

1100 KW EXTERIOR FUEL CELL INSTALLATION AT EQUINIX SV6



EQUINIX

EQUINIX – SV6
444 TOYAMA DRIVE
SUNNYVALE, CA 94089



Know what's below.
Call before you dig.

PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION, THE CONTRACTOR SHALL CONTACT LOCAL UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRICAL, GAS, WATER, CABLE, AND TELEPHONE, REQUESTING A UTILITY MARK OUT AND AS NECESSARY RETAIN THE SERVICES OF A PRIVATE UTILITY MARK OUT COMPANY TO PERFORM SUCH MARK OUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND VERIFY THE LOCATION OF UTILITIES, IRRIGATION, SITE LIGHTING, AND ELECTRICAL LINES IN THE VICINITY OF THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR ANY AND ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATION AT NO ADDITIONAL EXPENSE.

Bloomenergy

1299 ORLEANS DRIVE
SUNNYVALE, CA 94089

PROPRIETARY AND CONFIDENTIAL

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SEAL

Bloomenergy

1299 Orleans Drive,
Sunnyvale, CA 94089
t: (408) 543-1500

ENGINEER OF RECORD
CARSON P. TURNER, P.E.
LICENSE # C53718

CUSTOMER SITE

EQUINIX – SV6
444 TOYAMA DRIVE
SUNNYVALE, CA 94089



EQUINIX

REVISION HISTORY

REV	REVISION ISSUE	DATE
0	RELEASED PER ICN-10441	04/01/2017

DESIGNED BY BRANDON SNOW/JACOB CHU	DATE 05/08/2017
DRAWN BY ASHA BASAVALINGAPPA	DATE 02/17/2017
REVIEWED BY BRANDON SNOW/CHRIS BARTUNEK	DATE 05/29/2017
APPROVED BY CARSON TURNER	DATE 06/01/2017

SHEET TITLE

COVER SHEET

DRAWING NUMBER

G0.1

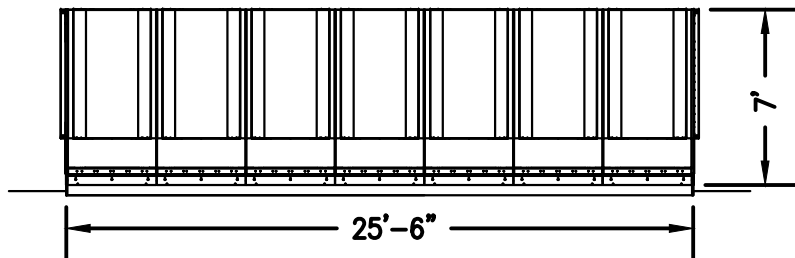
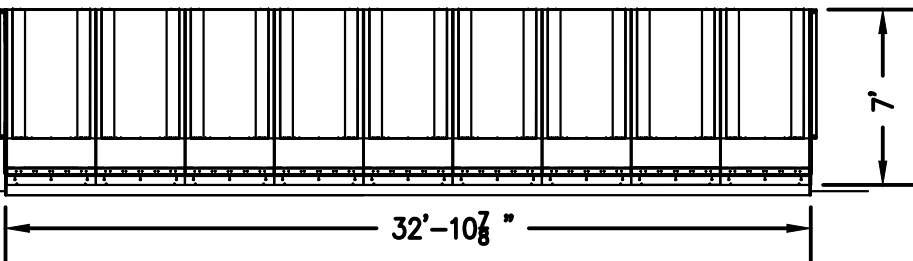
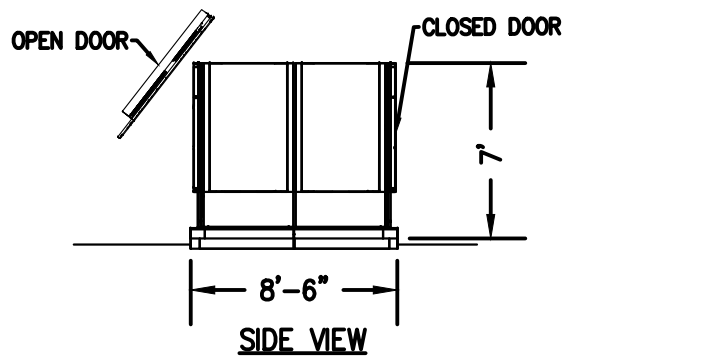

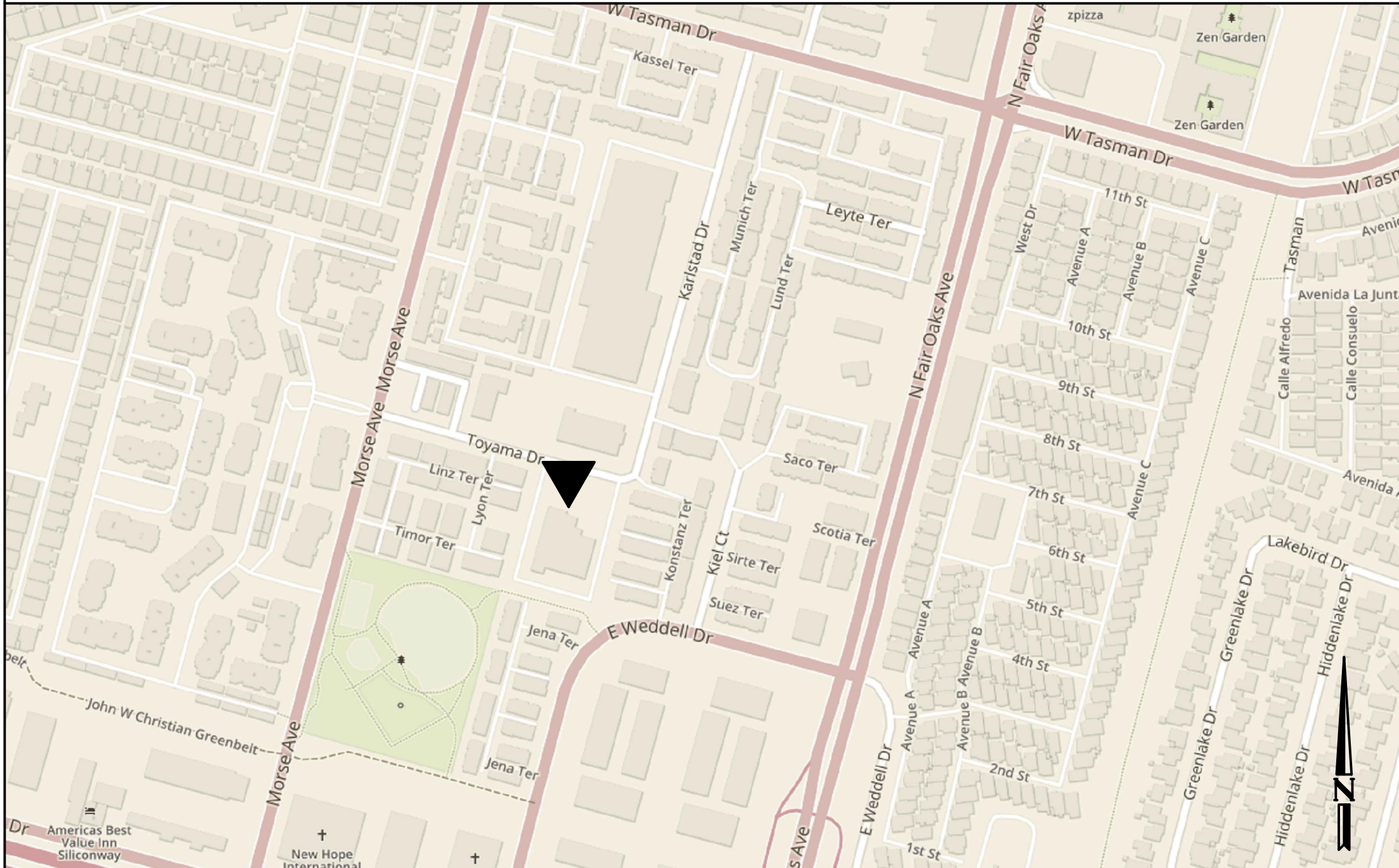
BLOOM DOCUMENT





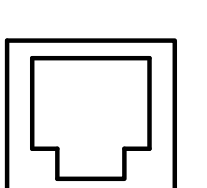



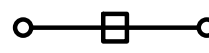









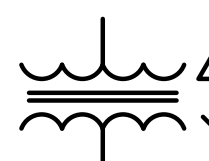
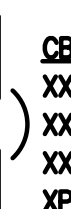
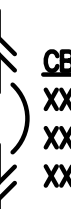
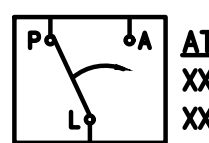
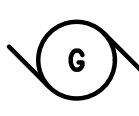
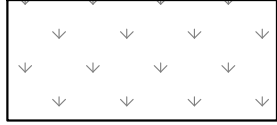
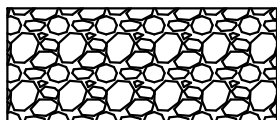


