

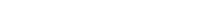
**DOCKETED**

<b>Docket Number:</b>	20-SPPE-02
<b>Project Title:</b>	Lafayette Backup Generating Facility
<b>TN #:</b>	234294
<b>Document Title:</b>	Digital Realty Responses to Data Request Set 1 - LBGF (Part 2)
<b>Description:</b>	N/A
<b>Filer:</b>	Scott Galati
<b>Organization:</b>	DayZenLLC
<b>Submitter Role:</b>	Applicant Representative
<b>Submission Date:</b>	8/12/2020 11:50:24 AM
<b>Docketed Date:</b>	8/12/2020

# **CIVIL DRAWING SET**

**C0.0 through C6.0**

**LEGEND**

-  PROPERTY LINE
-  EXISTING LOT LINE
-  PROPOSED LOT LINE



**DIGITAL REALTY**  
Data Center Solutions

**2825 LAFAYETTE STREET**  
SANTA CLARA, CA  
95050-2627

MEP ENGINEER  
  
Environmental Systems Design, Inc.  
233 South Wacker Drive, Suite 5300  
Chicago, Illinois 60606  
312.372.1200  
www.esdglobal.com  
DPR License No. 184-000892 IL

ARCHITECT  
  
**HKS**

STRUCTURAL ENGINEER  
**PEOPLES ASSOCIATES**  
STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT  
**Kimley»Horn**  
©2019 KIMLEY-HORN AND ASSOCIATES, INC.  
4637 CHABOT DRIVE, SUITE 300,  
PLEASANTON, CA 94588  
PHONE: 925-398-4840 FAX: 714-938-9488

CIVIL ENGINEER STAMP  

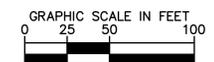

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

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

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

**PROPOSED PROPERTY LOT LINE ADJUSTMENT**

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	07/08/20
PROJECT ENGINEER	SHEET NUMBER
KN	C0.0
SCALE	
AS SHOWN	



LAFAYETTE STREET

CENTRAL EXPRESSWAY

PROPOSED BUILDING

EXISTING BUILDING

EXISTING PROPERTY LINE  
PROPOSED PROPERTY LINE

PROPOSED SUBSTATION



**DIGITAL REALTY**  
Data Center Solutions

**2825 LAFAYETTE STREET  
SANTA CLARA, CA  
95050-2627**

MEP ENGINEER  
  
**Environmental Systems Design, Inc.**  
233 South Wacker Drive, Suite 5300  
Chicago, Illinois 60606  
312.372.1200  
www.esdglobal.com  
DPR License No. 184-000892 IL

ARCHITECT

STRUCTURAL ENGINEER  
**PEOPLES ASSOCIATES**  
STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT  
**Kimley»Horn**  
©2019 KIMLEY-HORN AND ASSOCIATES, INC.  
4637 CHABOT DRIVE, SUITE 300,  
PLEASANTON, CA 94588  
PHONE: 925-398-4840 FAX: 714-938-9488

CIVIL ENGINEER STAMP

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

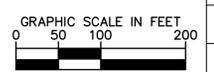
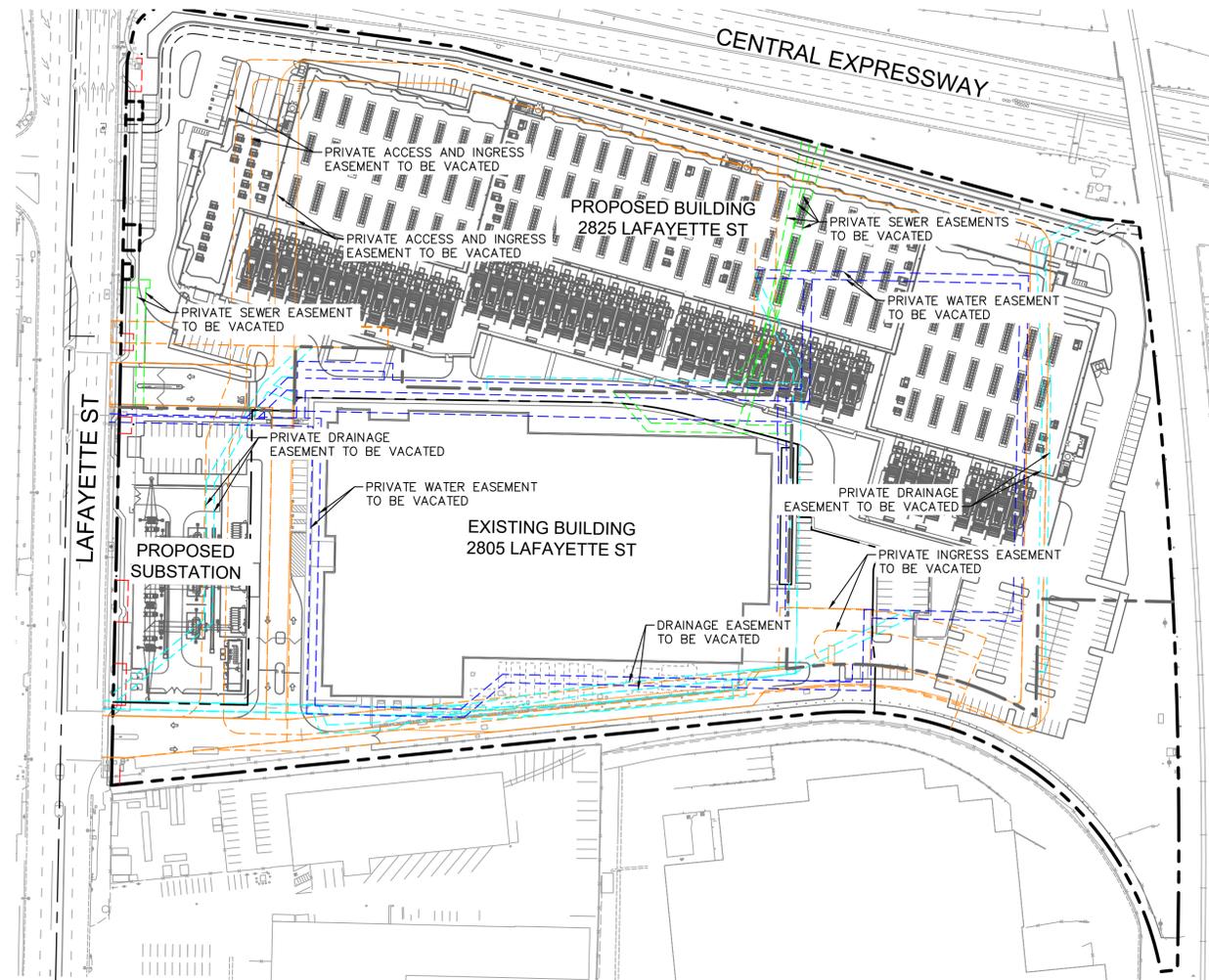
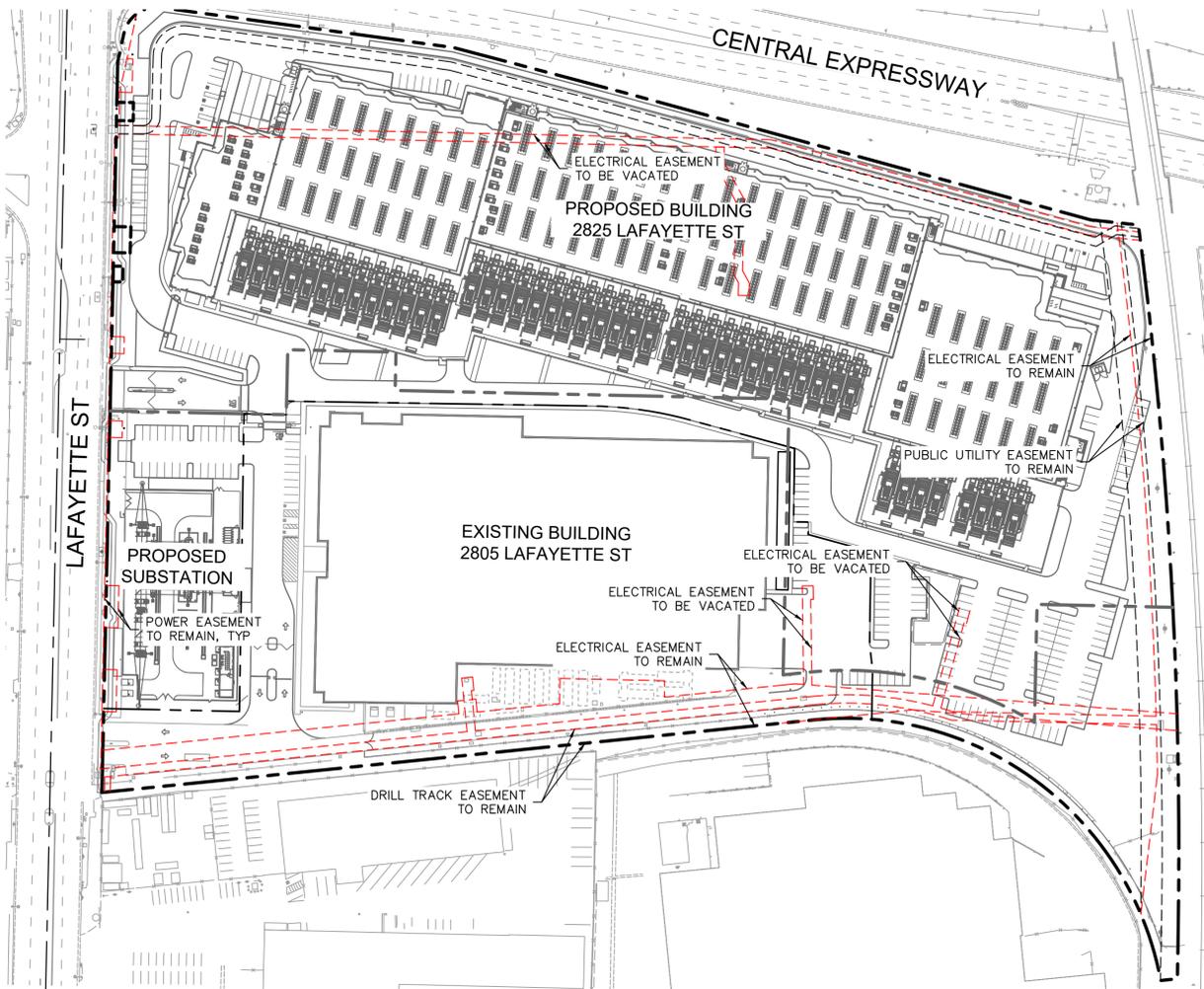
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19
NO.	RECORD	DATE

