE, OR 1:1 MIN. 36" BOX SIZE	REPLACED WITH: 195 TREES 24" BOX SIZE (REPLACES 97 TREES) 288 TREES 36" BOX SIZE(REPLACES 288 TREES) SURPLUS OF 10 TREES
DEVELOPMENT CRITERIA – VEHICULAR USE AREA (VUA)		
PARKING LOT SCREENING	30" HEIGHT MINIMUM LANDSCAPED BERM	LIMITED AREA FOR GRADING WITHIN THE BUILDING FRONTAGE. A DENSE LANDSCAPE SCREEN OF 24" HEIGHT MINIMUM WILL PROVIDE A BUFFER FROM THE STREET (CPTED REQUIRES MAX 24" HEIGHT SHRUBS)

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LANDSCAPE ARCHITECT OF RECORD SEAL
LICENSED LANDSCAPE ARCHITECT
MATTHEW JOSEPH MORGAN
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

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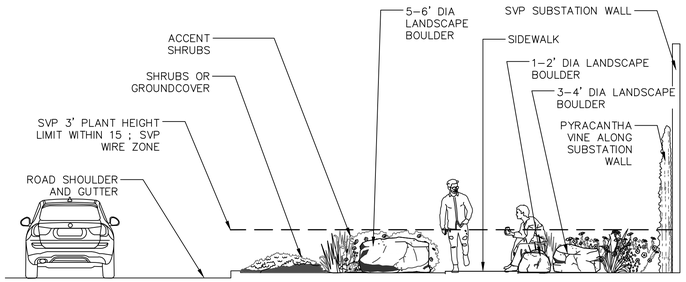
SANTA CLARA, CA, 95050

LANDSCAPE NOTES AND SCHEDULE

PRINCIPAL IN CHARGE: JP	PROJECT NUMBER: 197250001
PROJECT MANAGER: MJ	DATE: 06/19/20
PROJECT ENGINEER: KN	SHEET NUMBER: L2.1
SCALE: AS SHOWN	



A ENHANCED STREETSCAPE IMPROVEMENTS

SCALE: 1"=10'

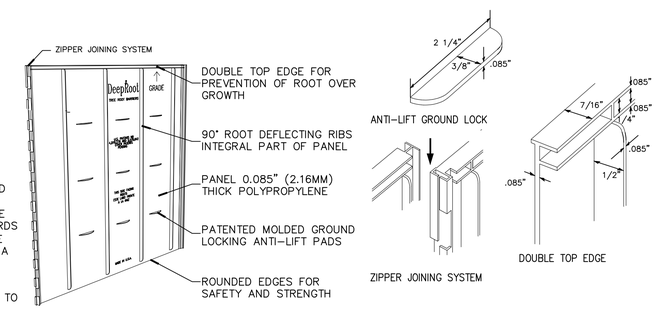
SPECIFIED TREE ROOT BARRIERS ARE A MECHANICAL BARRIER AND ROOT DEFLECTOR TO PREVENT TREE ROOTS FROM DAMAGING HARDSCAPES AND LANDSCAPES. ASSEMBLED IN 2' LONG MODULES LINEAR APPLICATIONS DIRECTLY BESIDE A HARDSCAPE ADJACENT TO ONE SIDE OF THE TREES (LINEAR PLANTING STYLE).

A. MATERIALS

1. THE CONTRACTOR SHALL FURNISH AND INSTALL TREE ROOT BARRIERS AS SPECIFIED. THE TREE ROOT BARRIERS SHALL BE PRODUCT # UB 48–2 AS MANUFACTURED BY DEEP ROOT PARTNERS, L.P. 530 WASHINGTON STREET, SAN FRANCISCO, CA 94111 (800–458–7668), OR APPROVED EQUAL. THE BARRIER SHALL BE BLACK, INJECTION MOLDED PANELS, OF 0.085" WALL THICKNESS IN MODULES 24" LONG BY 48" DEEP; MANUFACTURED WITH A MINIMUM 50% POST CONSUMER RECYCLED POLYPROPYLENE PLASTIC WITH ADDED ULTRAVIOLET INHIBITORS; RECYCLABLE. EACH PANEL SHALL HAVE:

