1200 MEMOREX

PCC PACKAGE

SCOPE OF WORK
THE PROJECT PROPOSES TO DEMOLISH THE EXISTING IMPROVEMENTS ON THE SITE TO CONSTRUCT A FOUR-STORY 472,920 SQUARE FOOT DATA CENTER BUILDING WITH AN ATTACHED SIX-STORY 87,520 SQUARE FOOT ANCILLARY USE OFFICE AND STORAGE COMPONENT, FOR A COMBINED SQUARE FOOTAGE OF 560,440.

SKYBOX DATA CENTERS
CORGAN
CRITICAL PROJECT SERVICES, LLC
R+G RUTH AND GOING, INC. Civil Engineering Land Surveying Planning
REED ASSOCIATES LANDSCAPE ARCHITECTURE 477 SOUTH MAFFE STREET SUNNYVALE, CALIFORNIA 94086
kW mission critical engineering

1200 Memorex - Santa Clara, CA

Development, Design, and Construction Anticipated Milestones

ACTIVITY	DATE
PCC Approval	4/09/2020
CEC CEQA Exemption	12/10/2020
Building Permit Issued	3/12/2021
Demolition Complete	5/24/2021
Grading Complete	6/21/2021
Building Shell Complete	6/13/2022
Interior Finish Out Complete	6/13/2022
Substantial Completion	9/1/2022

SHEET INDEX

SHEET NO.	SHEET NAME	PCC PACKAGE - 2019.06.05	POC PACKAGE V2 - 2019.11.13	POC PACKAGE V3 - 2020.03.01
00 - PCC				
A-110	SITE PLAN	■	■	■
A-121	LEVEL 1 FLOOR PLAN	■	■	■
A-122	LEVEL 2 FLOOR PLAN	■	■	■
A-123	LEVEL 3 FLOOR PLAN	■	■	■
A-124	LEVEL 4 FLOOR PLAN	■	■	■
A-125	OFFICE LEVEL - FLOOR PLANS	■	■	■
A-126	OFFICE LEVEL - FLOOR PLANS	■	■	■
A-130	ROOF PLAN	■	■	■
A-140	BUILDING SECTION	■	■	■
A-150	ELEVATIONS	■	■	■
A-151	ELEVATIONS	■	■	■
A-152	ELEVATIONS			■
A-210	SITE PLAN - MP	■	■	■
A-221	LEVEL 1 FLOOR PLAN - MP	■	■	■
A-222	LEVEL 2 FLOOR PLAN - MP	■	■	■
A-223	LEVEL 3 FLOOR PLAN - MP	■	■	■
A-224	LEVEL 4 FLOOR PLAN - MP	■	■	■
A-225	OFFICE LEVEL - FLOOR PLANS - MP	■	■	■
A-226	OFFICE LEVEL - FLOOR PLANS - MP	■	■	■
A-230	ROOFTOP EQUIPMENT PLAN - MP	■	■	■
A-240	BUILDING SECTION - MP	■	■	■
G-000	COVER SHEET	■	■	■
G-100	PROJECT INFORMATION	■	■	■
H-100	HISTORIC RESOURCE ELEMENTS			■
08-CIVIL-PCC				
C-100	EXISTING SITE CONDITIONS	■	■	■
C-110	EXISTING UTILITY CONDITIONS	■	■	■
C-200	SITE ACCESS AND CIRCULATION PLAN	■	■	■
C-210	FIRE ACCESS AND APPARATUS DIAGRAM		■	■
C-211	ADJACENT PARCEL EXISTING FIRE SERVICE PLAN		■	■
C-300	PRELIMINARY GRADING AND DRAINAGE PLAN	■	■	■
C-400	PRELIMINARY SITE UTILITY PLAN	■	■	■
C-500	PRELIMINARY STORMWATER CONTROL PLAN	■	■	■
C-510	STORMWATER CONTROL DETAILS	■	■	■
C-520	PRELIMINARY STORMWATER CALCULATIONS	■	■	■
C-521	PRELIMINARY STORMWATER CALCULATIONS	■	■	■
06-LANDSCAPE-PCC				
L-1.0	LANDSCAPE PLANTING PLAN	■		
L-1.1	LANDSCAPE PLANTING PLAN	■		
L-2.0	LANDSCAPE HYDROZONE PLAN	■		
L-2.1	LANDSCAPE HYDROZONE PLAN	■		
L-100	LANDSCAPE PLANTING PLAN		■	■
L-101	LANDSCAPE PLANTING PLAN		■	■
L-102	EXISTING TREE PLAN		■	■
L-103	LANDSCAPE HYDROZONE PLAN		■	■
L-104	LANDSCAPE HYDROZONE PLAN		■	■
L-105	PRELIMINARY IRRIGATION PLAN			■
L-106	PRELIMINARY IRRIGATION PLAN			■
10 - ELECTRICAL-PCC				
E-100	LEGEND AND ABBREVIATIONS		■	■
E-101	MV ONE-LINE	■	■	■
E-102	ELECTRICAL SITE ROUTING PLAN	■	■	■
E-103	ELECTRICAL SITE DETAILS		■	■
E-104	ELECTRICAL SITE LIGHTING PLAN		■	■
E-105	SITE LIGHTING PHOTOMETRICS		■	■
E-106	LUMINAIRE SCHEDULE		■	■