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

**EASEMENT PLAN**

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	07/08/20
PROJECT ENGINEER	SHEET NUMBER
KN	
SCALE	C0.1
AS SHOWN	

- LEGEND**
- PUBLIC UTILITY EASEMENT
  - ELECTRICAL/POWER EASEMENT
  - WATER EASEMENT
  - SANITARY SEWER EASEMENT
  - STORM DRAIN EASEMENT
  - INGRESS/EGRESS EASEMENT
  - PROPERTY LINE
  - EXISTING LOT LINE
  - PROPOSED LOT LINE



**SITE DATA**

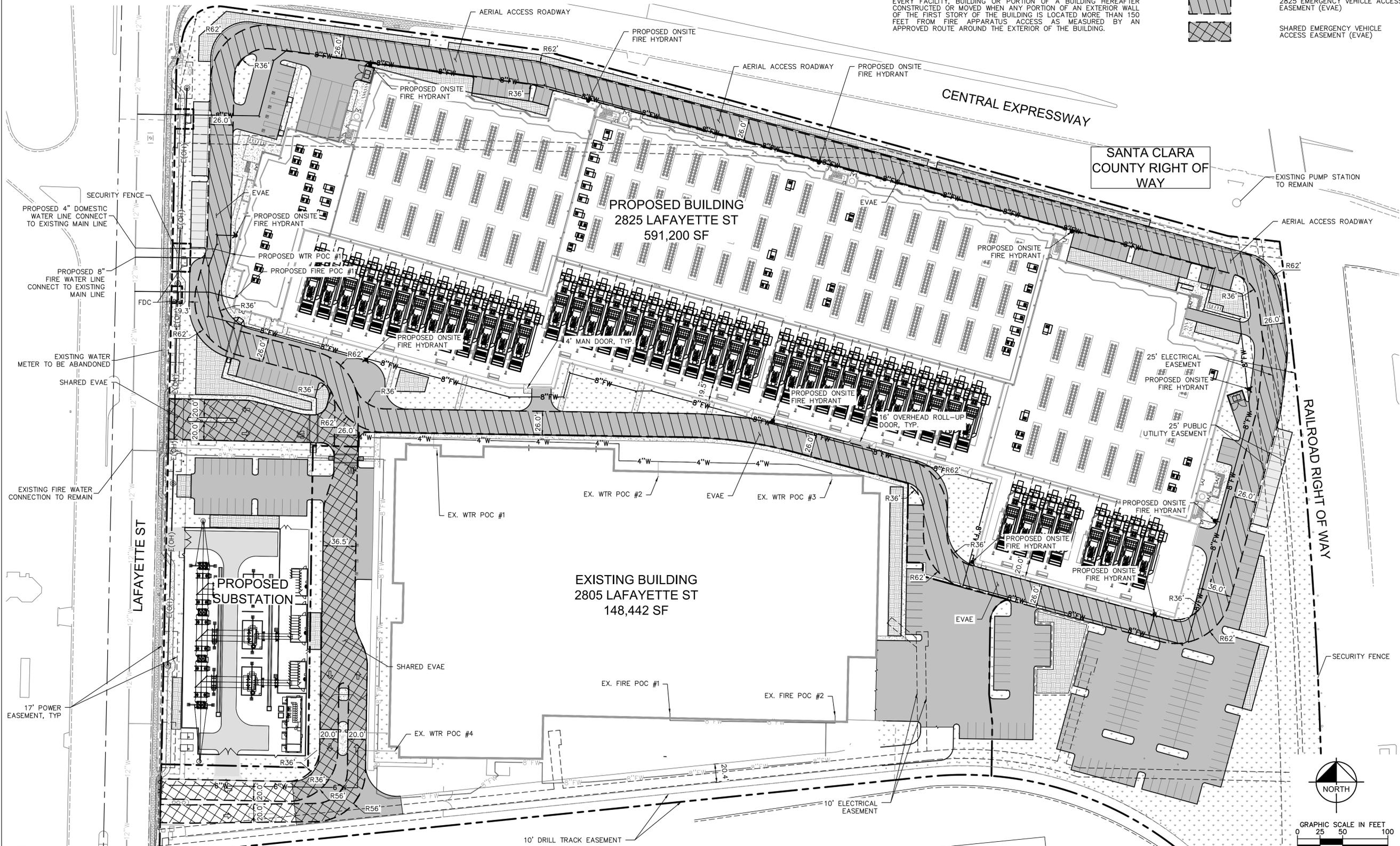
BUILDING CONSTRUCTION TYPE: IIA  
 TOTAL BUILDING SQUARE FOOTAGE: 591,200 SF  
 REQUIRED FIRE FLOW (PER CFC TABLE B105.1, BEFORE REDUCTION): 6,000 GPM  
 MINIMUM REQUIRED HYDRANTS (PER CFC TABLE C102.1): 6 HYDRANTS  
 HYDRANTS PROVIDED: 11 HYDRANTS  
 AVERAGE HYDRANT SPACING: ~246'

**GENERAL NOTES**

1. FIRE ACCESS ROADWAYS SHALL HAVE A "MINIMUM" UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 13 FEET 6 INCHES. AERIAL APPARATUS ACCESS ROADS MAY REQUIRE ADDITIONAL VERTICAL CLEARANCE.
2. ALL FIRE ACCESS ROADWAYS SHALL BE AN ALL-WEATHER SURFACE DESIGNED TO SUPPORT THE IMPOSED LOAD OF FIRE APPARATUS WITH A GROSS VEHICLE WEIGHT OF 75,000 POUNDS.
3. FIRE APPARATUS ACCESS ROADWAYS SHALL HAVE A "MINIMUM" INSIDE TURNING RADIUS OF 36 FEET.
4. THE GRADE FOR EMERGENCY APPARATUS ACCESS ROADWAYS SHALL NOT EXCEED 10% TO FACILITATE FIRE-GROUND OPERATIONS. SEE SHEET C3.0, PRELIMINARY GRADING AND DRAINAGE PLAN, FOR PROPOSED GRADING INFORMATION.
5. TRAFFIC CALMING DEVICES ARE NOT PERMITTED ON ANY DESIGNATED FIRE ACCESS ROADWAY, UNLESS APPROVED BY THE FIRE PREVENTION & HAZARDOUS MATERIALS DIVISION.
6. FIRE APPARATUS ACCESS ROADWAYS SHALL BE PROVIDED FOR EVERY FACILITY, BUILDING OR PORTION OF A BUILDING HEREAFTER CONSTRUCTED OR MOVED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY OF THE BUILDING IS LOCATED MORE THAN 150 FEET FROM FIRE APPARATUS ACCESS AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING.

**LEGEND**

- PROPERTY LINE
- PROPOSED 8" FIRE WATER LINE
- EXISTING WATER LINE
- PROPOSED ONSITE FIRE HYDRANT
- LANDSCAPE/PLANTER AREA
- BIORETENTION AREA
- ASPHALT CONCRETE PAVEMENT
- 2825 EMERGENCY VEHICLE ACCESS EASEMENT (EVAE)
- SHARED EMERGENCY VEHICLE ACCESS EASEMENT (EVAE)



**DIGITAL REALTY**  
 Data Center Solutions  
**2825 LAFAYETTE STREET**  
**SANTA CLARA, CA**  
**95050-2627**

MEP ENGINEER  
  
 Environmental Systems Design, Inc.  
 233 South Wacker Drive, Suite 5300  
 Chicago, Illinois 60606  
 312.372.1200  
 www.esdglobal.com  
 DPR License No. 184-000892 IL

ARCHITECT

STRUCTURAL ENGINEER  
  
 PEOPLES ASSOCIATES  
 STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT  
  
 Kimley-Horn  
 ©2019 KIMLEY-HORN AND ASSOCIATES, INC.  
 4637 CHABOT DRIVE, SUITE 300,  
 PLEASANTON, CA 94588  
 PHONE: 925-396-4840 FAX: 714-938-9488

CIVIL ENGINEER STAMP

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

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

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

**FIRE TRUCK ACCESS PLAN**

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 07/08/20
PROJECT ENGINEER KN	SHEET NUMBER
SCALE AS SHOWN	<b>C1.0</b>

Wednesday, July 24, 2019

**Fire Flow Data Requested by**  
 Name: Miles Johnson  
 Company: Kimley Horn  
 Tel: 669-800-4140  
 Email: miles.johnson@kimley-horn.com

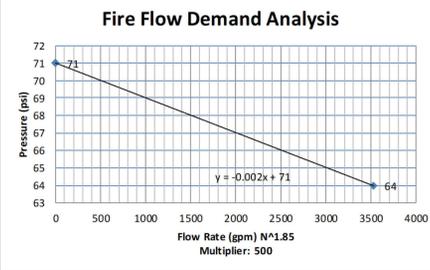
You have requested fire flow data for the area around 2825 Lafayette St. Results provided are from fire hydrant flow test #751. Flow data was obtained from hydrant #285, and pressure data was obtained from hydrant #1760, as shown on the attached water utility map. The flow hydrants are connected to a 12" water main.

Test Flow (GPM) was computed, per National Fire Protection Association 291, by the Hazen-Williams Equation and multiplied by a Hydrant Coefficient value of 0.83.