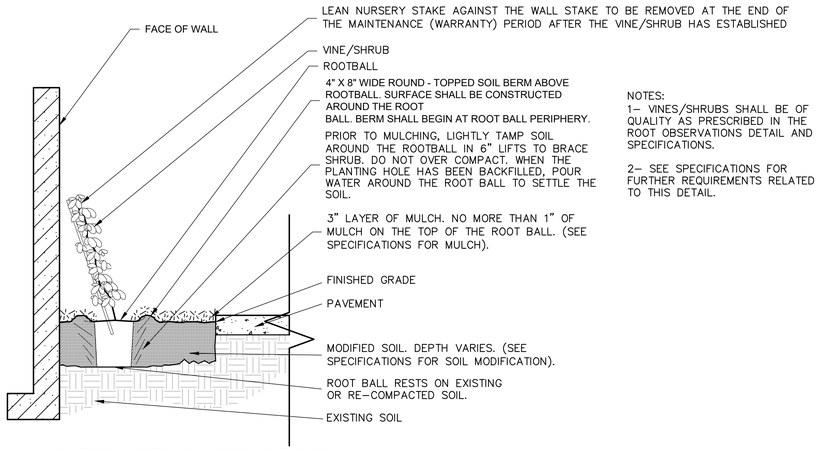
B. CONSTRUCTION AND INSTALLATION

1. THE CONTRACTOR SHALL INSTALL THE TREE ROOT BARRIERS WITH THE REQUIRED NUMBER OF PANELS FOR THE LENGTH SHOWN AND IN THE MANNER SHOWN ON THE DRAWINGS. ROOT BARRIER SHALL EXTEND 10' IN EACH DIRECTION FROM THE TRUNK OF THE TREE. VERTICAL ROOT DEFLECTING RIBS SHALL BE FACING INWARDS TO THE ROOT BALL AND THE TOP OF THE DOUBLE EDGE SHALL BE 1/2" ABOVE GRADE. EACH OF THE REQUIRED NUMBER OF PANELS SHALL BE CONNECTED IN A LINEAR FASHION AND PLACED ALONG THE ADJACENT HARDSCAPE.
2. EXCAVATION AND SOIL PREPARATION SHALL CONFORM TO THE DRAWINGS
3. THE TREE ROOT BARRIERS SHALL BE BACKFILLED ON THE OUTSIDE WITH 3/4" TO 1 1/2" GRAVEL OR CRUSHED ROCK AS SHOWN ON THE DRAWINGS. NO GRAVEL BACKFILL IS REQUIRED FOR A LINEAR PLANTING



B 24" DEEP ROOT TREE BARRIER

NTS

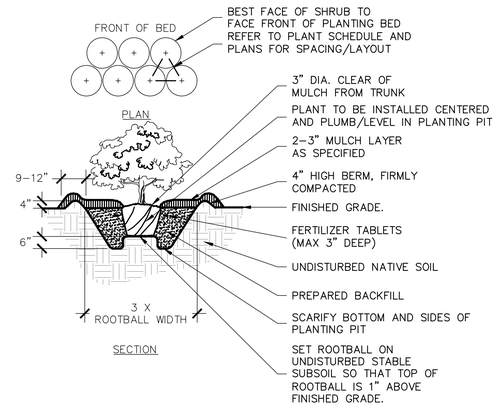


NOTES:
1– VINES/SHRUBS SHALL BE OF QUALITY AS PRESCRIBED IN THE ROOT OBSERVATIONS DETAIL AND SPECIFICATIONS.

2– SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

C VINE PLANTING AT BUILDING

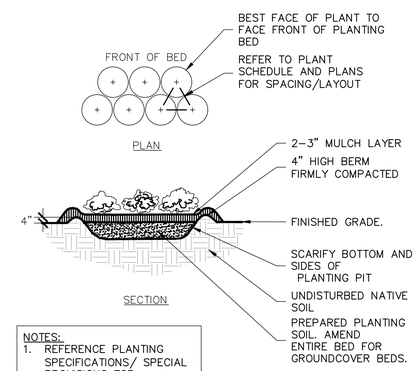
NTS



NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. WHEN SHRUBS MASSED WITH GROUNDCOVER BEDS, ENTIRE BED TO BE AMENDED.
3. WHEN SHRUBS ARE USED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS/HEIGHT

D TYPICAL SHRUB PLANTING

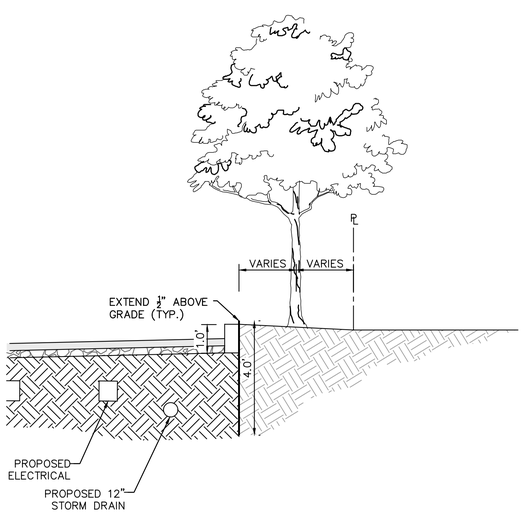
NTS



NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

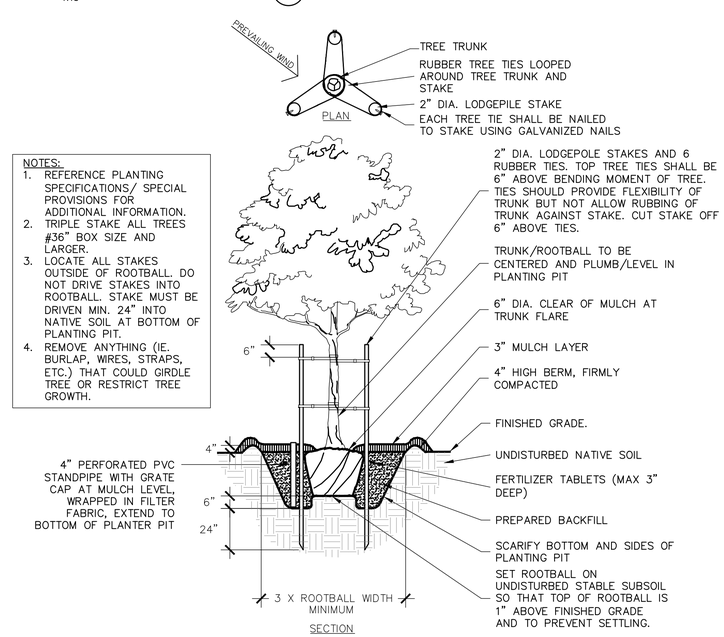
E TYPICAL GROUNDCOVER PLANTING

NTS



F TYPICAL SECTION (ROOT BARRIER AT UTILITY EASEMENTS)