DOC-1009024

THIS DRAWING IS 24" x 36" AT FULL SIZE

SITE ID: EQX005.0

SHEET 01 OF 20

SITE INFORMATION		PERMITTING INFORMATION		CODES		PROJECT DESCRIPTION		BLOOM ENERGY FAQ's																																																																
<p>PARCEL INFORMATION</p> <p>PROPERTY OWNER* DIGITAL REALTY COUNTY SANTA CLARA COUNTY TAX MAP # 110-14-200</p> <p>PROPERTY DESCRIPTION</p> <p>PROPERTY TYPE* DATA CENTER PROPERTY AREA** 2.26 AC (98,446 SF±) BUILDING AREA**** 39,065 SF DISTURBED AREA 2,400 SF±</p> <p>PARKING INFORMATION</p> <p>REQUIRED PARKING*** 79 EXISTING PARKING*** 122 REQUIRED ADA PARKING 4 REMOVED PARKING 18 FINAL ADA PARKING 4 FINAL PARKING COUNT 104</p> <p>* BASED ON COSTAR REPORT DATED 12/19/2016. ** BASED ON SANTA CLARA COUNTY PARCEL MAP BOOK 110, PAGE 14, EFFECTIVE ROLL YEAR 2016-2017. *** BASED ON "RECORD DRAWINGS" SHEET A1.1, PROJECT TITLED "SUNNYVALE, PHASE 2 – EXTERIOR, 444 TOYAMA DRIVE, SUNNYVALE, CA 94089" DATED 10/02/2008. **** REQUIRED PARKING COUNT BASED ON SUNNYVALE MUNICIPAL CODE 19.46.100 (b) REQUIRING 2 SPACES PER 1000 SF OF BUILDING.</p>		<p>MUNICIPAL</p> <p>AGENCY PLANNING DEPARTMENT CITY OF SUNNYVALE PALNNG CONTACT INFO (408) 730-7440</p> <p>BUILDING CITY OF SUNNYVALE BUILDING CONTACT INFO (408) 730-7444</p> <p>FIRE SUNNYVALE DEPARTMENT OF PUBLIC SAFETY FIRE SERVICE BUREAU CONTACT INFO (408) 730-7100</p> <p>UTILITY</p> <p>TYPE NATURAL GAS COMPANY PG&E CONTACT INFO (800) 743-5000</p> <p>ELECTRICAL PG&E CONTACT INFO (800) 743-5000</p> <p>WATER SUNNYVALE PUBLIC WORKS DEPARTMENT CONTACT INFO (408) 730-7415</p>		<p>BUILDING 2016 CALIFORNIA BUILDING CODE ENERGY 2016 CALIFORNIA ENERGY CODE PLUMBING 2016 CALIFORNIA PLUMBING CODE FUEL GAS 2016 CALIFORNIA MECHANICAL CODE ELECTRICAL 2016 CALIFORNIA ELECTRICAL CODE</p> <p>PROJECT TEAM CONTACTS</p> <table><tr><th>FIRM</th><th>ADDRESS</th><th>CONTACT INFO</th></tr><tr><td>MANUFACTURER BLOOM ENERGY</td><td>1299 ORLEANS DR. SUNNYVALE, CA 94089</td><td>(408) 543-1500</td></tr><tr><td>CUSTOMER EQUINIX</td><td>444 TOYAMA DR. SUNNYVALE, CA 94089</td><td>(866) 378-4649</td></tr><tr><td>BLOOM ENERGY (CIVIL, MECHANICAL & PLUMBING) CARSON P. TURNER, PE</td><td>1299 ORLEANS DR. SUNNYVALE, CA 94089</td><td>(408) 220-4101</td></tr><tr><td>BLOOM ENERGY (ELECTRICAL) WILLIAM LOU, PE</td><td>1299 ORLEANS DR. SUNNYVALE, CA 94089</td><td>(650) 269-6888</td></tr><tr><td>OLDCASTLE PRECAST (STRUCTURAL-PRECAST) JUAN MAIZ, PE</td><td>3786 VALLEY AVE. PLEASANTON, CA 94566</td><td>(925) 846-8183</td></tr><tr><td>STRUCTURAL ENGINEERS, INC. (STRUCTURAL) DAVID BRINK, SE</td><td>2901 TASMAN DR. #100 SANTA CLARA, CA 95054</td><td>(650) 938-2200</td></tr></table>		FIRM	ADDRESS	CONTACT INFO	MANUFACTURER BLOOM ENERGY	1299 ORLEANS DR. SUNNYVALE, CA 94089	(408) 543-1500	CUSTOMER EQUINIX	444 TOYAMA DR. SUNNYVALE, CA 94089	(866) 378-4649	BLOOM ENERGY (CIVIL, MECHANICAL & PLUMBING) CARSON P. TURNER, PE	1299 ORLEANS DR. 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ES-5 SERIES:<ul style="list-style-type: none">THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA AMERICA FC 1-2004.IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.ESS SERIES:<ul style="list-style-type: none">THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA FC 1-2014.IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.Q: WHERE ARE FUEL CELLS COVERED IN THE NATIONAL ELECTRICAL CODE (NEC)? A: FUEL CELLS ARE COVERED IN ARTICLE 692 OF THE NEC (NFPA 70). FUEL CELLS HAVE BEEN INCORPORATED INTO THE NEC SINCE 2002. Q: WHAT IS THE MODEL NUMBER OF THIS PRODUCT? A: PLEASE SEE THE DATA SHEET PROVIDED WITH THIS FAQ. Q: WHAT IS THE NOISE LEVEL OF THE FUEL CELL SYSTEM? A: FOR SPECIFIC DB RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ. Q: DO BLOOM FUEL CELL SYSTEMS PROVIDE LIFE SAFETY POWER? A: NO. WE ARE NOT LIFE SAFETY AND DO NOT PROVIDE LIFE SAFETY POWER, EVEN WHEN A UPM IS INSTALLED. WE ARE NOT ALTERING WHATEVER LIFE SAFETY IS CURRENTLY PRESENT AT THE FACILITY. Q: IS THE BLOOM FUEL CELL SYSTEM TAMPER-PROOF? A: YES. THE FUEL CELLS ARE SECURED IN PLACE AND DOORS ARE SECURED AND LOCKED. ONLY BLOOM SERVICE PERSONNEL HAVE THE KEYS AND CAN BE ON-SITE WITHIN 24 HOURS. Q: WHAT HAPPENS TO THE CUSTOMER FACILITY POWER IF THE FUEL CELLS SHUT DOWN? A: THE FUEL CELL SYSTEM IS OPERATED IN GRID-PARALLEL MODE. IF THE UTILITY GRID IS OPERATIONAL, THE CUSTOMER FACILITY WILL RECEIVE POWER FROM THE GRID AND NOTICE NO DIFFERENCE. Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY POWER SHUTS DOWN? A: IF UTILITY PROVIDED POWER IS LOST FOR ANY REASON, THE FUEL CELL SYSTEM WILL ALSO STOP PRODUCING POWER. THE FUEL CELL SYSTEM WILL REMAIN IN STAND-BY MODE UNTIL IT AUTOMATICALLY SENSES THE UTILITY GRID HAS BEEN RESTORED. Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY GAS SHUTS DOWN? A: IF THE UTILITY GAS IS INTERRUPTED, THE FUEL CELL SYSTEM WILL AUTOMATICALLY SHUT DOWN AS WELL. Q: CAN THE FUEL CELL SYSTEM BE SHUT DOWN LOCALLY IN CASE OF AN EMERGENCY? A: YES. IF THE FUEL CELL MUST BE SHUT DOWN RIGHT AWAY—for EXAMPLE, IN CASE OF A BUILDING FIRE OR ELECTRICAL HAZARD—TWO SHUTOFF CONTROLS ARE INSTALLED AT THE FACILITY EXTERNAL TO THE SYSTEM. THE LOCATIONS OF THESE TWO CONTROLS SHOULD BE KNOWN TO THE FACILITIES MANAGER BEFORE OPERATION AND SHOULD BE NOTED ON THE SITE DIAGRAM THAT IS CREATED FOR EACH SITE DURING INSTALLATION. THE TWO SHUTOFFS ARE: (1) THE ELECTRICAL DISCONNECT SWITCH AND (2) THE MANUAL NATURAL GAS SHUTOFF VALVE. A THIRD SHUTOFF, AN EMERGENCY POWER OFF (EPO) BUTTON, MAY BE PROVIDED ON-SITE. Q: DOES THE BLOOM FUEL CELL SYSTEM OPERATE 24/7? A: YES. Q: ARE THE BLOOM FUEL CELL SYSTEMS MONITORED? A: YES. BLOOM FUEL CELL SYSTEMS ARE CONTROLLED REMOTELY AND HAVE INTERNAL SENSORS THAT CONTINUOUSLY MONITOR SYSTEM OPERATION. IF SAFETY CIRCUITS DETECT A CONDITION OUTSIDE NORMAL OPERATING PARAMETERS, THE FUEL SUPPLY IS STOPPED AND INDIVIDUAL SYSTEM COMPONENTS ARE AUTOMATICALLY SHUT DOWN. A BLOOM ENERGY REMOTE OPERATOR CAN ALSO REMOTELY INITIATE ANY EMERGENCY SEQUENCE. AN EMERGENCY STOP ALARM INITIATES AN AUTOMATIC SHUTDOWN SEQUENCE THAT PUTS THE SYSTEM INTO "SAFE MODE" AND CAUSES IT TO STOP EXPORTING POWER. IF YOU HAVE QUESTIONS ABOUT ANY OF THESE SAFETY FEATURES, PLEASE CONTACT BLOOM ENERGY AT CUSTOMERCARE@BLOOMENERGY.COM. Q: WHAT ARE THE EMISSIONS GENERATED BY BLOOM FUEL CELL SYSTEMS? A: THE SPECIFIC PERCENTAGE OF CARBON EMISSION REDUCTIONS ARE DEPENDENT ON YOUR STATE'S GENERATION MIX, BUT BLOOM FUEL CELL SYSTEMS VIRTUALLY ELIMINATE NOX, SOX, AND OTHER CRITICAL AIR POLLUTANTS THAT ARE FOUND IN TRADITIONAL ELECTRICITY GENERATION METHODS. FOR SPECIFIC EMISSIONS RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ. Q: WHAT IS THE SUSTAINABILITY IMPACT OF BLOOM FUEL CELL SYSTEMS? A: BLOOM FUEL CELL SYSTEMS GENERATE ELECTRICITY ON-SITE THROUGH AN EFFICIENT ELECTROCHEMICAL REACTION WITHOUT COMBUSTION. DUE TO THE HIGH EFFICIENCY (60%-53% COMPARED TO A COMBINED CYCLE NATURAL GAS PLANT WITH EFFICIENCY OF 40-45% OR COAL PLANTS AT 35%) BLOOM ENERGY SERVERS REDUCE CARBON EMISSIONS BY 20-50% COMPARED TO THE US GRID EMISSION RATES. THE VARIATION IN EMISSIONS REDUCTION IS DUE TO THE VARIATION IN HOW DIFFERENT STATES GENERATE ELECTRICITY. IN ADDITION, BLOOM FUEL CELL SYSTEMS USE NO WATER DURING NORMAL OPERATION</p>																																											
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GENERAL CONSTRUCTION NOTES		ABBREVIATIONS		SITE PLAN SYMBOLS		LINETYPES			