PROJECT DATA AND CODE INFORMATION

PROJECT DATA	
PROJECT NAME:	1200 MEMOREX
PROJECT ADDRESS:	1200 Memorex Dr. Santa Clara, CA 95050
OWNER:	1200 Partners, LLC

APPLICABLE CODES	NOTE: INCLUDED IN SPECIFICATION SECTION 014100 REGULATORY REQUIREMENTS
BUILDING CODE:	2016 California Building Code
ACCESSIBILITY CODE:	2016 California Building Code - Chapter 11B
ELECTRICAL CODE:	2016 California Electrical Code
ENERGY CODE:	2016 California Energy Code & 2016 California Green Building Standards
FIRE CODE:	2016 California Fire Code
MECHANICAL CODE:	2016 California Mechanical Code
PLUMBING CODE:	2016 California Plumbing Code
REGIONAL OR MUNICIPAL CODE:	City of Santa Clara Zoning and Local Amendments

LIFE SAFETY INFORMATION		REFERENCE
		2016 CBC
USE OR OCCUPANCY CLASSIFICATION		
OCCUPANCY:	(S2) STORAGE	
TYPE OF CONSTRUCTION		
CONSTRUCTION TYPE:	II-A	
FIRE PROTECTION REQUIREMENTS		
BEARING WALLS: INT./EXT.:	1	
NONBEARING WALLS: INT./EXT.:	0 AND 1 @ WEST EXT. WALL	
ROOF / CEILING:	0 AND 1 @ <20 FEET FROM FLOOR	
FLOOR/ CEILING:	1	
STRUCTURAL FRAME / COLUMNS:	1	
RATED SEPARATIONS:	1 BUILDING SEPARATION @ 2 HR.	

DESIGN LIMITATIONS	MAX. ALLOWED	MAX. PROVIDED	2 HR. SEPARATION PLAN
HEIGHT:	85' - 0"	83' - 6"	
AREA:	1. 121700 SF	1. 119230 SF	
	2. 117000 SF	2. 14585 SF	
# OF FLOORS:	1. 6	1. 4	
	2. 6	2. 6	

MEANS OF EGRESS	MAX. ALLOWED	MAX. PROVIDED
TRAVEL DISTANCE TO EXIT:		
TOTAL OCCUPANT LOAD:		

EGRESS WIDTH PER OCCUPANT	MIN. ALLOWED	PROVIDED
0.2" STAIRS:	0" - 0"	0" - 0"
0.15" DOORS:	0" - 0"	0" - 0"