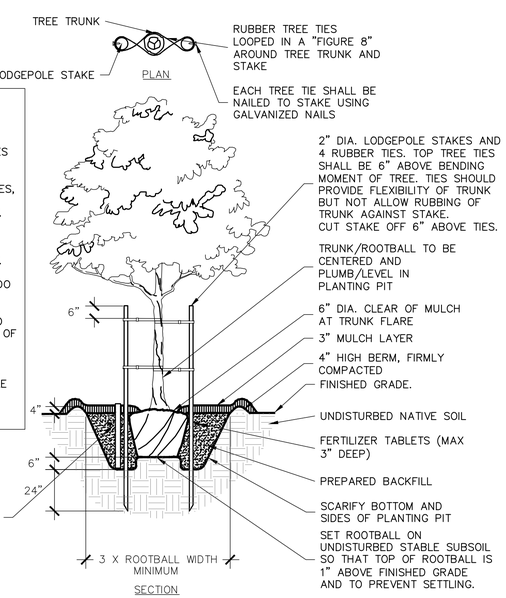
NTS



NOTES:
1. REFERENCE PLANTING SPECIFICATIONS/ SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
2. TRIPLE STAKE ALL TREES #36" BOX SIZE AND LARGER.
3. LOCATE ALL STAKES OUTSIDE OF ROOTBALL. DO NOT DRIVE STAKES INTO ROOTBALL. STAKE MUST BE DRIVEN MIN. 24" INTO NATIVE SOIL AT BOTTOM OF PLANTING PIT.
4. REMOVE ANYTHING (IE. BURLAP, WIRES, STRAPS, ETC.) THAT COULD GIRDLE TREE OR RESTRICT TREE GROWTH.

G TYPICAL TREE PLANTING (UP TO 36" BOX)

NTS



NOTES:
1. REFERENCE PLANTING NOTES FOR ADDITIONAL INFORMATION.
2. DOUBLE STAKE ALL TREES #15 (15 GAL.) SIZE AND LARGER.
3. FOR SINGLE STAKED TREES, PLACE STAKE ON WINDWARD SIDE OF TREE.
4. FOR DOUBLE STAKED TREES, PLACE STAKES PERPENDICULAR TO WINDWARD SIDE OF TREE.
5. LOCATE ALL STAKES OUTSIDE OF ROOTBALL. DO NOT DRIVE STAKES INTO ROOTBALL. STAKE SHALL BE DRIVEN MIN. 24" INTO NATIVE SOIL AT BOTTOM OF PLANTING PIT.
6. REMOVE ANYTHING (IE. BURLAP, WIRES, STRAPS, ETC.) THAT COULD GIRDLE TREE OR RESTRICT TREE GROWTH.

H TYPICAL TREE PLANTING (UP TO 24" BOX)

NTS

K:\BAY_LDEV\197250001 - DLR Data Center (Lafayette St.) - MRJ\CAD\Exhibits\Entitlement Drawings\L2.0 PRELIM LANDSCAPE PLAN OPT 2.dwg 6/19/2020 2:09 PM Michael.Thomsen

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LANDSCAPE ARCHITECT OF RECORD SEAL
LICENSED LANDSCAPE ARCHITECT
Michael Jerome Jensen No. 4293
Signature
Renewal Date
Date
STATE OF CALIFORNIA

NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19

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LANDSCAPE DETAILS

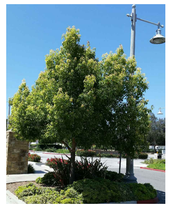
PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	06/19/20
PROJECT ENGINEER	SHEET NUMBER
KN	L2.2
SCALE	
AS SHOWN	