Date of Fire Flow Test #751	Static Pressure PSI	Residual Pressure PSI	Opening Size Inches	Test Flow GPM
Wednesday, July 17, 2019	71	64	4	2,378

Fire Flow Graphical Analysis		
		= Manual Input
		= Calculated Demand
Static	Pressure	Flow Rate
Observed	71	0
Demand	64	2378
	68.0	1500

Do Not Modify		
71	0	0
64	1761943	3524
X	751223	1502



Water Supply Pressure Calculations		DLR Data Center
DLR Data Center		DLR Data Center
Assumptions and References:		Kimley-Horn and Associates September 13, 2019
1. Available static pressure at existing water main (Node #1), P <sub>s</sub> = 71 PSI		
Note: see attached Fire Flow Test		
2. Water Demand: Building Sprinklers= 0 GPM Fire Hydrant= 1500 GPM Design= 1500 GPM @ 71 PSI (Per Fire Flow Test)		
3. Use Hazen-Williams formula to compute friction loss in pipe. $h_f = [10.44 \cdot L \cdot V^{1.85}] / [C^{1.85} \cdot d^{4.8655}]$		
where:	h <sub>f</sub> Pressure Loss over length of pipe (FT)	
	L Length of Pipe (FT)	
	V Volumetric Flow Rate (GPM)	
	C Friction Coefficient	
	d Diameter (Inches)	
Note: 10% of friction loss will be added to h <sub>f</sub> to account for losses through bends		
4. Determine the Pressure at downstream Nodes by subtracting friction losses in pipes & bends, gain/loss due to elevation change between nodes and loss across the backflow preventer. $P_{n+1} = P_n - 1.10 \cdot h_{f_{pipe}} - h_{bpf}$		
where:	P <sub>n+1</sub> Pressure at Node #X+1 (PSI)	
	P <sub>n</sub> Pressure at Node #X (PSI)	
	h <sub>f</sub> Pressure Loss over length of pipe (FT)	
	h <sub>e</sub> Elevation Difference Between two nodes (FT)	
	h <sub>bpf</sub> Pressure Loss across Backflow Preventer 15 PSI	
Notes: 1. See attached BFP cut sheet/flow characteristics graph 2. Occurs at Node #2		
Note: 1 FT H <sub>2</sub> O = 2.31 PSI		
5. Refer to the attached Schematic Plan for more information		
6. Calculations		
Input:		Results:
Site Fire Hydrant Calculations		
Pipe Segment "FH1"	V (GPM) 1500, d (IN) 8, C 150, L (FT) 1714, h <sub>f</sub> (FT) 51.1, Elev (FT) 38.5 @ Node 3, h <sub>e</sub> (FT) 1.5	P (PSI) 32.3 @ Node #3 > 20 PSI OK
		40.0 @ Test Hydrant

**EXISTING UTILITY NOTE**

THE EXISTING UTILITIES SHOWN ON THE PLAN ARE BASED ON AVAILABLE RECORDS. THE CONTRACTOR MUST FIELD DETERMINE THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. REPORT DISCREPANCIES AND POTENTIAL CONFLICTS WITH PROPOSED UTILITIES TO ENGINEER PRIOR TO INSTALLATION OF ANY PIPING.

**SITE DATA**

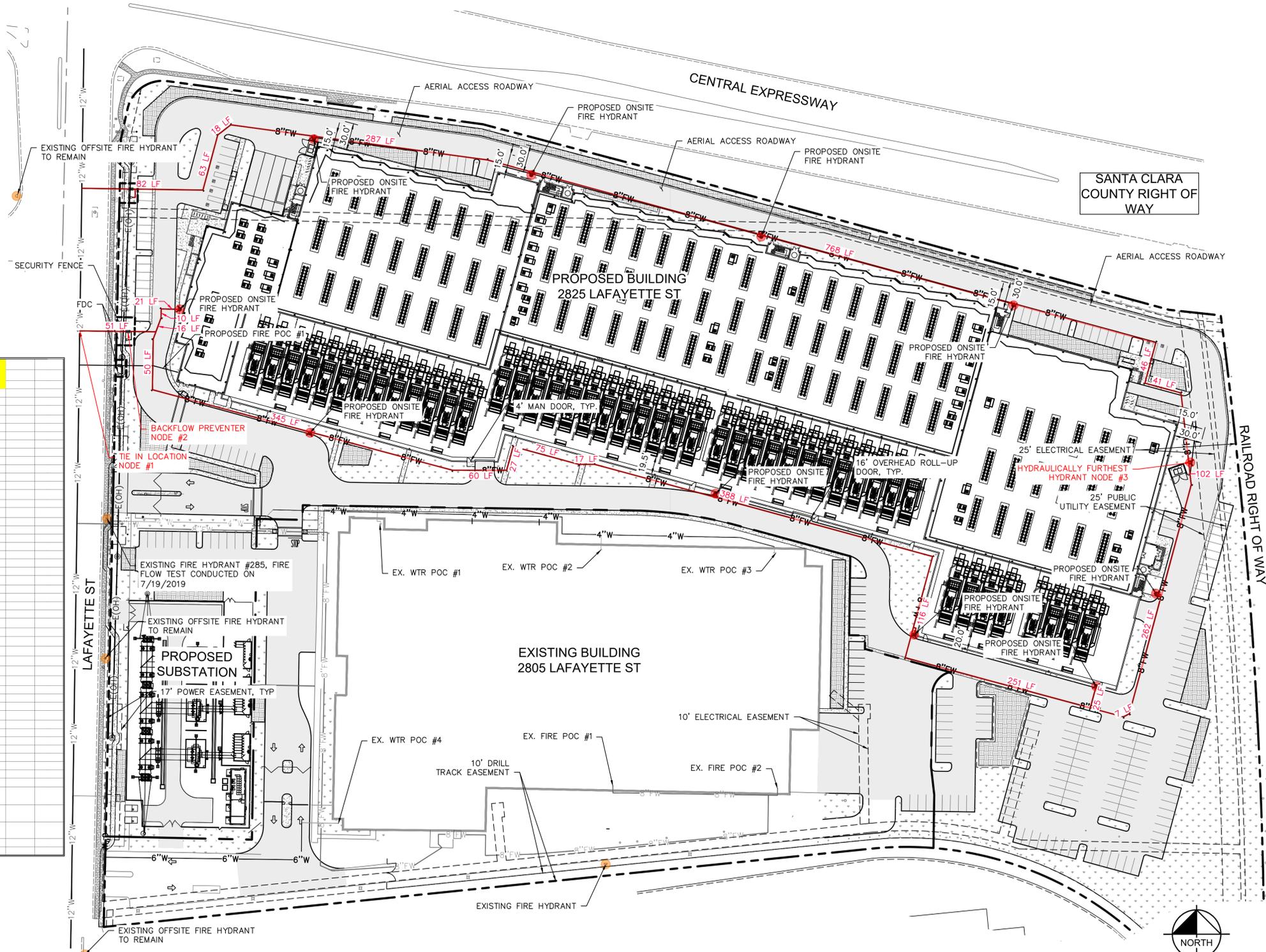
BUILDING CONSTRUCTION TYPE: TYPE 2-A

**GENERAL NOTES**

- DOMESTIC WATER TO MAINTAIN 5' HORIZONTAL CLEARANCE FROM BIORETENTION AREAS.
- CONTRACTOR TO FIELD VERIFY INVERTS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
- PRIOR TO THE START OF CONSTRUCTION, FIRE PROTECTION WATER SUPPLIES SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO THE TIME OF CONSTRUCTION OR PRIOR TO COMBUSTIBLE MATERIALS BEING MOVED ONSITE, UNLESS AN APPROVED ALTERNATIVE METHOD OF PROTECTION IS APPROVED BY THE FIRE PREVENTION AND HAZARDOUS MATERIALS DIVISION.

**LEGEND**

- PROPERTY LINE
- EXISTING WATER LINE
- EXISTING FIRE WATER LINE
- PROPOSED FIRE WATER LINE (SIZE PER PLAN)
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- LANDSCAPE / PLANTER AREA
- BIORETENTION AREA
- ASPHALT CONCRETE PAVEMENT



**DIGITAL REALTY**  
 Data Center Solutions  
**2825 LAFAYETTE STREET**  
**SANTA CLARA, CA**  
**95050-2627**

MEP ENGINEER  
  
 Environmental Systems Design, Inc.  
 233 South Wacker Drive, Suite 5300  
 Chicago, Illinois 60606  
 312.372.1200  
 www.esdglobal.com  
 DPR License No. 184-000892 IL

ARCHITECT

STRUCTURAL ENGINEER  
**PEOPLES ASSOCIATES**  
 STRUCTURAL ENGINEERS  
 CIVIL ENGINEER AND LANDSCAPE ARCHITECT  
**Kimley Horn**  
 ©2019 KIMLEY-HORN AND ASSOCIATES, INC.  
 4637 CHABOT DRIVE, SUITE 300,  
 PLEASANTON, CA 94588  
 PHONE: 925-396-4840 FAX: 714-938-9488

CIVIL ENGINEER STAMP

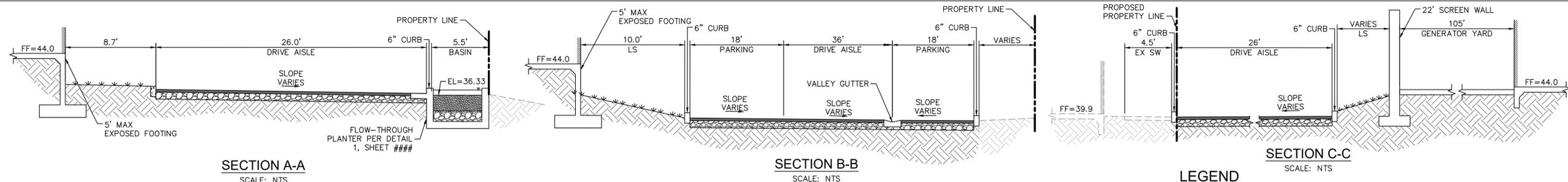
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