PLUMBING FIXTURE REQUIREMENTS	FEMALE		MALE		SINGLE USER	
FIXTURE	# REQUIRED	# PROVIDED	# REQUIRED	# PROVIDED	# REQUIRED	# PROVIDED
WATER CLOSETS	#	#	#	#	#	#
URINALS			#	#	#	#
LAVATORIES	#	#	#	#	#	#
SHOWERS	#	#	#	#	#	#
	SERVICE					
	# REQUIRED	# PROVIDED				
SERVICE SINKS	#	#				
DRINKING FOUNTAINS	#	#				

PROJECT NARRATIVE

1200 Memorex

1.1.1 Existing Development
The 9.18-acre project site is located at 1200 Memorex Drive. The site is zoned ML-Light Industrial and has a General Plan designation of Light Industrial. The site is currently developed with three buildings: a three-story approximately 300,000 square foot building, a two-story approximately 46,000 square foot building, and a one-story approximately 2,950 square foot building. Roughly 100,000 square feet of active outdoor uses are located on the eastern portion of the site. Existing uses on the site are light industrial in nature and include operations such as aluminum plating, metal cleaning/polishing, a machine shop, construction contractors, a brewery, material storage, vehicle storage, and hauling. The vehicle storage and hauling operations are primarily located in the outdoor areas on the site.

1.1.2 Proposed Development
The project proposes to demolish the existing improvements on the site to construct a four-story 472,920 square foot data center building with an attached six-story 87,520 square foot ancillary use office and storage component, for a combined square footage of 560,440. The structure would have a height of 87 feet to the top of building parapet. The data center portion of the building would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 60 megawatts (MW) of information technology (IT) power. The ancillary use portion of the building would be used for office (roughly 51,000 square feet) and storage uses.

Three-quarters of the data center portion of the building would consist of production data hall space, which requires backup power generation, while the other quarter would consist of development data hall space, which does not require backup power generation. Standby backup emergency electrical generators would be installed to provide an uninterrupted power supply to the production data hall space. A total of 24 three-MW diesel-fueled engine generators would be located on the south side of the building, providing 48 MW of backup power generation capacity. Of the 24 proposed generators (16 critical & 8 redundant), 21 units would be located within a ground-level generator yard and three units would be located on the roof of the adjacent loading dock. Mechanical cooling equipment would be located on the roof with metal panel perimeter screening above the building parapet.

The project would also construct a 150 megavolt amps (MVA) electrical substation on the eastern portion of the site. The substation would have three 50 MVA transformers, one of which would be redundant and would only become active if one of the other transformers fails. The substation capacity would be a nominal 100 MVA. The substation would have an all-weather asphalt surface underlain by an aggregate base.

1.1.2.1 *Site Access and Parking*
The site currently has four driveways on Memorex Drive and three driveways on Ronald Street/Di Giulio Avenue, all of which would be removed by the project. Access to the site would be provided by two new driveways on Memorex Drive and one new driveway on Di Giulio Avenue. The project would result in a net decrease in driveways accessing the site, reducing curb cuts and eliminating hazards associated with site distances from current driveways located near intersections and roadway bends.

Based on input from City staff, the project would be classified as a Storage use, which requires one parking space per 5,000 square feet of gross floor area. The office component (Business use), of the project would occupy less than 10 percent of the gross floor area and would be considered an ancillary use to the primary Storage use. As a result, the parking requirements for the Storage use would apply to the entire project. With a gross square footage of 560,440, and a required parking ratio of one space per 5,000 square feet, the project would be required to provide 112 spaces. The project proposes to provide 113 parking spaces in surface parking lots located on the eastern portion of the site. Five parking spaces would be ADA accessible, and 11 parking spaces would be dedicated for clean air vehicles. Electric vehicle charging stations would be located adjacent to the clean air vehicle spaces.