PRELIMINARY PLANT PALETTE

TREES

CEDRUS DEODARA
DEODAR CEDAR

CERCIS OCCIDENTALIS
WESTERN REDBUD


CINNAMOMUM CAMPHORA
CAMPHOR TREE

PISTACIA CHINENSIS
CHINESE PISTACHE

TILIA CORDATA
LITTLELEAF LINDEN

GLEDITSIA TRIACANTHOS
HONEY LOCUST

CUPRESSUS SEMPERVIRENS
ITALIAN CYPRESS

LAGERSTROEMIA X 'TUSKEGEE'
TUSKEGEE CRAPE MYRTLE

MAGNOLIA GRANDIFLORA 'ALTA'
ALTA SOUTHERN MAGNOLIA

ACER RUBRUM 'BOWHALL'
BOWHALL RED MAPLE

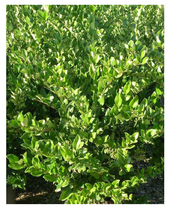
CARPINUS BETULUS 'FATIGIATA'
FASTIGIATE EUROPEAN HORNBEAM

LAURUS NOBILIS 'SARATOGA'
BAY LAUREL

SHRUBS / VINE

ERIOPHYLLUM CONFERTIFLORUM
YELLOW YARROW

ASCLEPIAS FASCICULARIS
NARROWLEAF MILKWEED

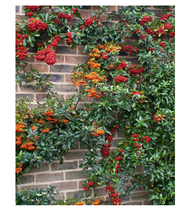

LIGUSTRUM JAPONICUM 'TEXANUM'
GLOSSY LEAF PRIVET

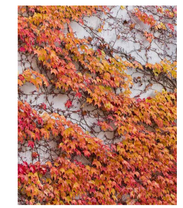
MYRTUS COMMUNIS 'COMPACTA'
DWARF MYRTLE

RHAMNUS CALIFORNICA
CALIFORNIA COFFEEBERRY

ROSA CALIFORNICA
CALIFORNIA WILD ROSE

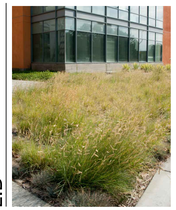
ZAUSCHNERIA CALIFORNICA
CALIFORNIA FUCHSIA


PYRACANTHA COCCINEA
SCARLET FIRETHORN

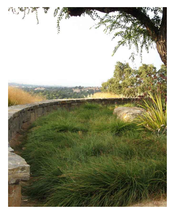

PARTHENOCISSUS TRICUSPIDATA
BOSTON IVY

TRACHELOSPERMUM JASMINOIDES
STAR JASMINE

LID


BOUTELOUA GRACILIS 'BLONDE AMBITION' / BLUE GRAMA OATS

CAREX PANSA
CALIFORNIA FIELD SEDGE

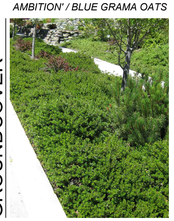

CAREX PANSA
CALIFORNIA FIELD SEDGE

CHONDROPETALUM TECTORUM
SMALL CAPE RUSH

JUNCUS PATENS
CALIFORNIA GRAY RUSH

MUHLENBERGIA RIGENS
DEER GRASS

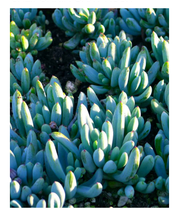
GROUNDCOVER


ARCTOSTAPHYLOS 'EMERALD
CARPET' / MANZANITA

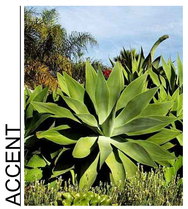
CARISSA MACROCARPA 'GREEN
CARPET' / NATAL PLUM

MYOPORUM PARVIFOLIUM
MYOPORUM

SALVIA 'GRACIAS'
GRACIAS SAGE


SENECIO SERPENS
BLUE CHALK STICKS

ACCENT


AGAVE ATTENUATA
FOXTAIL AGAVE

CARPENTERIA CALIFORNICA
BUSH ANEMONE

EUPHORBIA RIGIDA
GOPHER SPURGE

HESPERALOE PARVIFLORA
RED YUCCA

PHORMIUM 'JACK SPRATT'
JACK SPRAT NZ FLAX

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LANDSCAPE ARCHITECT OF RECORD SEAL

LICENSED LANDSCAPE ARCHITECT
Matthew Murgia License No. 4505
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NO.	RECORD	DATE
2	PCC ISSUANCE	06.19.20
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PLANT PALETTE
IMAGERY

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 06/19/20
PROJECT ENGINEER KN	SHEET NUMBER
SCALE AS SHOWN	L2.3