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

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

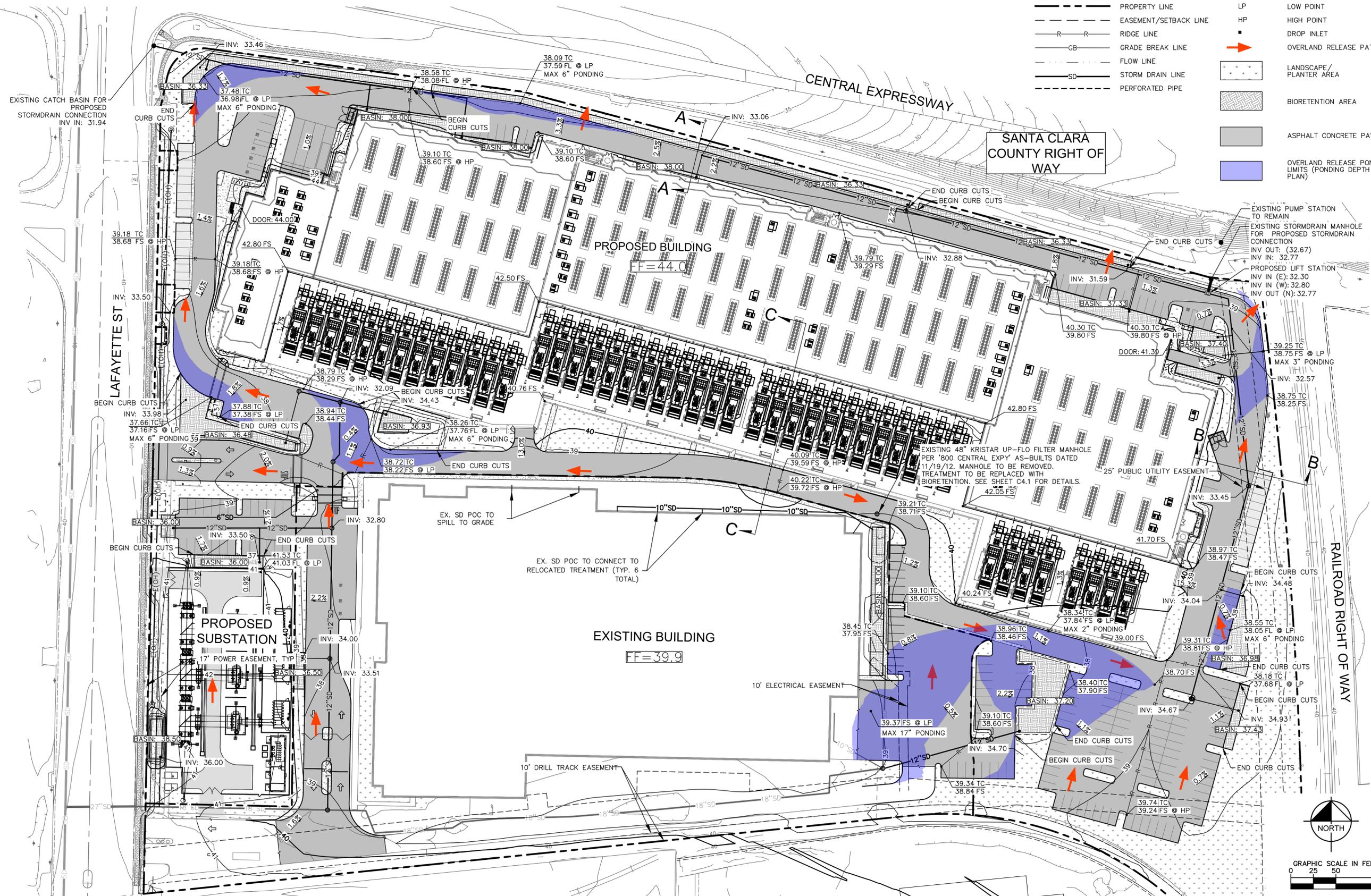
**FIRE DEPARTMENT WATER SUPPLY PLAN**

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	07/08/20
PROJECT ENGINEER	SHEET NUMBER
KN	C2.0
SCALE	
AS SHOWN	



**LEGEND**

	PROPERTY LINE	LP	LOW POINT
	EASEMENT/SETBACK LINE	HP	HIGH POINT
	RIDGE LINE		DROP INLET
	GRADE BREAK LINE		OVERLAND RELEASE PATH
	FLOW LINE		LANDSCAPE/PLANTER AREA
	STORM DRAIN LINE		BIORETENTION AREA
	PERFORATED PIPE		ASPHALT CONCRETE PAVEMENT
			OVERLAND RELEASE PONDING LIMITS (PONDING DEPTH PER PLAN)



**DIGITAL REALTY**  
Data Center Solutions

**2825 LAFAYETTE STREET**  
SANTA CLARA, CA  
95050-2627

MEP ENGINEER

**ESD**  
Environmental Systems Design, Inc.  
233 South Wacker Drive, Suite 5300  
Chicago, Illinois 60606  
312.372.1200  
www.esdglobal.com  
DPR License No. 184-000892 IL

ARCHITECT

**HKS**

STRUCTURAL ENGINEER

**PEOPLES ASSOCIATES**  
STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT

**Kimley Horn**

©2019 KIMLEY-HORN AND ASSOCIATES, INC.  
4637 CHABOT DRIVE, SUITE 300,  
PLEASANTON, CA 94588  
PHONE: 925-398-4840 FAX: 714-938-9488

CIVIL ENGINEER STAMP

REGISTERED PROFESSIONAL ENGINEER  
MILES R. JOHNSON  
RCE NO. 84307  
CIVIL  
STATE OF CALIFORNIA

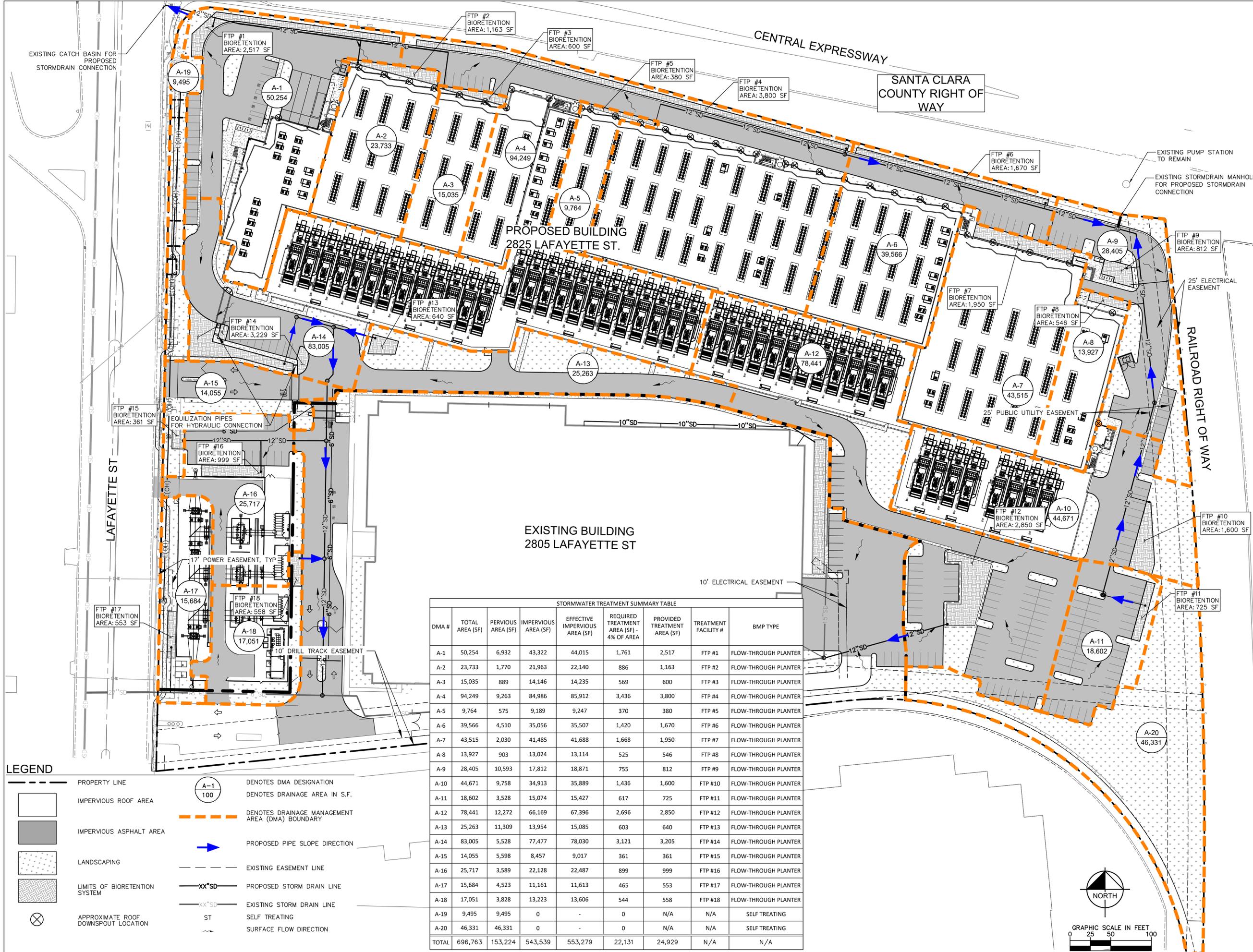
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

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

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

**GRADING AND DRAINAGE PLAN**

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	07/08/20
PROJECT ENGINEER	SHEET NUMBER
KN	C3.0
SCALE	
AS SHOWN	

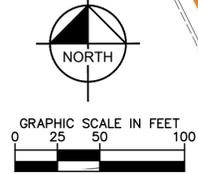


STORMWATER TREATMENT SUMMARY TABLE

DMA #	TOTAL AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF) - 4% OF AREA	PROVIDED TREATMENT AREA (SF)	TREATMENT FACILITY #	BMP TYPE
A-1	50,254	6,932	43,322	44,015	1,761	2,517	FTP #1	FLOW-THROUGH PLANTER
A-2	23,733	1,770	21,963	22,140	886	1,163	FTP #2	FLOW-THROUGH PLANTER
A-3	15,035	889	14,146	14,235	569	600	FTP #3	FLOW-THROUGH PLANTER
A-4	94,249	9,263	84,986	85,912	3,436	3,800	FTP #4	FLOW-THROUGH PLANTER
A-5	9,764	575	9,189	9,247	370	380	FTP #5	FLOW-THROUGH PLANTER
A-6	39,566	4,510	35,056	35,507	1,420	1,670	FTP #6	FLOW-THROUGH PLANTER
A-7	43,515	2,030	41,485	41,688	1,668	1,950	FTP #7	FLOW-THROUGH PLANTER
A-8	13,927	903	13,024	13,114	525	546	FTP #8	FLOW-THROUGH PLANTER
A-9	28,405	10,593	17,812	18,871	755	812	FTP #9	FLOW-THROUGH PLANTER
A-10	44,671	9,758	34,913	35,889	1,436	1,600	FTP #10	FLOW-THROUGH PLANTER
A-11	18,602	3,528	15,074	15,427	617	725	FTP #11	FLOW-THROUGH PLANTER
A-12	78,441	12,272	66,169	67,396	2,696	2,850	FTP #12	FLOW-THROUGH PLANTER
A-13	25,263	11,309	13,954	15,085	603	640	FTP #13	FLOW-THROUGH PLANTER
A-14	83,005	5,528	77,477	78,030	3,121	3,205	FTP #14	FLOW-THROUGH PLANTER
A-15	14,055	5,598	8,457	9,017	361	361	FTP #15	FLOW-THROUGH PLANTER
A-16	25,717	3,589	22,128	22,487	899	999	FTP #16	FLOW-THROUGH PLANTER
A-17	15,684	4,523	11,161	11,613	465	553	FTP #17	FLOW-THROUGH PLANTER
A-18	17,051	3,828	13,223	13,606	544	558	FTP #18	FLOW-THROUGH PLANTER
A-19	9,495	9,495	0	-	0	N/A	N/A	SELF TREATING
A-20	46,331	46,331	0	-	0	N/A	N/A	SELF TREATING
TOTAL	696,763	153,224	543,539	553,279	22,131	24,929	N/A	N/A