1.1.2.2 *Building Height and Floor Area Ratio Variances*
The project would construct a building with a maximum height of 87 feet to the top of parapet, which would exceed the maximum height of 70 feet allowed under the ML – Light Industrial zoning designation. Additionally, the project would have a floor area ratio (FAR) of 1.40, which would exceed the maximum FAR of 0.6 allowed under the Light Industrial General Plan designation.

The project is requesting variances to allow building heights and FAR above those allowed in the Zoning Ordinance and General Plan. The building height and FAR variances would allow the project to maximize the efficiency of the proposed data center. By consolidating the data center equipment in a single large structure instead of multiple smaller structures, energy efficiency is increased and fewer resources are required for building operation and maintenance. Further, due to the low employment requirement of data centers, the proposed project would result in a decrease in vehicle trips and vehicle miles travelled associated with the site, even with the proposed increases in allowed height and FAR (see discussion below).

1.1.2.3 *Vehicle Trips and Vehicle Miles Travelled*
Data centers result in fewer vehicle trips than typical light industrial uses because the building is primarily occupied by IT equipment and associated mechanical infrastructure. Few employees are required to operate the data center. While the project includes an office component, the office use is ancillary to the data center use and makes up less than 10 percent of the overall building square footage.

A preliminary assessment was completed to determine the net vehicle trip generation resulting from the project. Trip generation rates for existing uses on the site were based on the Institute of Transportation Engineers' (ITE) Trip Generation Manual, Tenth Edition's trip generation rates for general light industrial land uses (land use code 110). Trip generation rates for the proposed project were based on ITE rates for data centers (land use code 160) and general office buildings (land use code 710). The trip rates for existing uses were applied to 346,950 square feet of light industrial building area and roughly 100,000 square feet of active outdoor light industrial uses, resulting in an estimated total of 2,227 existing daily trips. For the proposed uses, the general office building trip rate was applied to the 51,000 square feet of office area, and the data center trip rate was applied to the remaining 509,440 square feet of the project, resulting in an estimated total of 1,001 daily project trips. Based on ITE trip rates, the project would result in a net reduction of 1,226 daily vehicle trips associated with the site. A reduction in daily vehicle trips would also result in a reduction in vehicle miles travelled (VMT). By reducing vehicle trips and VMT associated with the site, the project would result in a net reduction in air pollutants and greenhouse gas emissions associated with vehicle trips, and would reduce traffic congestion in the surrounding area. It should be noted that this assessment is preliminary and will be refined as part of the environmental review completed for the project.

1.1.2.4 *Hazardous Materials Remediation*
Known contamination is present in the soils and groundwater on the site. The contamination is associated with historic uses by the Memorex Corporation, which manufactured magnetic tape on the site through approximately 1993. The site is subject to Regional Water Quality Control Board (RWQCB) oversight and cleanup requirements related to this contamination. Since 1993, uses on the site have included the use and storage of hazardous materials, and it is possible that additional contamination is present on the site in areas that have not been previously investigated. The project would complete soil, soil vapor, and groundwater quality investigations to determine the extent of contamination on the site. It is anticipated that the project would prepare a Site Management Plan (SMP) and a Health and Safety Plan (HSP) to establish appropriate protocols for handling and monitoring contaminated soil, soil vapor, and groundwater, and to determine what remediation measures are necessary. As a result, the project would facilitate the remediation of contamination on the site. Additionally, current uses on the site such as aluminum plating and metal cleaning/polishing likely involve the use and storage of hazardous materials. The proposed data center project would not involve the use or storage of hazardous materials, representing an improvement over existing condition. Further, by developing a data center on the site, the project would eliminate the potential for additional hazardous materials releases to occur from other light industrial uses that may otherwise occupy the site in the future.