<div>1. IN THE EVENT OF DISCREPANCIES BETWEEN THE DRAWINGS, SPECIFICATIONS, OR SCOPE OF WORK SUMMARY IN THIS PACKAGE, NOTIFY BLOOM ENERGY IMMEDIATELY.</div> <div>2. THE EXISTING SITE PLAN FEATURES ARE BASED ON DESIGN DRAWINGS, AS-BUILT PLANS, AERIAL PHOTOGRAPHS AND FIELD MEASUREMENTS UNLESS OTHERWISE NOTED. THE LOCATIONS OF ALL FEATURES AND STRUCTURES ON THE PLANS ARE APPROXIMATE.</div> <div>3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK IS DONE IN ACCORDANCE WITH CURRENT APPLICABLE NATIONAL, STATE AND LOCAL CODES, ORDINANCES AND REQUIREMENTS AT A MINIMUM; EVEN IF NOT SPECIFICALLY REFERENCED IN THESE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS. MORE STRINGENT REQUIREMENTS MAY BE SPECIFIED, IN SITUATIONS WHERE THERE IS A CONFLICT BETWEEN THE MINIMUM REGULATORY REQUIREMENTS AND INFORMATION PROVIDED IN THESE DRAWINGS OR SPECIFICATIONS CONSULT BLOOM ENERGY FOR RESOLUTION BEFORE COMMENCING WORK.</div> <div>4. THE CONTRACTOR SHALL PROTECT ALL EXISTING ITEMS AND FACILITIES TO REMAIN THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL REPAIR AND/OR REPLACE, AT CONTRACTOR'S EXPENSE, ANY EXISTING ITEMS AND FACILITIES TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, TO THE SATISFACTION OF PROPERTY OWNER AND BLOOM ENERGY.</div> <div>5. UNLESS DELIVERY IS SPECIFIED BY BLOOM ENERGY TO THE JOB SITE, CONTRACTOR SHALL DELIVER ALL EQUIPMENT, DAMAGE-FREE TO THE JOB SITE.</div> <div>6. PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION, THE CONTRACTOR SHALL CONTACT LOCAL UTILITIES, INCLUDING BUT NOT LIMITED TO, ELECTRICAL, GAS, WATER, CABLE, AND TELEPHONE. CONTRACTOR SHALL REQUEST A UTILITY MARK OUT AND AS NECESSARY RETAIN THE SERVICES OF A PRIVATE UTILITY MARK OUT COMPANY TO PERFORM SUCH MARK OUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND VERIFY THE LOCATION OF UTILITIES, IRRIGATION, SITE LIGHTING, AND ELECTRICAL LINES IN THE VICINITY OF THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY AND ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATION AT NO ADDITIONAL EXPENSE.</div> <div>7. BLOOM ENERGY WILL PROVIDE THE CONTRACTOR WITH COPIES OF ALL PERMITS AND PROVIDE THE CONTRACTOR ANY CONDITIONS OF APPROVAL BY THE PLANNING DEPARTMENT.</div> <div>8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING JURISDICTIONS AS REQUIRED FOR INSPECTIONS.</div> <div>9. THE CONTRACTOR SHALL PROVIDE BLOOM ENERGY WITH<ul style="list-style-type: none">A CONSTRUCTION SCHEDULE PRIOR TO STARTING THE WORKA QUALIFIED JOB SUPERINTENDENT THROUGHOUT THE WORKPHOTOS SHOWING TRENCHES PRIOR TO BACKFILL, SLOPE OF STEEL OR PRECAST PADSFINAL AS BUILT DRAWINGS OF ALL UNDERGROUND CONSTRUCTION.</div> <div>9. THE CONTRACTOR SHALL PROVIDE BARRICADES AND SAFETY SIGNS PER OSHA REQUIREMENTS.</div> <div>10. THE CONTRACTOR IS RESPONSIBLE FOR OVERALL CONSTRUCTION SITE CLEANLINESS, INCLUDING PROVISIONS OF A DEBRIS BOX WITH WEEKLY SERVICING, REMOVAL OF ALL CONTRACTOR/SUBCONTRACTOR REFUSE AND DEBRIS, AND SWEEPING OF THE ENTIRE YARD AREA AT THE COMPLETION OF THE WORK.</div> <div>11. UNLESS STATED OTHERWISE IN THE SCOPE OF WORK SUMMARY, ALL OTHER PROCEDURES, TESTING, MATERIALS AND EQUIPMENT SHOWN ON THE PLANS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.</div> <div>12. THE PLAN VIEW DRAWINGS PROVIDED IN THIS SET INCLUDE A ROUGH SCALE REPRESENTATION OF EXISTING AND PROPOSED CONDITIONS AND SHOULD NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS ON SITE. ALL DRAWINGS MARKED "NTS" HAVE NO RELATIVE SCALE AND ONLY LISTED DIMENSIONS SHOULD BE USED.</div> <div>13. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGE TO THE WORK OF OTHER TRADES CAUSED BY THEIR OPERATIONS. ALL REPAIRS SHALL BE PERFORMED AT THE COST OF THE CONTRACTOR RESPONSIBLE FOR THE DAMAGES. WORK SHALL ONLY BE PERFORMED AFTER APPROVAL OF A REPRESENTATIVE OF THE TRADE WHOSE WORK WAS DAMAGED.</div> <div>14. THE CONTRACTOR SHALL NOTIFY BLOOM ENERGY IF SITE CONDITIONS OR DIMENSIONS DISAGREE WITH INFORMATION SHOWN ON THE DRAWINGS. WORK IS NOT TO PROCEED UNTIL SUCH DIFFERENCES ARE RESOLVED.</div> <div>15. THE CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS, AND BE PREPARED TO PERFORM THE WORK WITHIN THE EXISTING CONDITIONS.</div> <div>16. THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL INSPECT WORK PREVIOUSLY PREPARED OR INSTALLED BY OTHERS BEFORE APPLYING SUBSEQUENT MATERIALS OR FINISHES. IF UNSATISFACTORY, NOTIFY BLOOM ENERGY. DO NOT PROCEED UNTIL THE DEFECTIVE WORK HAS BEEN CORRECTED.</div> <div>17. THE CONTRACTOR REMAINS RESPONSIBLE FOR FAULTY MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL PROJECT PAYMENT IS MADE. ANY DEFECT OR DAMAGE FOUND EVEN AFTER THE FINAL ACCEPTANCE, CERTIFICATION AND PAYMENT FOR THIS PROJECT WILL BE REMEDIATED AT THE CONTRACTOR'S EXPENSE. REPAIRS OR REPLACEMENTS REQUIRED WILL SUBSEQUENTLY BE WARRANTED FOR ONE YEAR AFTER WORK COMPLETION AND ACCEPTANCE.</div> <div>18. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES AND OSHA REQUIREMENTS, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS.</div> <div>19. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY LANDSCAPED AREAS TO PRE-CONSTRUCTION CONDITION AS ASSESSED BY THE PROPERTY OWNER OR CUSTOMER. CUSTOMER APPROVAL OF AN ACCEPTABLE STATE IS REQUIRED TO CONFIRM COMPLETION OF WORK. THE CONTRACTOR SHALL SCHEDULE A POST CONSTRUCTION WALK TO EVALUATE THE LANDSCAPING FUNCTIONALITY WITH EQUINIX LANDSCAPER.</div> <div>20. GENERAL HOUSEKEEPING OF THE SITE, INCLUDING SWEEPING AND CONTROL OF SEDIMENT, TRASH, AND DEBRIS SHALL BE PERFORMED DAILY OR IMMEDIATELY UPON THE OCCURRENCE.</div> <div>21. DURING CONSTRUCTION ALL EXITS AND DOORWAYS MUST REMAIN UNOBSTRUCTED.</div> <div>22. THE TYPES, LOCATION, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENTS, SIZED , LOCATIONS AND DEPTHS OF SUCH GROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY BLOOM ENERGY IF WORK CANNOT PROCEED AS PROPOSED.</div>		<div><div>°</div>DEGREES CELSIUS</div> <div><div>F</div>DEGREES FAHRENHEIT</div> <div><div>A</div>AMPS</div> <div><div>AC</div>ALTERNATING CURRENT, ASPHALT CONCRETE</div> <div><div>ACS</div>ESS AC POWER SECTION</div> <div><div>AHJ</div>AUTHORITIES HAVING JURISDICTION</div> <div><div>AL</div>ALUMINUM</div> <div><div>ASTM</div>AMERICAN SOCIETY OF THE INTERNATIONAL ASSOCIATION FOR TESTING AND MATERIALS</div> <div><div>ATM</div>ATMOSPHERE</div> <div><div>ATS</div>AUTOMATIC TRANSFER SWITCH</div> <div><div>AWG</div>AMERICAN WIRE GAUGE</div> <div><div>BC</div>BASE COURSE</div> <div><div>BMPS</div>BEST MANAGEMENT PRACTICES</div> <div><div>C</div>CONDUIT</div> <div><div>CP</div>CAST IN PLACE</div> <div><div>CJ</div>CONTROL JOINT</div> <div><div>CL</div>CENTER LINE</div> <div><div>CLR</div>CLEAR</div> <div><div>CONC</div>CONCRETE</div> <div><div>CMU</div>CONCRETE MASONRY UNIT</div> <div><div>CPT</div>CONTROL POWER TRANSFORMER</div> <div><div>CT</div>CURRENT TRANSFORMER</div> <div><div>CU</div>COPPER</div> <div><div>DC</div>DIRECT CURRENT</div> <div><div>DI</div>DEIONIZED</div> <div><div>ECM</div>ELECTRICAL COMBINATION MODULE</div> <div><div>EDM</div>ELECTRICAL DISTRIBUTION MODULE</div> <div><div>ELEV</div>ELEVATION</div> <div><div>EMT</div>ELECTRICAL METAL TUBING</div> <div><div>EPO</div>EMERGENCY POWER OFF</div> <div><div>ES</div>ENERGY SERVER</div> <div><div>FH</div>FIRE HYDRANT</div> <div><div>FNPT</div>FEMALE NATIONAL PIPE THREAD</div> <div><div>FP5</div>ESS FUEL PROCESSING MODULE</div> <div><div>FPM</div>FUEL CELL POWER MODULE</div> <div><div>G</div>GROUND</div> <div><div>GAL</div>GALLON</div> <div><div>GF</div>GROUND FAULT</div> <div><div>GFEP</div>GROUND FAULT EQUIPMENT PROTECTION</div> <div><div>GND</div>GROUND</div> <div><div>HDD</div>HORIZONTAL DIRECTIONAL DRILLING</div> <div><div>HDPE</div>HIGH DENSITY POLYETHYLENE</div> <div><div>HR</div>HOOR</div> <div><div>HZ</div>HERTZ</div> <div><div>ID</div>INNER DIAMETER</div> <div><div>IEEE</div>INSTITUTE FOR ELECTRICAL & ELECTRONIC ENGR.