**LEGEND**

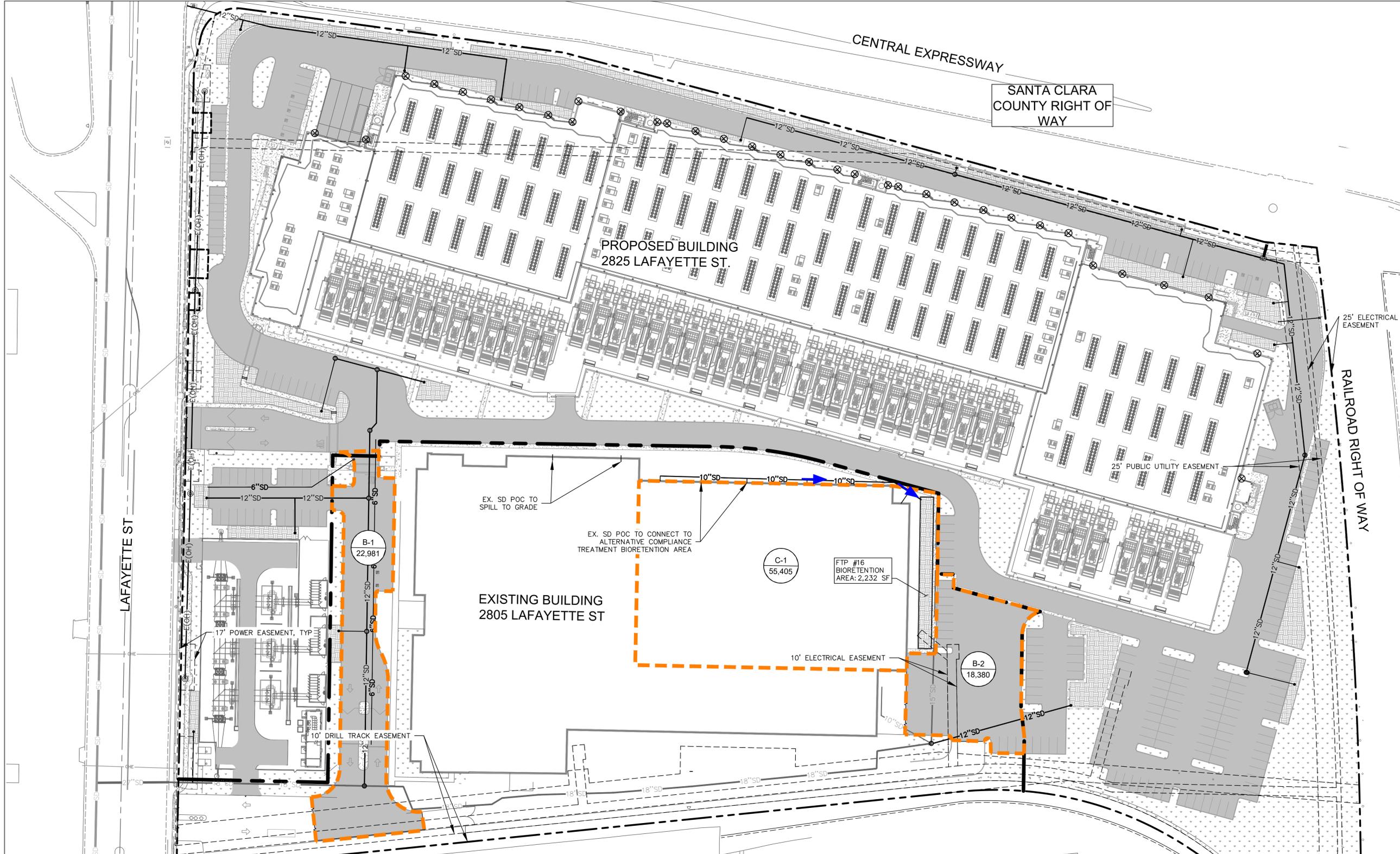
- PROPERTY LINE
- IMPERVIOUS ROOF AREA
- IMPERVIOUS ASPHALT AREA
- LANDSCAPING
- LIMITS OF BIORETENTION SYSTEM
- APPROXIMATE ROOF DOWNSPOUT LOCATION
- A-1/100 DENOTES DMA DESIGNATION
- DENOTES DRAINAGE AREA IN S.F.
- DENOTES DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
- PROPOSED PIPE SLOPE DIRECTION
- EXISTING EASEMENT LINE
- PROPOSED STORM DRAIN LINE
- EXISTING STORM DRAIN LINE
- SELF TREATING
- SURFACE FLOW DIRECTION



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

**2805 PRELIM  
STORMWATER  
CONTROL PLAN**

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 07/08/20
PROJECT ENGINEER KN	SHEET NUMBER
SCALE AS SHOWN	<b>C4.1</b>



**LEGEND**

- PROPERTY LINE
- IMPERVIOUS ROOF AREA
- IMPERVIOUS ASPHALT AREA
- LANDSCAPING
- LIMITS OF BIORETENTION SYSTEM
- A-1 100 DENOTES DMA DESIGNATION
- DENOTES DRAINAGE AREA IN S.F.
- DENOTES DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
- PROPOSED PIPE SLOPE DIRECTION
- EXISTING EASEMENT LINE
- PROPOSED STORM DRAIN LINE
- EXISTING STORM DRAIN LINE
- SELF TREATING
- SURFACE FLOW DIRECTION

**REQUIRED STORMWATER TREATMENT SUMMARY TABLE**

DMA #	TOTAL AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF) - 4% OF AREA	PROVIDED TREATMENT AREA (SF)	TREATMENT FACILITY #	BMP TYPE
B-1	22,981	0	22,981	22,981	919	SEE C-1	SEE C-1	ALTERNATIVE COMPLIANCE*
B-2	18,380	0	18,380	18,380	735	SEE C-1	SEE C-1	ALTERNATIVE COMPLIANCE*
TOTAL	41,361	0	41,361	41,361	1,654	2,232	N/A	N/A

**ALTERNATIVE COMPLIANCE STORMWATER TREATMENT SUMMARY TABLE\***

DMA #	TOTAL AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF) - 4% OF AREA	PROVIDED TREATMENT AREA (SF)	TREATMENT FACILITY #	BMP TYPE
C-1	55,405	0	55,405	55,405	2,216	2,232	FTP #16	FLOW-THROUGH PLANTER
TOTAL	55,405	0	55,405	55,405	2,216	2,232	N/A	N/A

\*DRAINAGE MANAGEMENT AREAS (DMA) B-1 AND B-2 ENCOMPASS THE DISTURBED IMPERVIOUS AREA AT 2805 LAFAYETTE STREET. AN EQUIVALENT, OR LARGER, EXISTING IMPERVIOUS AREA C-1 WILL BE TREATED IN LIEU OF B-1 AND B-2.





**DIGITAL REALTY**  
Data Center Solutions

**2825 LAFAYETTE STREET  
SANTA CLARA, CA  
95050-2627**

MEP ENGINEER  
**ESD**  
Environmental Systems Design, Inc.  
233 South Wacker Drive, Suite 5300  
Chicago, Illinois 60606  
312.372.1200  
www.esdglobal.com  
DPR License No. 184-000892 IL

ARCHITECT  
**HKS**

STRUCTURAL ENGINEER  
**PEOPLES ASSOCIATES**  
STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT  
**Kimley»Horn**  
©2019 KIMLEY-HORN AND ASSOCIATES, INC.  
4637 CHABOT DRIVE, SUITE 300,  
PLEASANTON, CA 94588  
PHONE: 925-398-4840 FAX: 714-938-9488



IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

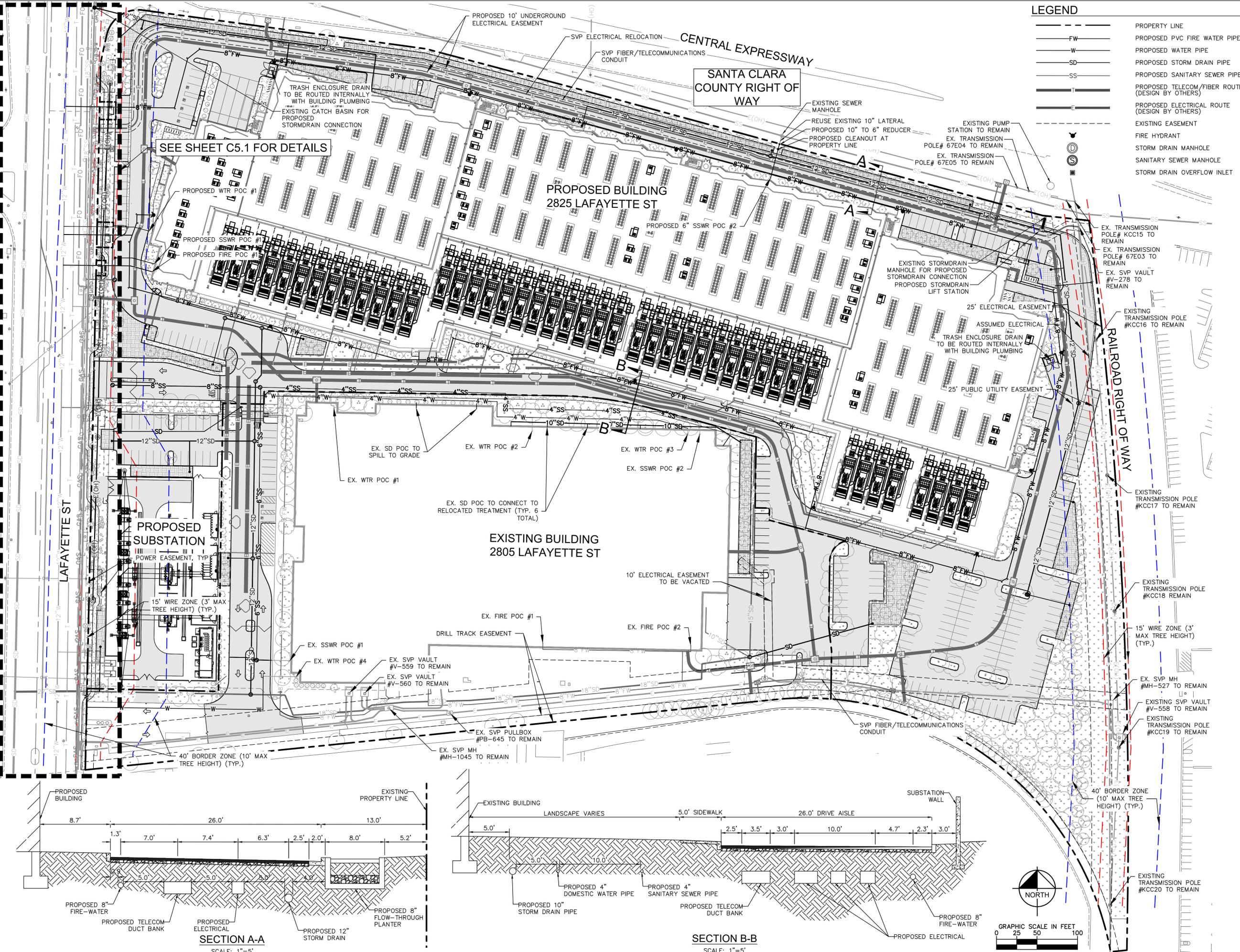
**DLR DATA CENTER**  
2825 LAFAYETTE STREET  
SANTA CLARA, CA, 95050

**COMPOSITE  
LANDSCAPE AND  
UTILITY PLAN**

PRINCIPAL IN CHARGE JP	PROJECT NUMBER 197250001
PROJECT MANAGER MJ	DATE 07/08/20
PROJECT ENGINEER KN	SHEET NUMBER C5.0
SCALE AS SHOWN	

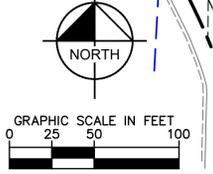
**LEGEND**

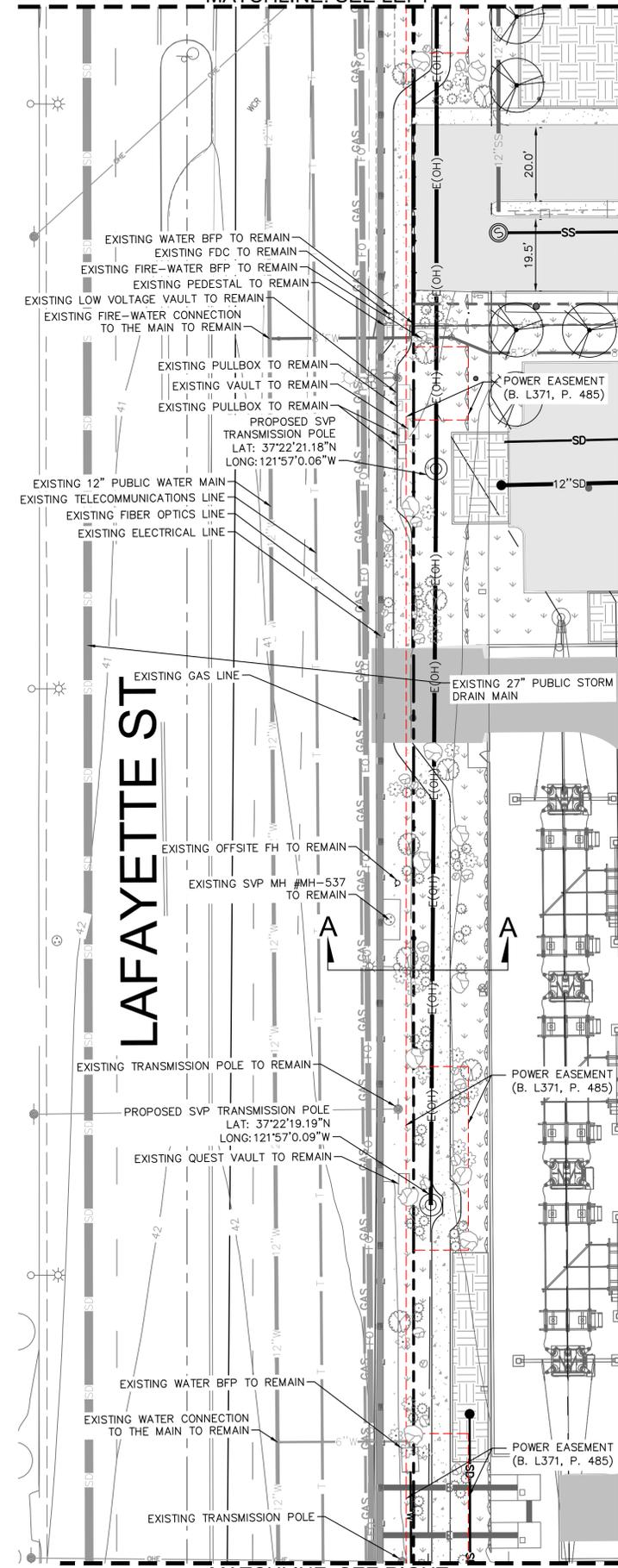
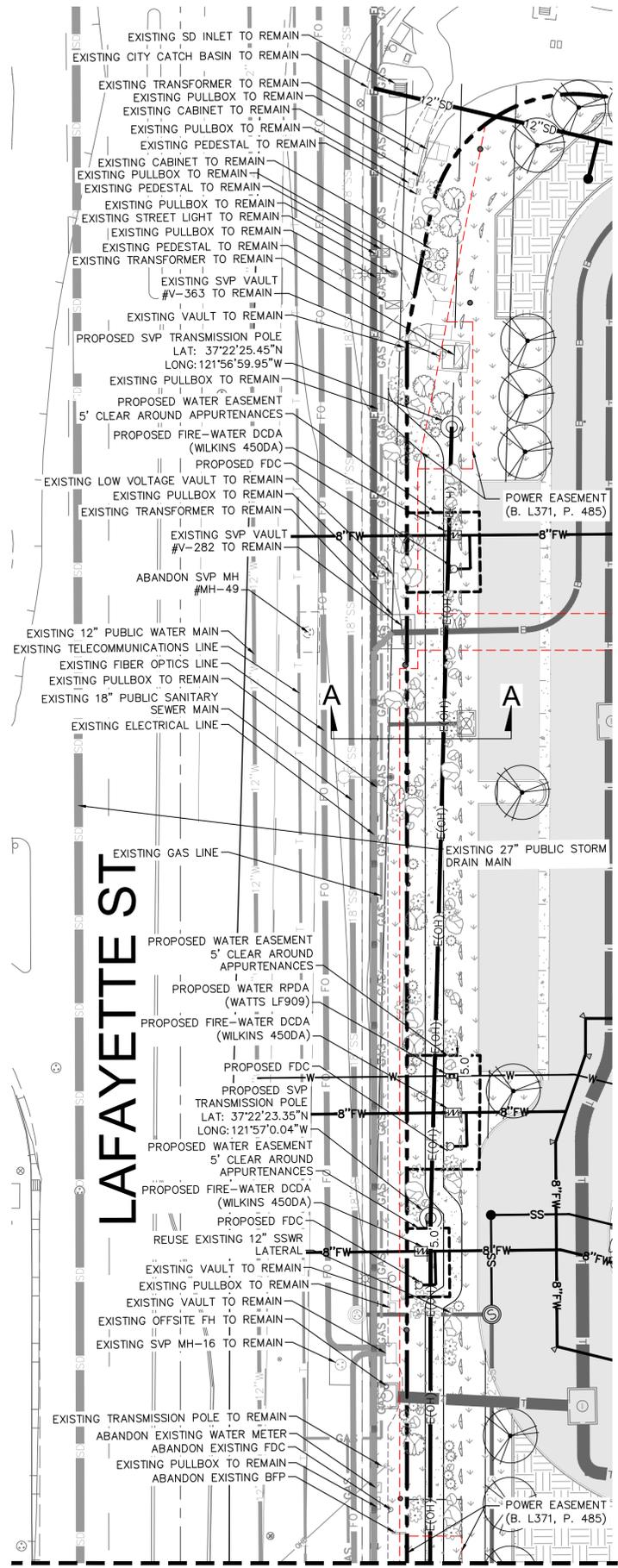
- — — — — PROPERTY LINE
- FW — PROPOSED PVC FIRE WATER PIPE
- W — PROPOSED WATER PIPE
- SD — PROPOSED STORM DRAIN PIPE
- SS — PROPOSED SANITARY SEWER PIPE
- — — — — PROPOSED TELECOM/FIBER ROUTE (DESIGN BY OTHERS)
- — — — — PROPOSED ELECTRICAL ROUTE (DESIGN BY OTHERS)
- - - - - EXISTING EASEMENT
- — — — — FIRE HYDRANT
- — — — — STORM DRAIN MANHOLE
- — — — — SANITARY SEWER MANHOLE
- — — — — STORM DRAIN OVERFLOW INLET