1.1.2.5 *Power Usage Effectiveness, Energy Efficiency, and Water Conservation*
Power Usage Effectiveness (PUE) is a metric used to compare the operating efficiency of data center facilities. PUE is defined as the ratio of total power use of a facility to the power used strictly by the information technology (IT) equipment (e.g. PUE=Total Facility Power/IT Equipment Power). For example, with a PUE of 2.0 a data center would use two watts of total power for every one watt of power used by the IT equipment. The annualized PUE for the proposed data center would be less than 1.29, which is on the low/efficient end of the scale for data centers in the area.

The project includes a variety of measures to minimize total power usage of the data center. Due to substantial cooling requirements, the primary method for achieving energy efficiency in data centers is through the cooling system. The proposed data center would maximize efficiency by utilizing direct outside air economization, economized chillers, or DSE cooling units, reducing energy consumption and eliminating the requirement for large quantities of water utilized for cooling purposes by other data centers in the area.

1.1.2.6 *Landscaping and Stormwater Control*
Currently, landscaping on the site is sparse. Mature trees are located on the site's frontage with Memorex Drive, and additional trees and shrubbery are located along portions of the site's perimeter. Although the project would remove some of the existing trees and landscaping on the site, the project would plant replacement trees that would meet or exceed required replacement ratios, resulting in an increase in trees and landscaping on the site.

The project would result in a decrease in the amount of impervious area on the site. Storm drainage runoff from the site's impervious surfaces would be directed to treatment systems before being collected in a series of pipes sized for a 10-year storm event in accordance with the City's design requirements. These pipes would ultimately leave the site, connecting to the existing City storm drainage pipes in Memorex Drive and/or Di Giulio Avenue. No new off-site storm drain facilities are anticipated to serve the project. Since redevelopment of the site would not increase the storm drain runoff compared to existing conditions, the project would have no adverse impact on the existing City storm drainage system downstream of the site.

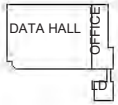
The goal of project is to ensure that the final design incorporates an efficient program of best management practices (BMP's) as appropriate to the site conditions and urban runoff pollution prevention requirements. To this end, development of the property shall comply with the requirements of the California Regional Water Quality Control Board, San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP). The project would implement site design measures, source control measures and treatment systems into the site design in accordance with Provision C.3 of the MRP. The project would also employ treatment control measures (TCMs) as appropriate based upon site specific design to achieve stormwater requirements for urban runoff pollution.