</div> <div><div>IOM</div>INPUT OUTPUT MODULE</div> <div><div>ISC</div>SHORT CIRCUIT CURRENT</div> <div><div>ISS</div>INTEGRATED STEEL SKID</div> <div><div>K</div>KILO</div> <div><div>KA</div>KILOAMPERE</div> <div><div>KAIC</div>KILOAMPERE INTERRUPTING CAPACITY</div> <div><div>KVA</div>KILOVOLT-AMPS</div> <div><div>KW</div>KILOWATTS</div> <div><div>LBS</div>POUNDS</div> <div><div>MA</div>MILLIAMPERES</div> <div><div>MDPE</div>MEDIUM DENSITY POLYETHYLENE</div> <div><div>MIN</div>MINUTE/MINIMUM</div> <div><div>MMBTU</div>MILLION BRITISH THERMAL UNITS</div> <div><div>MNPT</div>MALE NATIONAL PIPE THREAD</div> <div><div>MSA</div>METER SET ASSEMBLY</div> <div><div>MTS</div>MANUAL TRANSFER SWITCH</div> <div><div>MW</div>MEGAWATTS</div> <div><div>N</div>NEW</div> <div><div>NEC</div>NATIONAL ELECTRIC CODE</div> <div><div>NFPA</div>NATIONAL FIRE PROTECTION AGENCY</div> <div><div>NFS</div>NOT TO SCALE</div> <div><div>OC</div>ON CENTER</div> <div><div>OD</div>OUTER DIAMETER</div> <div><div>OSHA</div>OCCUPATIONAL SAFETY AND HEALTH ADMIN.</div> <div><div>P</div>POLE</div> <div><div>PEX</div>CROSS-LINED POLYETHYLENE</div> <div><div>PDS</div>POWER DISTRIBUTION SECTION</div> <div><div>PH</div>PHASE</div> <div><div>PM5</div>ESS POWER MODULE</div> <div><div>PSI</div>POUNDS PER SQUARE INCH</div> <div><div>PSIG</div>POUNDS PER SQUARE INCH GAGE</div> <div><div>PV</div>PHOTOVOLTAIC</div> <div><div>PVC</div>POLYVINYL CHLORIDE</div> <div><div>PWM</div>POWER MODULE</div> <div><div>QDC</div>QUICK DISCONNECT</div> <div><div>RSA</div>REGULATOR SET ASSEMBLY</div> <div><div>RMC</div>RIGID METAL CONDUIT</div> <div><div>SD</div>STORM DRAIN</div> <div><div>SF</div>SQUARE FEET</div> <div><div>SPD</div>SURGE PROTECTIVE DEVICE</div> <div><div>SS</div>STAINLESS STEEL, SANITARY SEWER</div> <div><div>SWPP</div>STORM WATER POLLUTION PROTECTION</div>	<div><div></div>DOOR</div> <div><div></div>BUILDING HATCH</div> <div><div></div>TREE/SHRUB</div> <div><div></div>SITE LIGHTING/POWER POLE</div> <div><div></div>UTILITY TRANSFORMER</div> <div><div></div>BOLLARD (REMOVABLE/FIXED)</div> <div><div></div>DETAIL CALL OUT</div> <div><div></div>DETAIL SECTION</div>	<div><div></div>GAS MSA/RSA (AS NOTED)</div> <div><div></div>GAS SHUTOFF VALVE</div> <div><div></div>SQUARE DRAIN COVER</div> <div><div></div>ROUND DRAIN COVER</div> <div><div></div>MANHOLE COVER</div> <div><div></div>FIRE HYDRANT</div> <div><div></div>ROOF DRAIN (BELOW GROUND)/ABOVE GROUND)</div> <div><div></div>SLOPE DIRECTION</div> <div><div></div>DISCONNECT SWITCH</div> <div><div></div>OVERHEAD ROLL UP DOOR</div>					
SITE SPECIFIC CONSTRUCTION NOTES		ABBREVIATIONS (CONTINUED)		ABBREVIATIONS (CONTINUED)		HATCH			
<div>1. CONSTRUCTION SUPERINTENDENT SHALL CONTACT THE CUSTOMER REPRESENTATIVE FOR A PRE-CONSTRUCTION CONFERENCE TWO WEEKS PRIOR TO THE START OF THE WORK. THE SCOPE OF WORK AND TIMELINE SHALL BE DISCUSSED WITH RESPECT TO ANY COORDINATION ISSUES WHICH SHALL DISRUPT THE FACILITY OPERATIONS. THE SUPERINTENDENT SHALL SUBMIT A WEEKLY STATUS REPORT TO THE CUSTOMER, WITH PICTURES, VIA EMAIL TO THE CUSTOMER REPRESENTATIVE. THIS INCLUDES ANY FACILITY EQUIPMENT WHICH ARE IN CLOSE PROXIMITY TO THE CONSTRUCTION WORK WHICH WILL BE MOVED BY THE FACILITY REPRESENTATIVES.</div> <div>2. TRENCHING:<div>2.1. ALLOWABLE TIMES FOR UTILITY TRENCH WORK IN DRIVEWAY SHALL BE COORDINATED WITH THE CUSTOMER.</div><div>2.2. TRENCHING SHOULD BE DONE IN STAGES, TO ENSURE CUSTOMER TRAFFIC FLOW IS NOT IMPEDED.</div><div>2.3. WHEN THE TRENCH IS OPEN, IT SHALL BE COVERED DURING OFF-WORK HOURS WITH PLATES THAT ARE CAPABLE OF SUPPORTING H-20 VEHICLE LOADING.</div></div> <div>3. UTILITY CONNECTIONS THAT REQUIRE TAPPING ON LIVE LINES SHALL BE PERFORMED AT NIGHT AND BE COORDINATED WITH AND APPROVED BY THE CUSTOMER PRIOR TO MAKING UTILITY CONNECTIONS. ANY PRECAUTIONARY MEASURES REQUIRED DUE TO UTILITY SHUT-OFF NEED TO BE COMPLETED BY CONTRACTOR.</div> <div>4. ONLY HALF OF DRIVE AISLES MAY BE CLOSED IN ACTIVE CONSTRUCTION AREAS. OTHER VEHICLES OR MATERIALS SHALL BE KEPT AWAY FROM THE AREA SO AS TO NOT HINDER TRAFFIC FLOW. COORDINATE THE LOCATION OF ON-SITE PARKING AND/OR TEMPORARY STORAGE WITH CUSTOMER REPRESENTATIVES.</div> <div>5. MAINTAIN MINIMUM 20' FIRE LANE ACCESS DURING CONSTRUCTION AND STAGE TRENCHING TO ACCOMPLISH REQUIRED FIRE ACCESS AS NECESSARY.</div> <div>6. STABILIZATION:<div>6.1. SEDIMENT, EROSION AND TRASH CONTROL SHALL BE PERFORMED AT ALL TIMES. BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED PRIOR TO WORK START AND REMOVED ONLY WHEN THE SITE IS FULLY STABILIZED.</div><div>6.2. THE SITE SHALL BE CONSIDERED "FULLY STABILIZED" WHEN THE CUSTOMER REPRESENTATIVES HAS REVIEWED SUBMITTED PICTURES AND ACCEPT THE STABILIZATION.</div></div> <div>7. ALL SITE RELATED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO PAVEMENT RESTORATION, CURB INSTALLATION, AND TURF RESTORATION SHALL BE IN CONFORMANCE TO THE AHJ SITE DEVELOPMENT STANDARDS, SPECIFICATIONS, AND DETAILS, UNLESS MORE STRINGENTLY SPECIFIED HEREIN.</div>		<div><div></div><div><div>XFMR-XXXX</div><div>### kVA</div><div>XXX V - XXX/XXX V</div></div></div> TRANSFORMER (3-PHASE)	<div><div></div><div><div>CB-XX</div><div>XXX AF</div><div>XXX AT</div><div>XXX KAIC</div><div>XP</div></div></div> MOLDED CASE CIRCUIT BREAKER	<div><div></div><div><div>CB-XX</div><div>XXX AF</div><div>XXX AT</div><div>XXX KAIC, 3P</div></div></div> DRAWOUT CIRCUIT BREAKER	<div><div></div><div><div>ATS-XX</div><div>XXX A / XXX V</div><div>XXX KAIC, 3P</div></div></div> AUTOMATIC TRANSFER SWITCH (ATS)	<div><div></div><div><div>GEN XX</div><div>XXX kW</div><div>XXX V</div></div></div> GENERATOR	<div><div></div>FLOOD ZONE</div> <div><div></div>GRASS</div> <div><div></div>GRAVEL SERVICE AREA</div> <div><div></div>BUILDING EXTERIOR WALL OUTLINE</div>		
ES5-YA8AAA ENERGY SERVER SYSTEM		ES5-AACAAA ENERGY SERVER SYSTEM		FUEL REQUIREMENTS					
GROSS OUTPUT POWER	300 kW	TOTAL SYSTEM WEIGHT (LESS PAD)	30,769 LBS	CONNECTION	2" FLANGE	PRESSURE	15 (+3/-5) psig		
NET OUTPUT POWER	300 kW	WEIGHT - POWER MODULE PM5	3,577 LBS	FUEL TYPE	NATURAL GAS	AVERAGE CONSUMPTION RATE (60°F, 1 atm)	7.4195 MMBtu/hr		
VOLTAGE	480 VAC	WEIGHT - AC MODULE AC5	3,161 LBS	PIPE SIZE - SUPPLY	SIZE SITE DEPENDENT	MAX CONSUMPTION RATE (60°F, 1 atm)	8.2313 MMBtu/hr		
MAXIMUM OUTPUT CURRENT	378 Amps	WEIGHT - FUEL PROCESSING MODULE FP5	2,569 LBS	WATER REQUIREMENTS					
FREQUENCY	60 Hz	WEIGHT - ANCILLARY EQUIPMENT (WDM, PDS, & TC) (LESS PAD)	SEE STRUCTURAL DRAWINGS	CONNECTION	1/2" MNPT	FLOW - STARTUP	0.8 gal/min MAXIMUM		
		WEIGHT - PRECAST BACK-TO-BACK LINEAR SERVER PAD	SEE STRUCTURAL DRAWINGS	WATER TYPE	MUNICIPAL GRADE	FLOW - CONTINUOUS	0 gal/min		
		WEIGHT - CAST IN PLACE ANCILLARY PAD	SEE STRUCTURAL DRAWINGS	MINIMUM PRESSURE	35 psi	WATER DISCHARGE	0 gal/min		
				MAXIMUM PRESSURE	150 psi	PIPE SIZE - SUPPLY	SIZE SITE DEPENDENT, USE STAINLESS STEEL OR PVC		