**SECTION A-A**  
SCALE: 1"=5'

**SECTION B-B**  
SCALE: 1"=5'





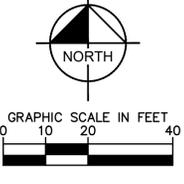
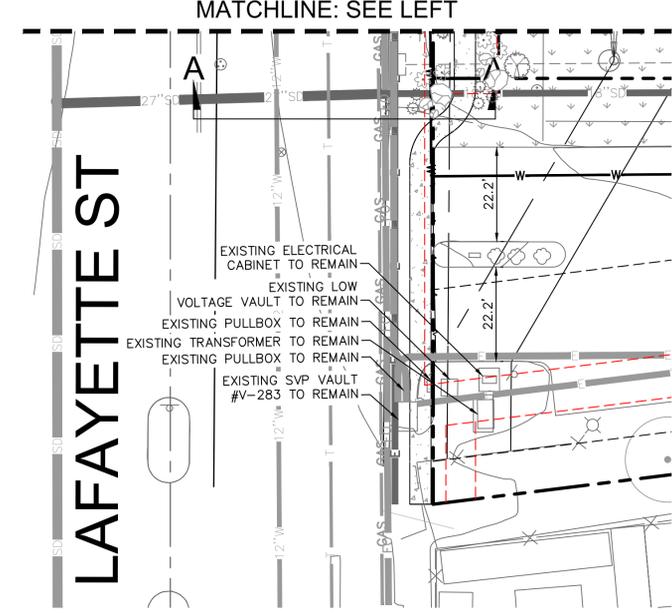
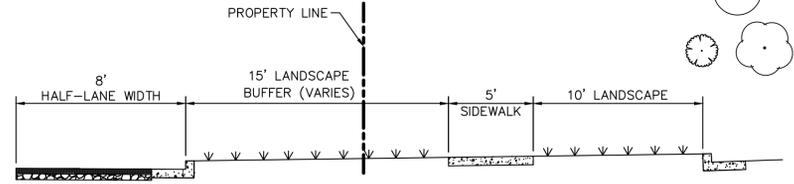
**GENERAL UTILITY NOTES**

- A MINIMUM 12" VERTICAL CLEARANCE MUST BE MAINTAINED AT WATER SERVICE CROSSINGS WITH OTHER UTILITIES.
- THE FOLLOWING MINIMUM HORIZONTAL CLEARANCES MUST BE MAINTAINED BETWEEN WATER SERVICES AND OTHER UTILITIES:
  - 10' FROM SANITARY SEWER UTILITIES
  - 10' FROM RECYCLED WATER UTILITIES
  - 8' FROM STORM DRAIN UTILITIES
  - 5' FROM FIRE AND OTHER WATER UTILITIES
  - 3' FROM ABANDONED WATER SERVICES
  - 5' FROM GAS UTILITIES
  - 5' FROM THE EDGE OF THE PROPOSED OF EXISTING DRIVEWAY
- A MINIMUM 10' HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN SANITARY SEWER, WATER AND RECYCLED WATER UTILITIES FROM EXISTING AND PROPOSED TREES. IF TREE ROOT BARRIERS ARE INSTALLED, THE CLEARANCE FROM THE TREE REDUCES TO 5'. THE CLEARANCE MUST BE FROM THE EDGE OF THE TREE ROOT BARRIER TO THE EDGE OF THE NAMED UTILITIES.
- NO WATER, SEWER, OR RECYCLED WATER FACILITIES SHALL BE LOCATED WITHIN 5' OF ANY STORM WATER TREATMENT SYSTEM.
- THE BELOW EQUIPMENT CLEARANCES SHALL BE MAINTAINED:
  - 10' MINIMUM CLEARANCE IS REQUIRED IN FRONT OF EQUIPMENT ACCESS DOORS.
  - MINIMUM CLEARANCE FROM PAD IS REQUIRED ON SIDES WITHOUT EQUIPMENT ACCESS DOORS.
  - 18' MINIMUM WIDTH SHALL BE PROVIDED AND MAINTAINED ON ONE SIDE OF THE EQUIPMENT PAD TO ALLOW AN ELECTRIC DEPARTMENT LINE TRUCK TO DRIVE UP NEXT TO THE PAD FOR INSTALLATION AND MAINTENANCE OF EQUIPMENT.
  - BARRIER PIPES ARE REQUIRED ONLY ON SIDES ACCESSIBLE TO VEHICLES:
    - 2.5' FROM SIDE OF EQUIPMENT SIDES.
    - 4' IN FRONT OF ACCESS DOORS.
    - BARRIER PIPES IN FRONT OF ACCESS DOORS SHALL BE REMOVABLE.
- THE BELOW MINIMUM HORIZONTAL CLEARANCES MUST BE MAINTAINED BETWEEN NEW CONDUITS OR PIPING SYSTEMS AND THE FOLLOWING:
  - 5' FROM ANY EXISTING OR PROPOSED SVP CONDUIT SYSTEM
  - 3.5' FROM POLES AND OPEN TRENCH INSTALLATION. EXCEPTIONS ARE FOR RISER CONDUIT
  - 3' FROM SIGN POSTS, BARRIER PIPES OR BOLLARDS, FENCE POSTS AND SIMILAR STRUCTURES
  - 5' FROM NEW SPLICE BOXES, PULL BOXES, MANHOLES, VAULTS OR SIMILAR SUBSURFACE FACILITIES
  - 5' FROM WALLS, FOOTINGS, RETAINING WALLS, LANDSCAPE PLANTERS, TREE ROOT BARRIERS OR OTHER SUBSURFACE WALL OR STRUCTURE
  - 5' FROM FIRE HYDRANT THRUST BLOCK. THE THRUST BLOCK EXTENDS 5' ON EITHER SIDE OF THE FIRE HYDRANT IN LINE WITH THE RADIAL WATER PIPE CONNECTED TO THE HYDRANT.
  - A MINIMUM 12" VERTICAL CLEARANCE MUST BE MAINTAINED BETWEEN NEW CONDUIT AND PIPE SYSTEMS INSTALLED PERPENDICULAR TO EXISTING SVP CONDUITS FOR OPEN TRENCH INSTALLATIONS.
- THE BELOW MINIMUM HORIZONTAL CLEARANCES MUST BE MAINTAINED BETWEEN VAULTS/MANHOLES AND THE FOLLOWING:
  - 10' FOOT FROM ADJACENT VAULTS OR MANHOLES
  - 5' FROM ADJACENT CONDUITS
  - 36" FROM FACE OF CURB OR BOLLARDS REQUIRED
- A MINIMUM 5' HORIZONTAL CLEARANCE IS REQUIRED BETWEEN THE CENTER OF AN ANCHOR LINE AND ANY EXCAVATION AREA.
- A MINIMUM OF 3.5' HORIZONTAL CLEARANCE IS REQUIRED FROM POLES (ELECTRICAL GUY STUB POLES, SERVICE CLEARANCE POLES, SELF SUPPORTING STEEL POLES AND LIGHTING POLES) AND OPEN TRENCH INSTALLATION. EXCEPTIONS ARE FOR RISER CONDUIT.

- EXISTING SVP VAULTS AND CONDUIT ARE SHOWN PER CITY OF SANTA CLARA ELECTRICAL UNDERGROUND MAP DRAWING UG75. EXACT AS BUILT LOCATIONS TO BE FIELD VERIFIED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION.
- THE PROPERTY SHALL BE FENCED OFF DURING DEMOLITION AND CONSTRUCTION.
- TREES MUST MEET THE CLEARANCE REQUIREMENTS LISTED IN SVP STANDARDS OH 1230 FOR OVERHEAD LINES AND SD 1235 FOR TREE PLANTING REQUIREMENTS NEAR UG FACILITIES.
- CONTRACTOR TO CONDUCT CCTV SCAN OF EXISTING SANITARY SEWER LATERAL TO CONFIRM EXISTING LATERAL IS IN GOOD CONDITION FOR REUSE. LATERAL TO BE REPLACED IF DETERMINED TO NOT BE IN GOOD CONDITION.
- PLANS SHALL CONFORM TO THE FOLLOWING SVP STANDARDS:
  - INSTALLATION OF UNDERGROUND SUBSTRUCTURES BY DEVELOPERS
  - UG1250 - ENCROACHMENT PERMIT CLEARANCES FROM ELECTRIC FACILITIES
  - UG0339 - REMOTE SWITCH PAD
  - OH1230 - TREE CLEARANCES FROM OVERHEAD ELECTRIC LINES
  - SD1235 - TREE PLANTING REQUIREMENTS NEAR UNDERGROUND ELECTRIC FACILITIES
- CONTRACTOR TO VERIFY THE DISPOSITION OF ALL EXISTING LATERALS FOR REUSE. CONTRACTOR TO NOTIFY THE ENGINEER IF ANY LATERAL IS DEEMED TO BE IN POOR CONDITION. IN THIS CASE, CONTRACTOR TO ABANDON SERVICE TO THE MAIN PER SEWER AND WATER UTILITY STANDARDS.

**LEGEND**

---	PROPERTY LINE
FW	PROPOSED 8" PVC FIRE WATER PIPE
W	PROPOSED 4" WATER PIPE
SD	PROPOSED 12" STORM DRAIN PIPE
SS	PROPOSED 6" SANITARY SEWER PIPE
T	PROPOSED TELECOM/FIBER ROUTE (DESIGN BY OTHERS)
E	PROPOSED ELECTRICAL ROUTE (DESIGN BY OTHERS)
XX'W	EXISTING WATER PIPE
SD	EXISTING STORM DRAIN PIPE
SS	EXISTING SANITARY SEWER PIPE
XX'SS	EXISTING TELECOM/FIBER ROUTE
T	EXISTING ELECTRICAL ROUTE
FO	EXISTING FIBER OPTICS ROUTE
GAS	EXISTING GAS PIPE
---	EXISTING EASEMENT
⊙	FIRE HYDRANT
⊙	STORM DRAIN MANHOLE
⊙	SANITARY SEWER MANHOLE
⊙	STORM DRAIN OVERFLOW INLET
⊙	EXISTING TREE/TO BE REMOVED
⊙	EXISTING TREE/TO REMAIN PROTECT IN PLACE
⊙	PROPOSED TREE



**DIGITAL REALTY**  
Data Center Solutions  
**2825 LAFAYETTE STREET**  
SANTA CLARA, CA  
95050-2627  
MEP ENGINEER  
**ESD**  
Environmental Systems Design, Inc.  
233 South Wacker Drive, Suite 5300  
Chicago, Illinois 60606  
312.372.1200  
www.esdglobal.com  
DPR License No. 184-000892 IL

ARCHITECT  
**HKS**

STRUCTURAL ENGINEER  
**PEOPLES ASSOCIATES**  
STRUCTURAL ENGINEERS

CIVIL ENGINEER AND LANDSCAPE ARCHITECT  
**Kimley Horn**

CIVIL ENGINEER STAMP  
REGISTERED PROFESSIONAL ENGINEER  
WILES R. JOHNSON  
RCE NO. 84307  
CIVIL  
STATE OF CALIFORNIA

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSE ENGINEER, TO ALTER AN ITEM IN ANY WAY.