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ENGINEER OF RECORD
CARSON P. TURNER, P.E.
LICENSE # C53718

CUSTOMER SITE

EQUINIX – SV6
444 TOYAMA DRIVE
SUNNYVALE, CA 94089



EQUINIX

REVISION HISTORY

REV	REVISION ISSUE	DATE
0	RELEASED PER ICN-10441	04/01/2017

DESIGNED BY
BRANDON SNOW/JACOB CHU

DATE
05/08/2017

DRAWN BY
ASHA BASAVALINGAPPA

DATE
02/17/2017

REVIEWED BY
BRANDON SNOW/CHRIS BARTUNEK

DATE
05/29/2017

APPROVED BY
CARSON TURNER

DATE
06/01/2017

SHEET TITLE

GENERAL
CONSTRUCTION
NOTES

DRAWING NUMBER

G0.2

BLOOM DOCUMENT

DOC-1009024

THIS DRAWING IS 24" x 36" AT FULL SIZE

SITE ID:EQX005.0

SHEET 02 OF 20

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APPROVED BY CARSON TURNER	DATE 06/01/2017

SHEET TITLE

EXISTING SITE PLAN
AND
DEMO PLAN

DRAWING NUMBER

G1.1A

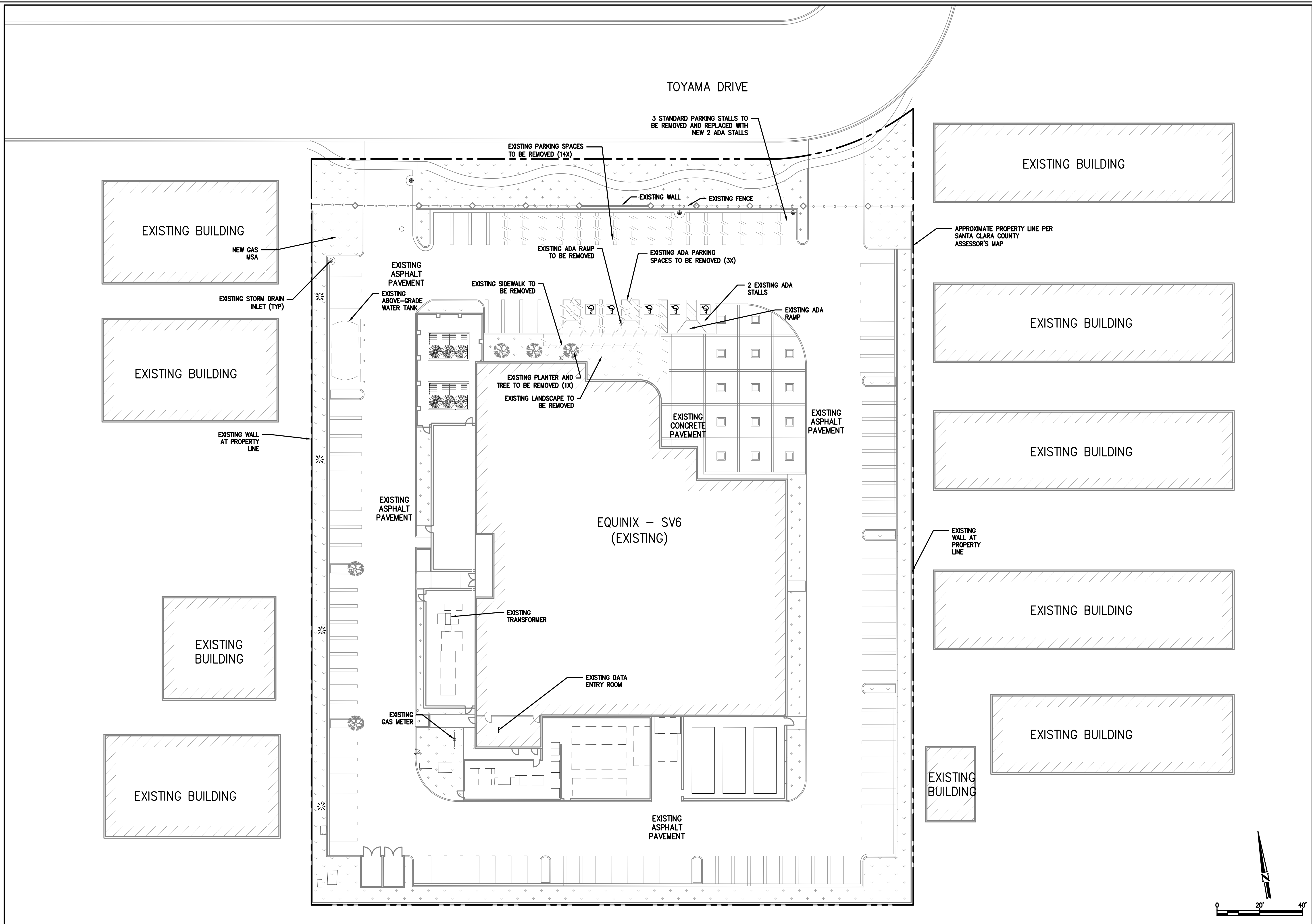
BLOOM DOCUMENT

DOC-1009024

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SITE ID: EQX005.0

SHEET 03 OF 20



EXISTING SITE PLAN AND DEMO PLAN

SCALE: 1" = 20'

1

G1.1A

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EQUINIX

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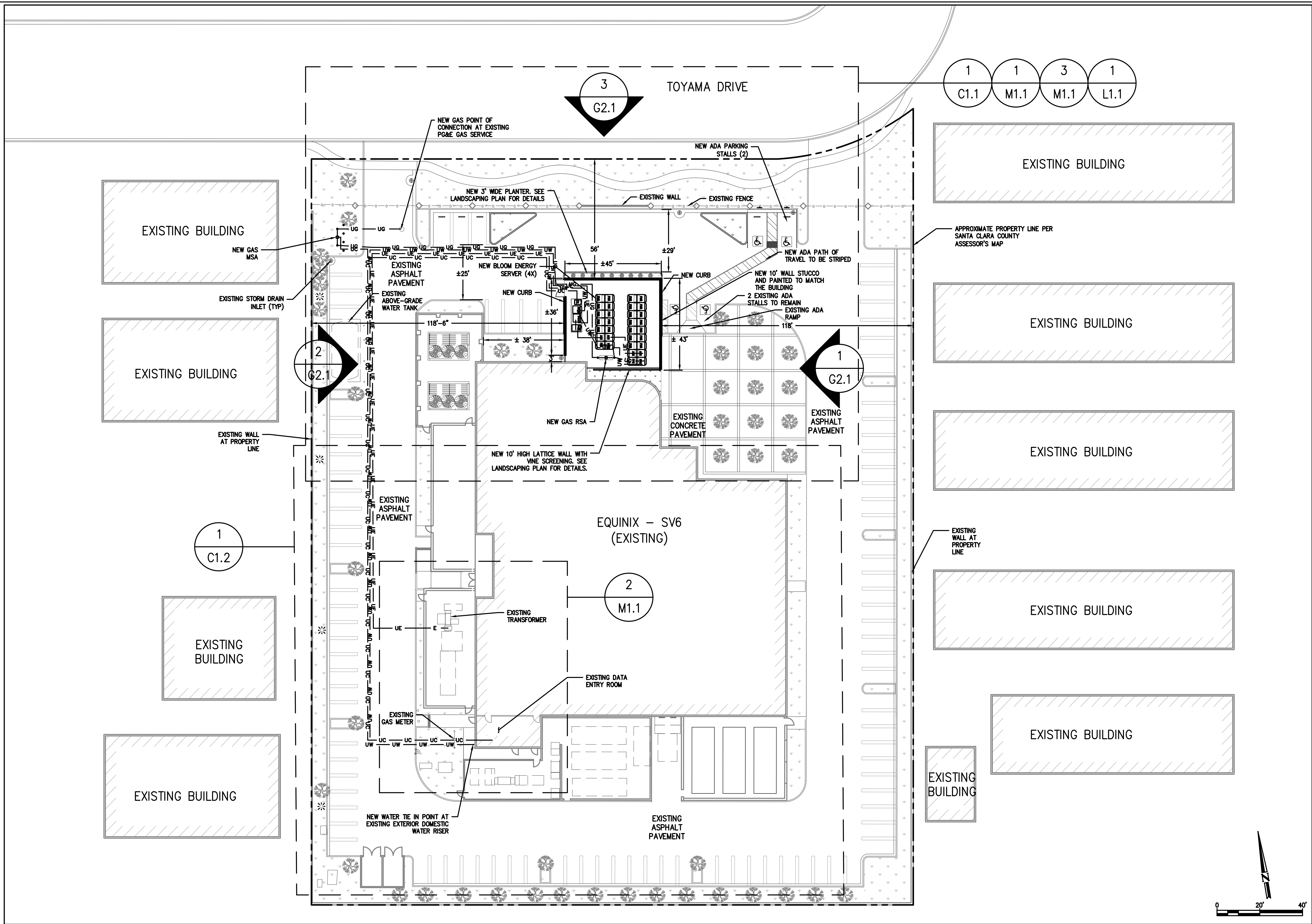
SHEET TITLE

OVERALL
SITE PLAN

DRAWING NUMBER
G1.1B

BLOOM DOCUMENT
DOC-1009024

THIS DRAWING IS 24" X 36" AT FULL SIZE
SITE ID: EQX005.0 SHEET 04 OF 20



OVERALL SITE PLAN
SCALE: 1" = 20'

1
G1.1B

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SHEET TITLE

ELEVATION VIEWS

DRAWING NUMBER

G2.1

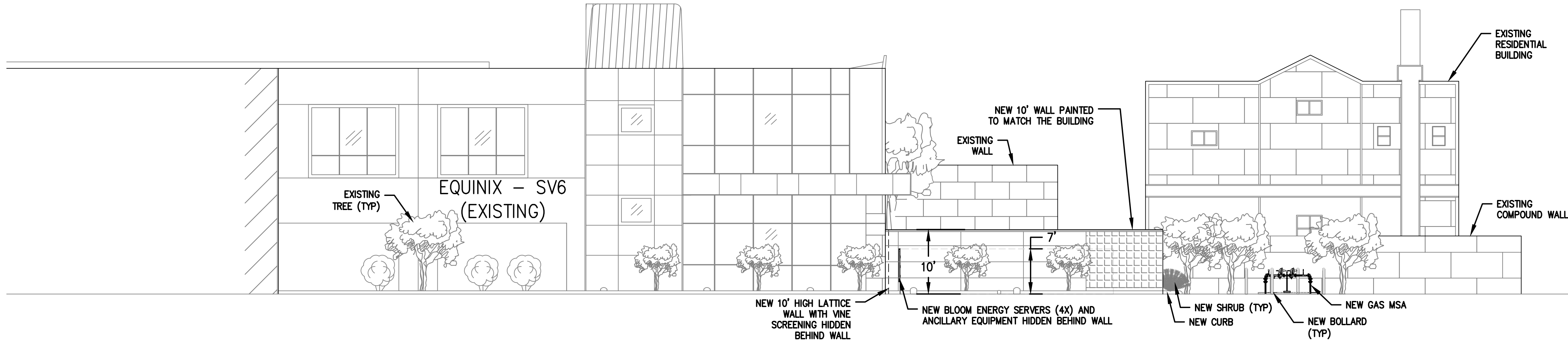
BLOOM DOCUMENT

DOC-1009024

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: EQX005.0

SHEET 05 OF 20

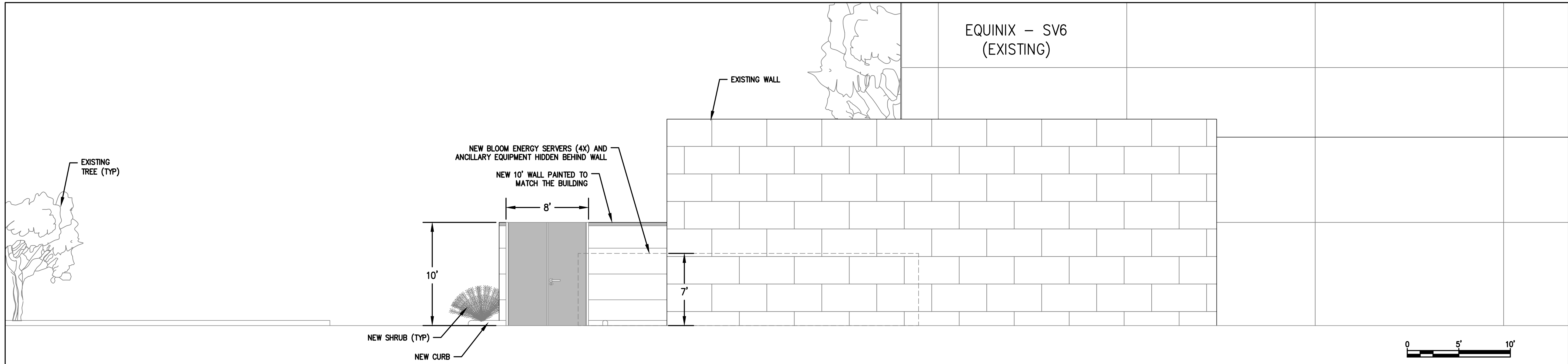


EAST ELEVATION

SCALE: 1"=10'

1

G2.1

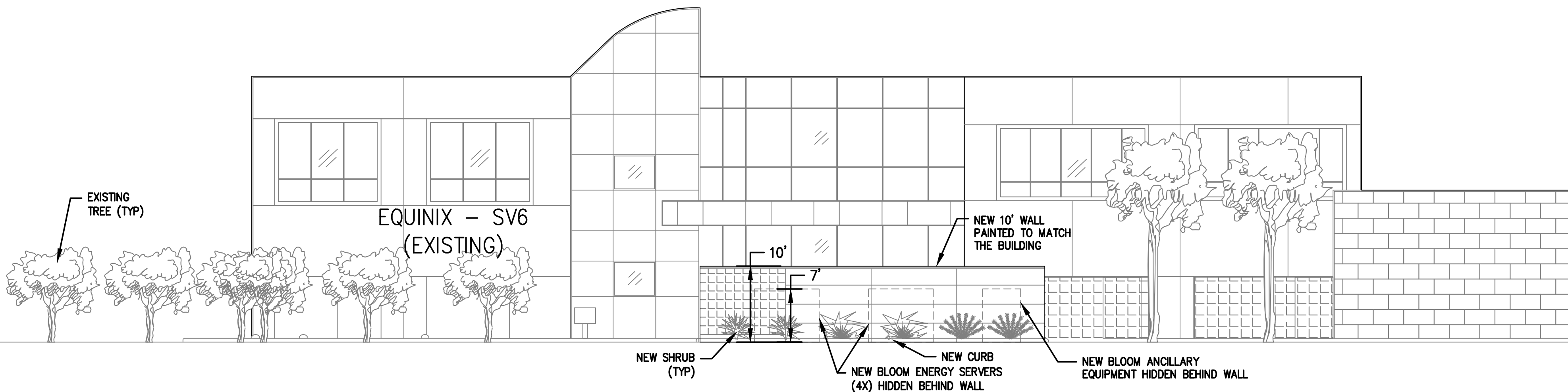


WEST ELEVATION

SCALE: 1"= 5'

2

G2.1



NORTH ELEVATION

SCALE: 1"=10'

EXISTING PROPERTY LINE
WALL HIDDEN FOR CLARITY

3

G2.1

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APPROVED BY CARSON TURNER	DATE 06/01/2017

SHEET TITLE

FIRE TRUCK
TURN DETAILS

DRAWING NUMBER

G2.2

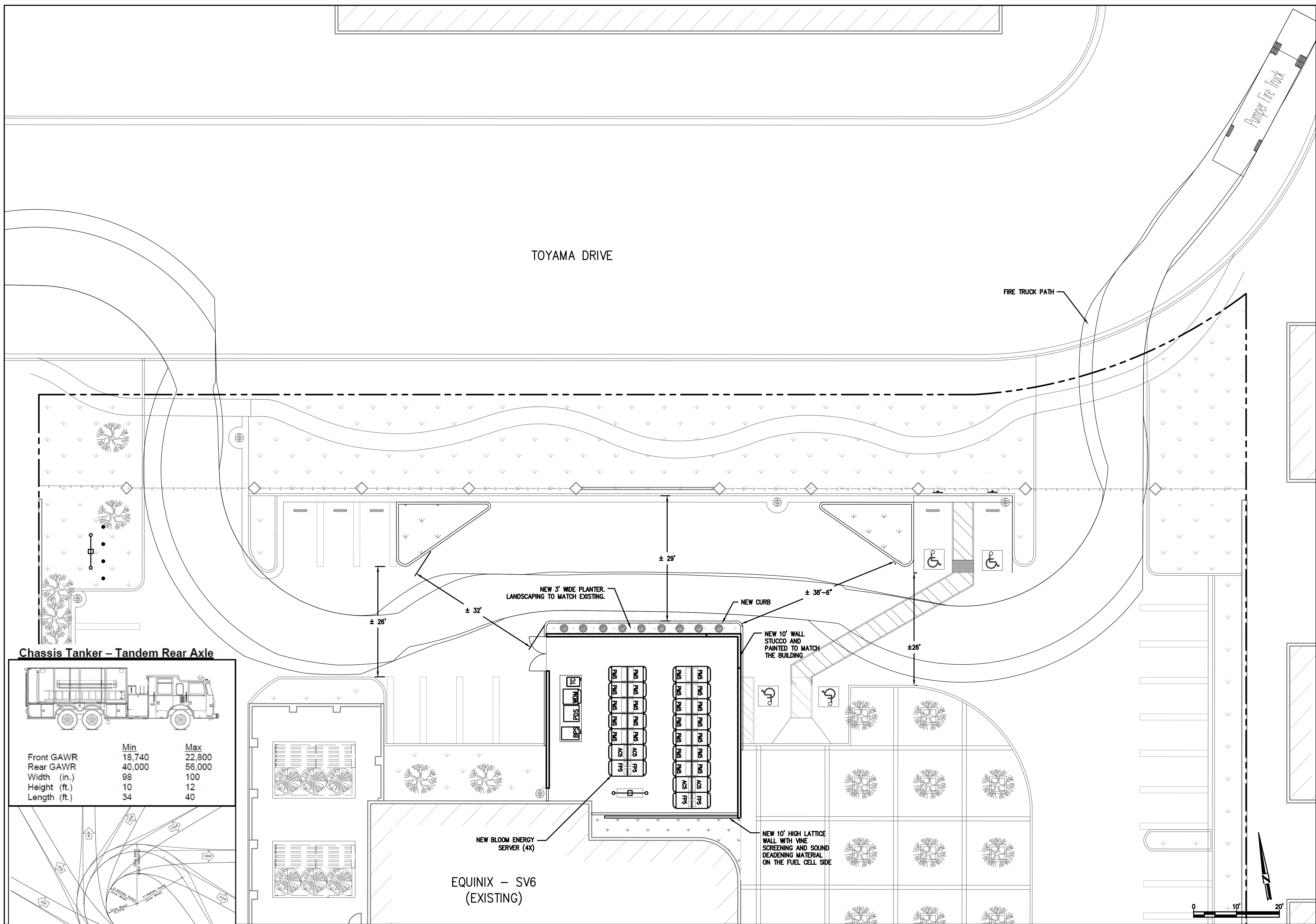
BLOOM DOCUMENT

DOC-1009024

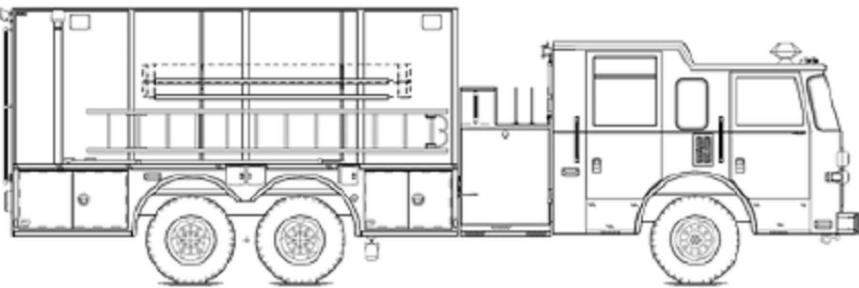
THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: EQX005.0

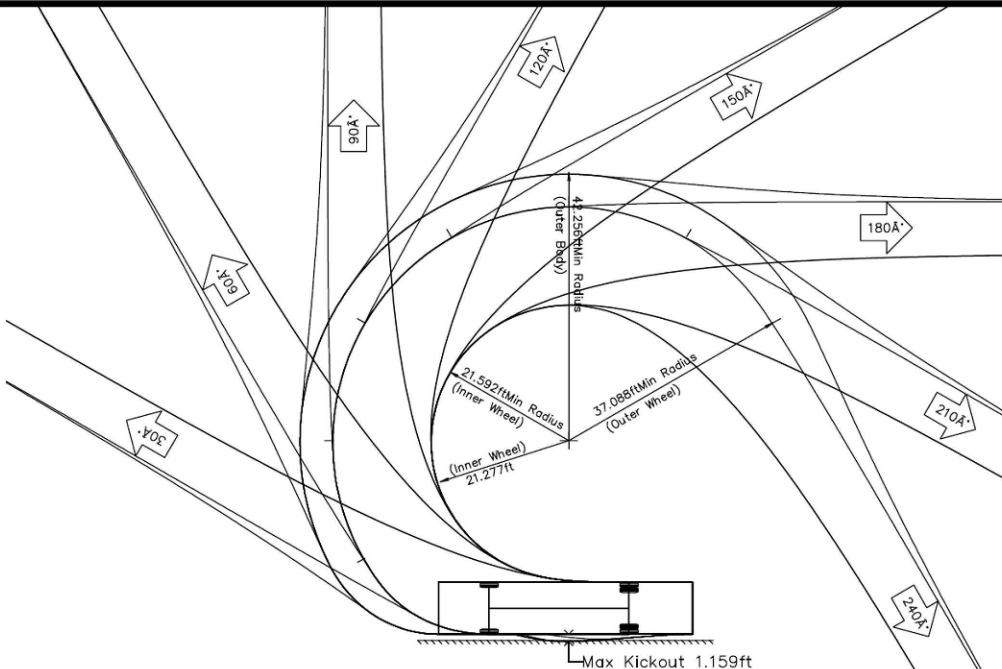
SHEET 06 OF 20



Chassis Tanker – Tandem Rear Axle



Front GAWR	Min	Max
Rear GAWR	18,740	22,800
Width (in.)	40,000	56,000
Height (ft.)	98	100
Length (ft.)	10	12
	34	40



Note:
Turn(s) based upon a design speed of 5.00mph. After transition, center of front axle follows greatest possible circular arc. Path is located 11.81ft from the vehicle. Maximum kick out distance is 1.159ft. Warning the vehicle crosses the curb.