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

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

**LAFAYETTE ST. FRONTAGE PLAN**

PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	07/08/20
PROJECT ENGINEER	SHEET NUMBER
KN	C5.1
SCALE	AS SHOWN

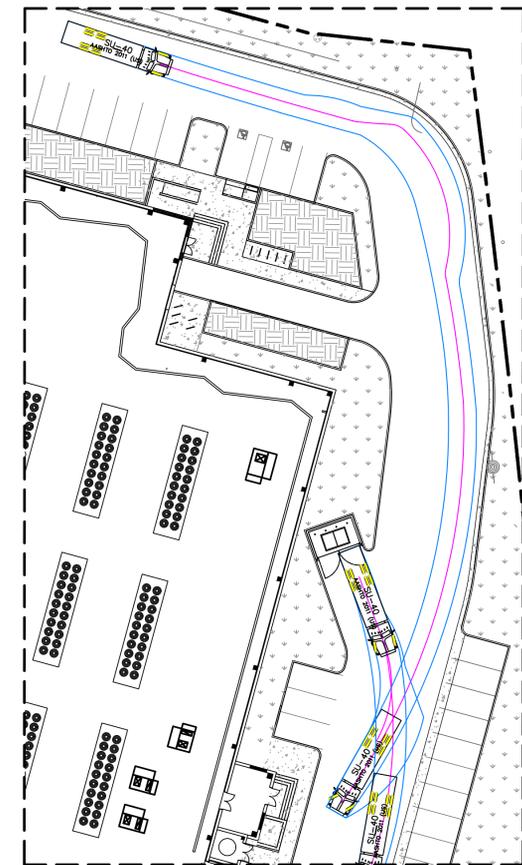
2	PCC ISSUANCE	06.19.20
1	PCC ISSUANCE	10.07.19
NO.	RECORD	DATE

**TRUCK TURN PLAN**

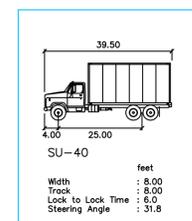
PRINCIPAL IN CHARGE	PROJECT NUMBER
JP	197250001
PROJECT MANAGER	DATE
MJ	07/08/20
PROJECT ENGINEER	SHEET NUMBER
KN	C6.0
SCALE	
AS SHOWN	

**LEGEND**

- PROPERTY LINE
- LANDSCAPE / PLANTER AREA
- BIORETENTION AREA
- ASPHALT CONCRETE PAVEMENT

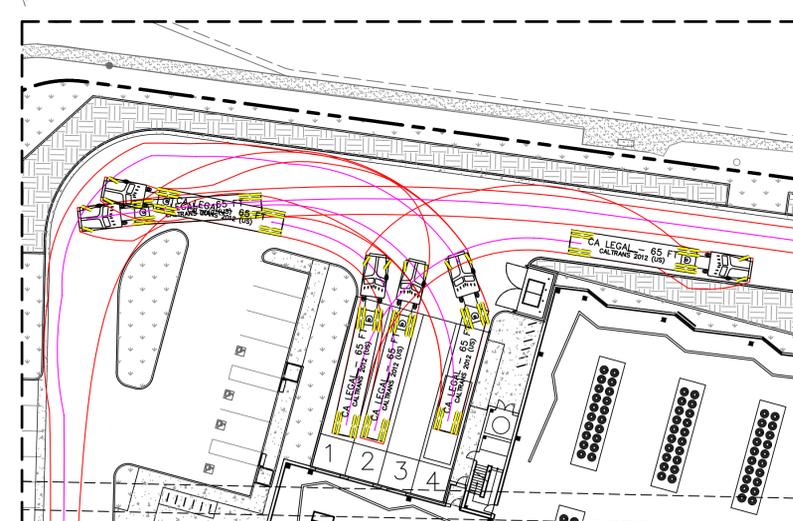
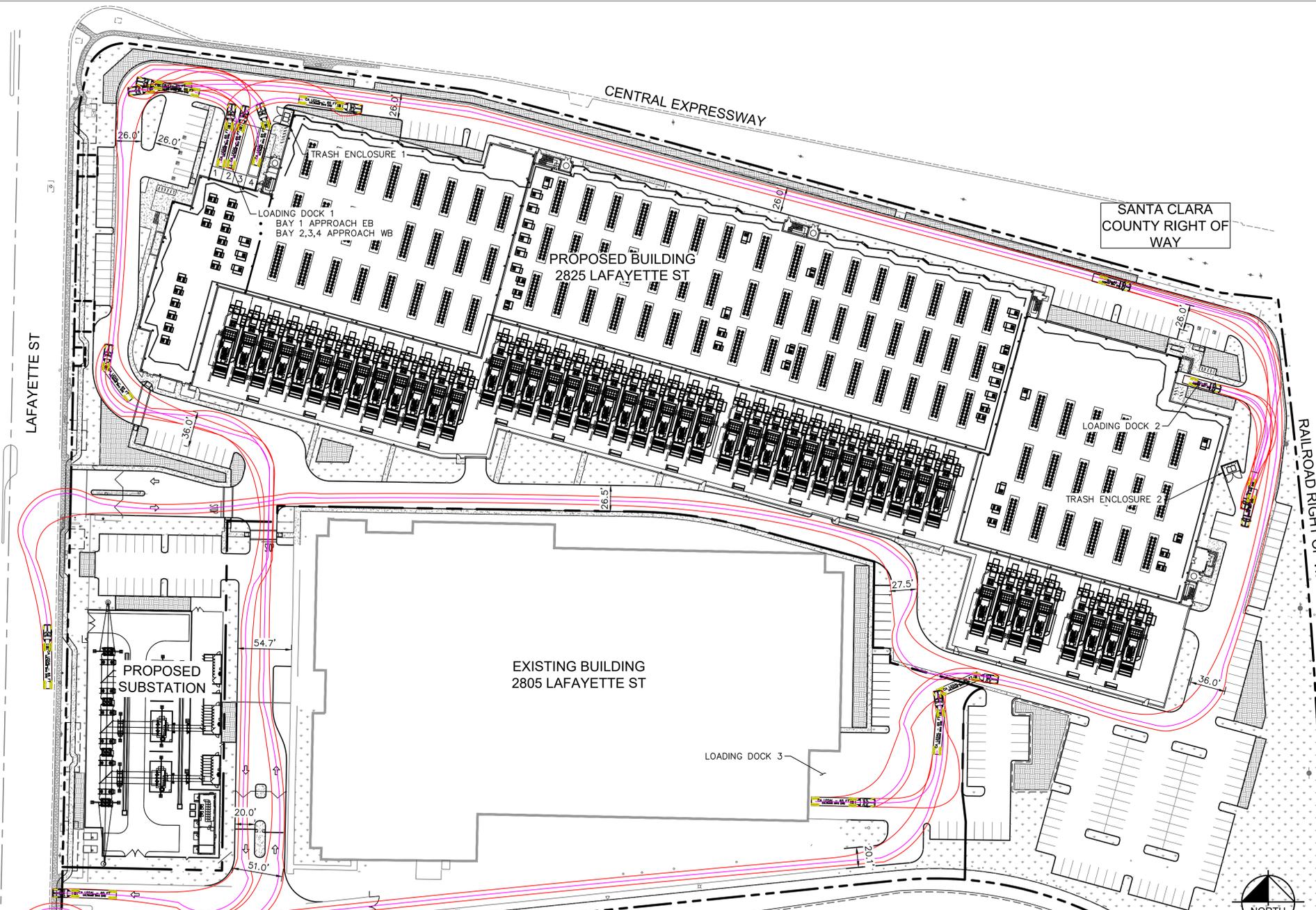
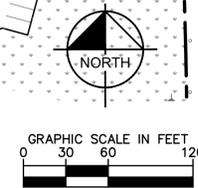


**DETAIL D: 40' GARBAGE TRUCK AT TRASH ENCLOSURE 2**  
SCALE: 1"=30'

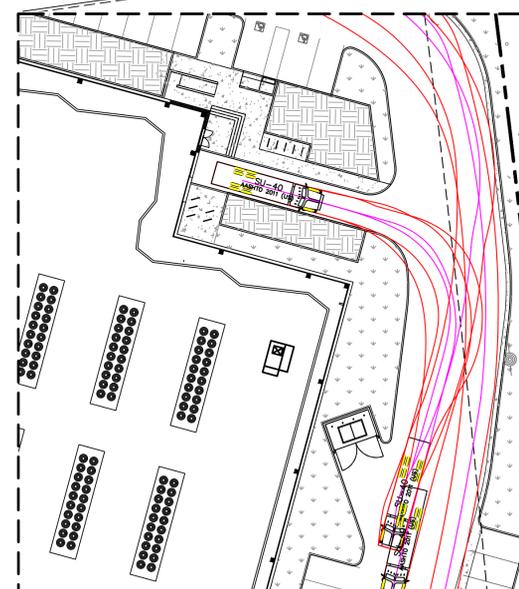


**SU-40 DETAIL**

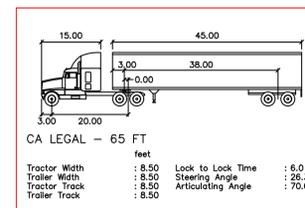
NOTE THAT SU-40 IS USED TO SIMULATE A GARBAGE TRUCK FOR THE PURPOSE OF THIS DRAWING.



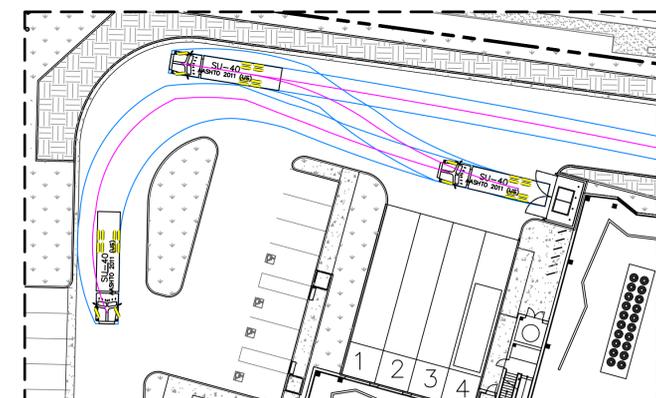
**DETAIL A: 65' TRUCK AT LOADING DOCK 1**  
SCALE: 1"=30'



**DETAIL B: 40' TRUCK AT LOADING DOCK 2**  
SCALE: 1"=30'



**CA LEGAL - 65 FT DETAIL**



**DETAIL C: 40' GARBAGE TRUCK AT TRASH ENCLOSURE 1**  
SCALE: 1"=30'