FIRE TRUCK TURN DETAILS

SCALE: 1" = 10'

1

G2.2

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1299 ORLEANS DRIVE
SUNNYVALE, CA 94089

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ENGINEER OF RECORD
CARSON P. TURNER, P.E.
LICENSE # C53718

CUSTOMER SITE

EQUINIX - SV6
444 TOYAMA DRIVE
SUNNYVALE, CA 94089



EQUINIX

REVISION HISTORY

REV	REVISION ISSUE	DATE
0	RELEASED PER ICN-10441	04/01/2017

DESIGNED BY BRANDON SNOW/JACOB CHU	DATE 05/08/2017
DRAWN BY ASHA BASAVALINGAPPA	DATE 02/17/2017
REVIEWED BY BRANDON SNOW/CHRIS BARTUNEK	DATE 05/29/2017
APPROVED BY CARSON TURNER	DATE 06/01/2017

SHEET TITLE

DETAILED
SITE PLAN

DRAWING NUMBER

C1.1

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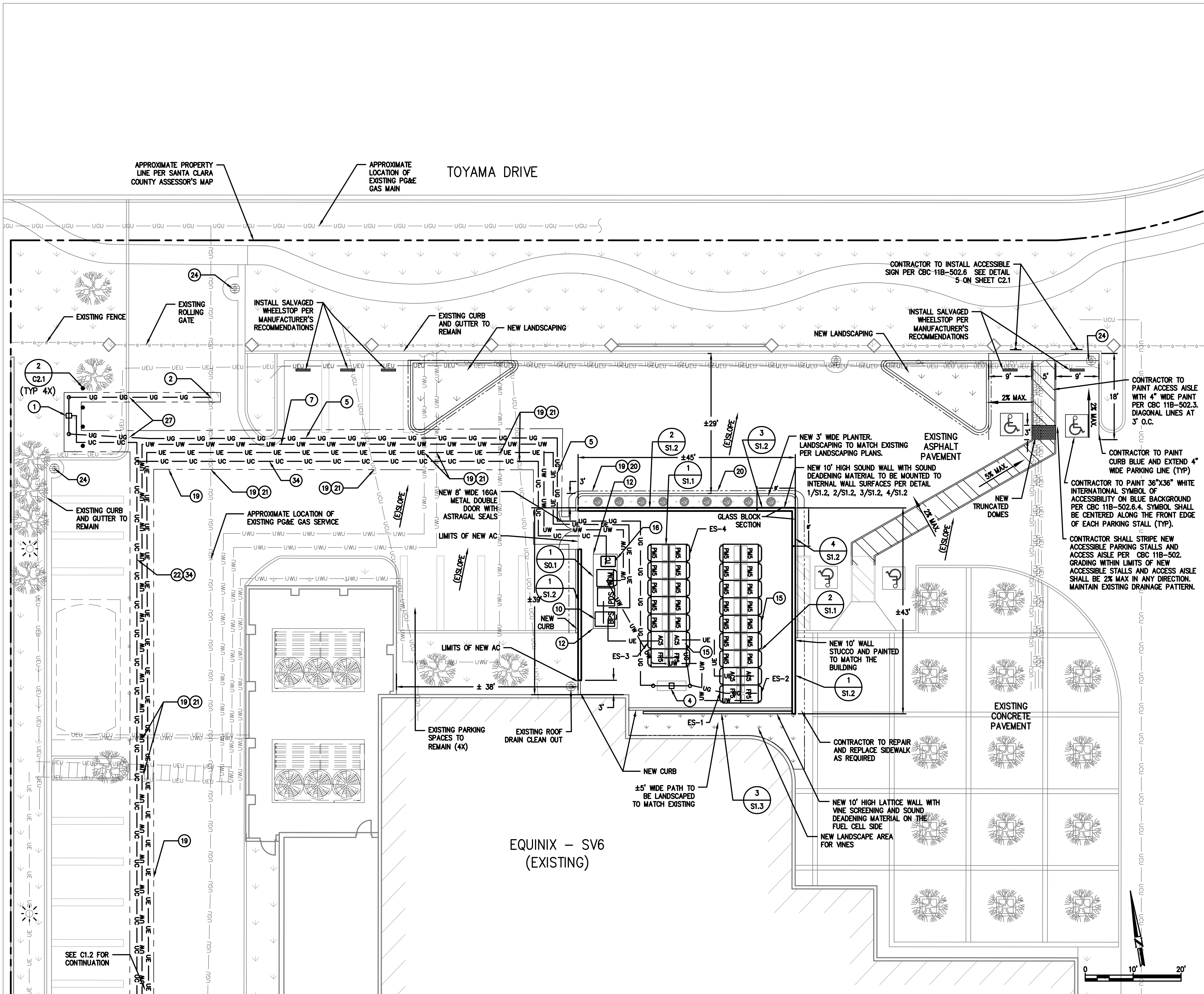
SHEET 11 OF 20

GENERAL NOTES

1. CLEAN AND PRIME ALL NEW WIRE MOUNTED PIPING AND CONDUIT. PIPING AND CONDUIT SHALL BE PAINTED WITH EXTERIOR GRADE PAINT TO MATCH EXISTING.
2. CONDUITS AND PIPES MOUNTED TO BUILDING WALL SHALL BE SUPPORTED AS PER LOCAL CODE, RUN AT HEIGHT ABOVE DOORWAYS, AND STAND OFF WALL TO AVOID EXISTING CONDUITS AND PIPES.
3. SLOPE LINES SHOWN ARE APPROXIMATE AND INTENDED TO SHOW THE GENERAL DIRECTION OF WATER RUN OFF. SLOPE LINES ARE DRAWN PER VISUAL SURVEY OF SURROUNDING AREA.
4. SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.

REFERENCE SHEET NOTES

- 1 NEW UTILITY PROVIDED AND INSTALLED GAS METER ASSEMBLY WITH SHUT-OFF VALVE. CONTRACTOR SHALL PROVIDE PAD PER DETAILS IF REQUIRED BY UTILITY COMPANY. COORDINATE ALL CONNECTIONS WITH GAS UTILITY.
- 2 NEW UNDERGROUND GAS SERVICE TAP BY UTILITY COMPANY. CONTRACTOR SHALL COORDINATE INSTALLATION REQUIREMENTS WITH GAS UTILITY. CONTRACTOR SHALL PERFORM ALL TRENCHING, BACKFILLING, COMPACTION AND PAVEMENT REPLACEMENT TO MATCH EXISTING SURFACE AND GRADE.
- 4 NEW PRIVATE GAS REGULATOR SET ASSEMBLY FOR ENERGY SERVER WITH SHUT-OFF VALVE. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- 5 NEW GAS PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- 6 TAP EXISTING WATER LINE AT NEAREST ACCESSIBLE LOCATION AS SHOWN WITH A LOCAL SHUT-OFF VALVE. REFER TO DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- 7 NEW WATER PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO WATER RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- 9 EXISTING UTILITY ELECTRIC METER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 10 NEW BLOOM PROVIDED, CONTRACTOR INSTALLED, DISCONNECT SWITCH. MOUNT TO PAD PER MANUFACTURER RECOMMENDATIONS.
- 11 CONTRACTOR SHALL TERMINATE ELECTRIC FEEDER AS SHOWN. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 12 CONTRACTOR SHALL PROVIDE TWO GROUNDING RODS TO BE PLACED 6' APART MINIMUM. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 13 NEW ELECTRICAL FEEDER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 14 MOUNT NEW CONDUIT/PIPE TO EXTERIOR WALL. COORDINATE EXACT ROUTING WITH CUSTOMER REPRESENTATIVE IN THE FIELD. REFER TO WALL MOUNTING DETAIL FOR ADDITIONAL REQUIREMENTS.
- 15 NEW BLOOM ENERGY SERVER. REFER TO BLOOM STANDARD INSTALLATION DRAWING SET FOR ADDITIONAL ENERGY SERVER DETAILS.
- 16 FACTORY WIRE ENERGY SERVER EMERGENCY POWER-OFF SWITCH (EPO).
- 17 CONTRACTOR SHALL CORE CONDUIT AND/OR PIPE THROUGH WALL. SCAN WALL PRIOR TO CORING TO AVOID COLLATERAL DAMAGE TO EXISTING PLUMBING AND WIRING. REFER TO WALL PENETRATION DETAIL FOR ADDITIONAL REQUIREMENTS.
- 19 CONTRACTOR SHALL PROVIDE SAWCUT TRENCH FOR UNDERGROUND UTILITIES IN THIS LOCATION AND HAND DIG TRENCHES WHERE THEY CROSS EXISTING UTILITIES. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL FOR ADDITIONAL REQUIREMENTS.
- 20 CONTRACTOR SHALL SAWCUT AS NEEDED TO ALLOW FOR EXCAVATION UNDER SCREEN WALL, CURB, ENERGY SERVER AND ANCILLARY PAD LOCATIONS. REFER TO DETAILS FOR ADDITIONAL EXCAVATION AND BACKFILL REQUIREMENTS. CONFORM PROPOSED PAVING TO EXISTING ALONG SAWCUT LINE.
- 21 PROTECT EXISTING UNDERGROUND UTILITY LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES.
- 22 CONTRACTOR SHALL PROVIDE NEW CONDUIT AND CABLE FROM NEW UTILITY GAS MSA TO CUSTOMER MPOE FOR UTILITY BILLING. REFER TO BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR CONNECTION REQUIREMENTS.
- 23 CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND NEW LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB-UP LOCATIONS PER MECHANICAL DETAIL.
- 24 PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO STORM DRAIN PROTECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- 27 CONTRACTOR SHALL UNDER-CUT EXISTING CURB FOR TRENCHING UTILITY LINES AND BACKFILL WITH CONCRETE SLURRY. IF CURB IS DAMAGED, REPAIR TO MATCH EXISTING.
- 34 CONTRACTOR SHALL PROVIDE NEW CONDUIT AND CABLE FROM NEW TC TO CUSTOMER DATA ENTRY ROOM. REFER TO BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR CONNECTION REQUIREMENTS.



DETAILED SITE PLAN

SCALE: 1" = 10'

1

C1.1

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CUSTOMER SITE

EQUINIX – SV6
444 TOYAMA DRIVE
SUNNYVALE, CA 94089



EQUINIX

REVISION HISTORY

REV	REVISION ISSUE	DATE
0	RELEASED PER IGN-10441	04/01/2017

DESIGNED BY BRANDON SNOW/JACOB CHU	DATE 05/08/2017
DRAWN BY ASHA BASAVALINGAPPA	DATE 02/17/2017
REVIEWED BY BRANDON SNOW/CHRIS BARTUNEK	DATE 05/29/2017
APPROVED BY CARSON TURNER	DATE 06/01/2017

SHEET TITLE

DETAILED
SITE PLAN

DRAWING NUMBER

C1.2

BLOOM DOCUMENT

DOC-1009024

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SITE ID: EQX005.0

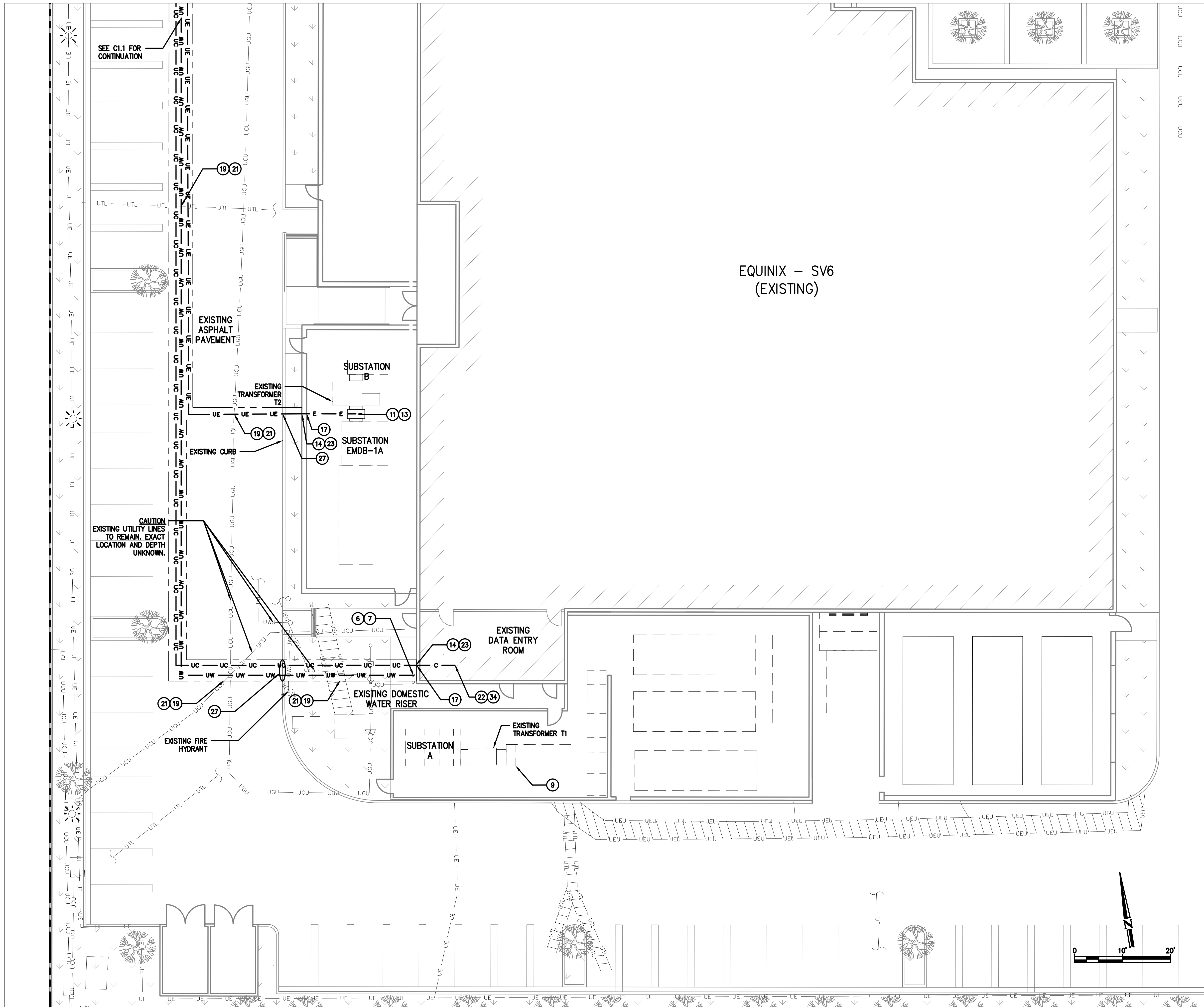
SHEET 12 OF 20

GENERAL NOTES

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REFERENCE SHEET NOTES

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- 4 NEW PRIVATE GAS REGULATOR SET ASSEMBLY FOR ENERGY SERVER WITH SHUT-OFF VALVE. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- 5 NEW GAS PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
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- 23 CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND NEW LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT SUB-UP LOCATIONS PER MECHANICAL DETAIL.
- 24 PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO STORM DRAIN PROTECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- 25 CONTRACTOR SHALL REMOVE EXISTING TREE.
- 27 CONTRACTOR SHALL UNDER-CUT EXISTING CURB FOR TRENCHING UTILITY LINES AND BACKFILL WITH CONCRETE SLURRY. IF CURB IS DAMAGED, REPAIR TO MATCH EXISTING.
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DETAILED SITE PLAN

SCALE: 1" = 10'

1

C1.2

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LICENSE # C53718

CUSTOMER SITE

EQUINIX – SV6
444 TOYAMA DRIVE
SUNNYVALE, CA 94089



EQUINIX

REVISION HISTORY

REV	REVISION	ISSUE	DATE
0	RELEASED	PER ICN-10441	04/01/2017

DESIGNED BY BRANDON SNOW/JACOB CHU	DATE 05/08/2017
DRAWN BY ASHA BASAVALINGAPPA	DATE 02/17/2017
REVIEWED BY BRANDON SNOW/CHRIS BARTUNEK	DATE 05/29/2017
APPROVED BY CARSON TURNER	DATE 06/01/2017

SHEET TITLE

BLOOM PRODUCT
DATA SHEET

DRAWING NUMBER

R0.1

BLOOM DOCUMENT

DOC-1009024

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: EQX005.0

SHEET 20 OF 20

PRODUCT DATASHEET

Bloomenergy®

Energy Server 5

Clean, Reliable, Affordable Energy



CLEAN, RELIABLE POWER ON DEMAND

The Energy Server 5 delivers clean power that reduces emissions and energy costs. The modular architecture enables the installation to be tailored to the actual electricity demand, with a flexibility to add servers as the load increases. The Energy Server 5 actively communicates with Bloom Energy's network operations centers so system performance can be monitored 24 hours per day, 365 days per year.

INNOVATIVE TECHNOLOGY

Utilizing solid oxide fuel cell (SOFC) technology first developed for NASA's Mars program, the Energy Server 5 produces clean power at unprecedented efficiencies, meaning it consumes less fuel and produces less CO₂ than competing technologies. Additionally, no water is needed under normal operating conditions.

ALL-ELECTRIC POWER

The Energy Server 5, which operates at a very high electrical efficiency, eliminates the need for complicated and costly CHP systems. Combining the standard electrical and fuel connections along with a small footprint and sleek design, the Energy Server 5 is the most deployable fuel cell solution on the market.

CONTROLLED AND PREDICTABLE COST

By providing efficient on-site power generation, the economic and environmental benefits are central to the Energy Server 5 value proposition. Bloom Energy customers can lock in their long term energy costs and mitigate the risk of electricity rate increases. The Energy Server 5 has been designed in compliance with a variety of safety standards and is backed by a comprehensive warranty.

About Bloom Energy

Bloom Energy is making clean, reliable energy affordable. Our unique on-site power generation systems utilize an innovative fuel cell technology with roots in NASA's Mars program. By leveraging breakthrough advances in materials science, Bloom Energy systems are among the most efficient energy generators, providing for significantly reduced operating costs and dramatically lower greenhouse gas emissions. Bloom Energy Servers are currently producing power for many Fortune 500 companies including Apple, Google, NSA, Walmart, AT&T, eBay, Staples, as well as notable non-profit organizations such as Caltech and Kaiser Permanente.

Headquarters:
Sunnyvale, California

For More Information:
www.bloomenergy.com

Energy Server 5

Technical Highlights (ES5-YA8AAA)	
Outputs	
Nameplate power output (net AC)	300 kW
Base load output (net AC)	300 kW
Electrical connection	480 V, 3-phase, 60 Hz
Inputs	
Fuels	Natural gas, directed biogas
Input fuel pressure	10-18 psig (15 psig nominal)
Water	None during normal operation
Efficiency	
Cumulative electrical efficiency (LHV net AC)*	65-53%
Heat rate (HHV)	5,811-7,127 Btu/kWh
Emissions	
NOx	< 0.01 lbs/MWh
SOx	Negligible
CO	< 0.05 lbs/MWh
VOCs	< 0.02 lbs/MWh
CO ₂ @ stated efficiency	679-833 lbs/MWh on natural gas; carbon neutral on directed biogas
Physical Attributes and Environment	
Weight	15.8 tons or 15.4 tons
Dimensions (variable layouts)	18' 4" x 8' 8" x 7' 0" or 32' 11" x 4' 5" x 7' 5"
Temperature range	-20° to 45° C
Humidity	0% - 100%
Seismic vibration	IBC site class D
Location	Outdoor
Noise	< 70 dBA @ 6 feet
Codes and Standards	
Complies with Rule 21 interconnection and IEEE1547 standards	
Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards	
An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102.	
Additional Notes	
Access to a secure website to monitor system performance & environmental benefits	
Remotely managed and monitored by Bloom Energy	
Capable of emergency stop based on input from the site	

* 65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test

Bloomenergy®

Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale CA 94089
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www.bloomenergy.com

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Energy Server 5

Technical Highlights (ES5-AACAAA)	
Outputs	
Nameplate power output (net AC)	262.5 kW
Base load output (net AC)	250 kW
Electrical connection	480 V, 3-phase, 60 Hz
Inputs	
Fuels	Natural gas, directed biogas
Input fuel pressure	10-18 psig (15 psig nominal)
Water	None during normal operation
Efficiency	
Cumulative electrical efficiency (LHV net AC)*	65-53%
Heat rate (HHV)	5,811-7,127 Btu/kWh
Emissions	
NOx	< 0.01 lbs/MWh
SOx	Negligible
CO	< 0.05 lbs/MWh
VOCs	< 0.02 lbs/MWh
CO ₂ @ stated efficiency	679-833 lbs/MWh on natural gas; carbon neutral on directed biogas
Physical Attributes and Environment	
Weight	12.6 tons
Dimensions (variable layouts)	14' 9" x 8' 8" x 7' 0" or 25' 9" x 4' 5" x 7' 5"
Temperature range	-20° to 45° C
Humidity	0% - 100%
Seismic vibration	IBC site class D
Location	Outdoor
Noise	< 70 dBA @ 6 feet
Codes and Standards	
Complies with Rule 21 interconnection and IEEE1547 standards	
Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards	
An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102.	
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