Project Number: 19110.0000

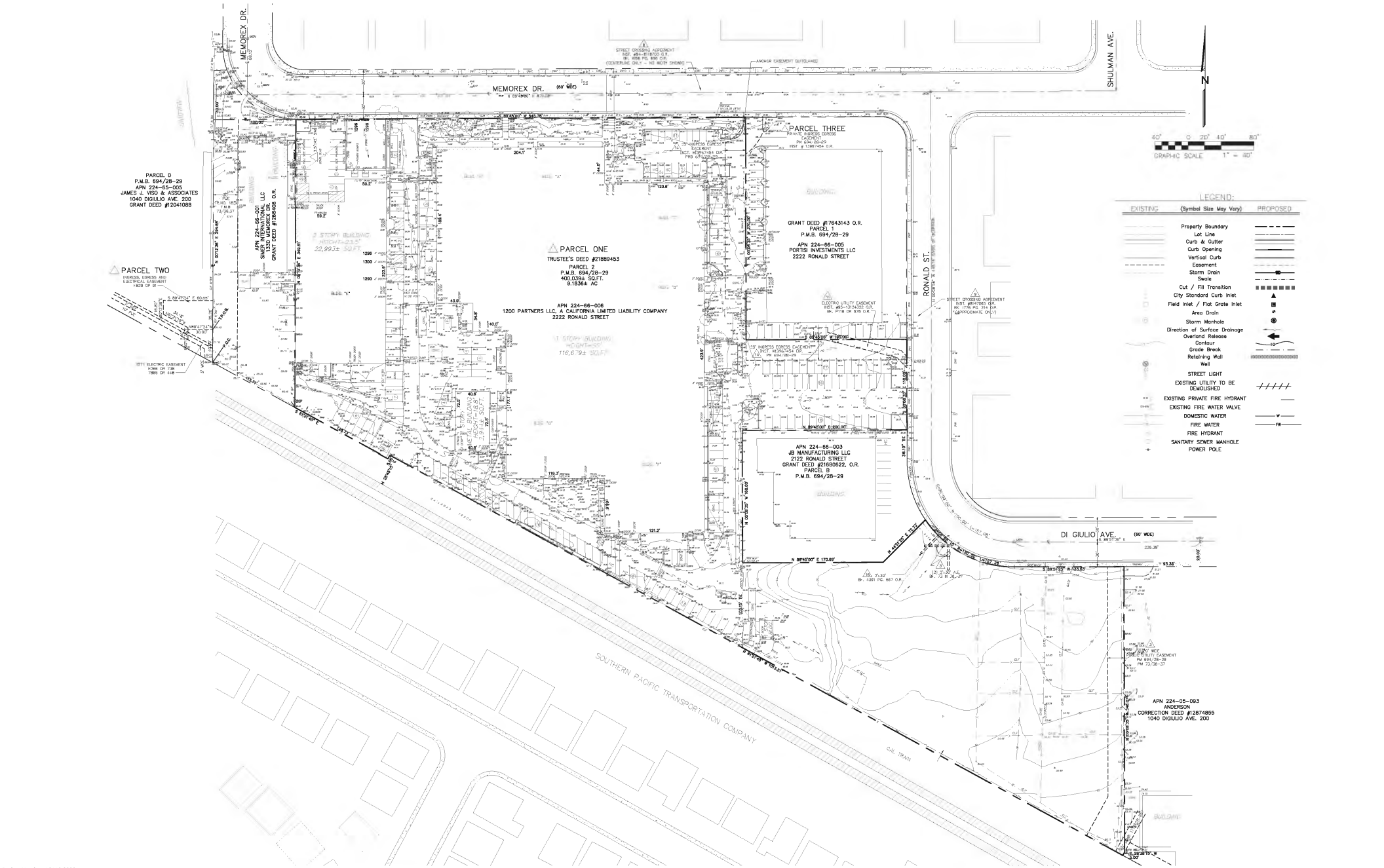
SKYBOX CORGAN RG CRITICAL kW

PROJECT INFORMATION

04.09.2020



G-100



Project Number: 19110.0000

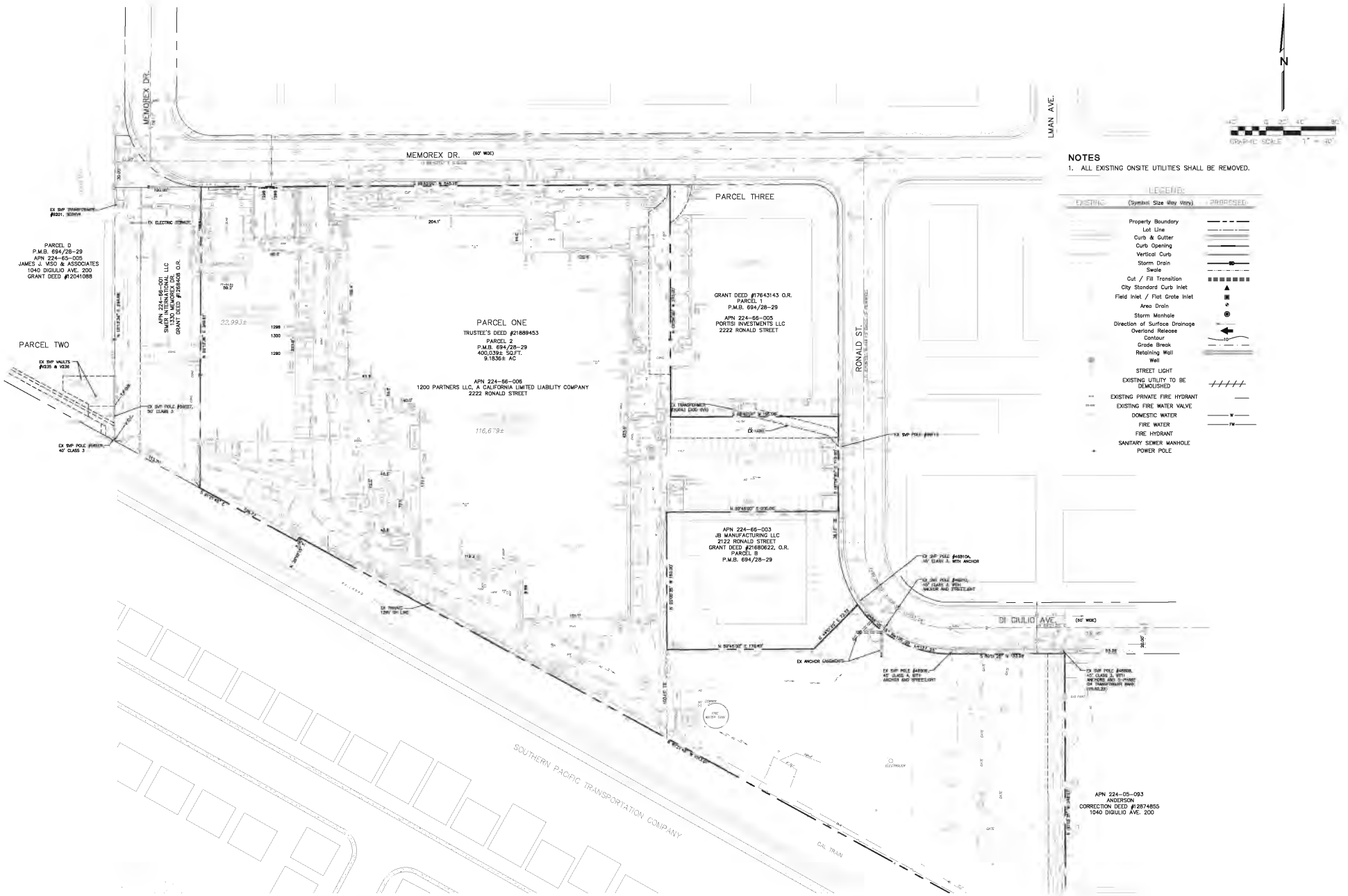
SKYBOX | CORGAN | RUTH AND GOINS, INC. | CRITICAL | kw mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

EXISTING SITE CONDITIONS

04.09.2020

DATA HALL | OFFICE | LD

C100



NOTES

1. ALL EXISTING ONSITE UTILITIES SHALL BE REMOVED.

LEGEND:

EXISTING	(Symbol Size May Vary)	PROPOSED
	Property Boundary	
	Lot Line	
	Curb & Gutter	
	Curb Opening	
	Vertical Curb	
	Storm Drain	SD
	Swale	
	Cut / Fill Transition	
	City Standard Curb Inlet	
	Field Inlet / Flat Grate Inlet	
	Area Drain	
	Storm Manhole	
	Direction of Surface Drainage	
	Overland Release	
	Contour	10
	Grade Break	
	Retaining Wall	
	Wall	
	STREET LIGHT	
	EXISTING UTILITY TO BE DEMOLISHED	
	EXISTING PRIVATE FIRE HYDRANT	
	EXISTING FIRE WATER VALVE	
	DOMESTIC WATER	W
	FIRE WATER	FW
	FIRE HYDRANT	
	SANITARY SEWER MANHOLE	
	POWER POLE	

Project Number: 19110.0000

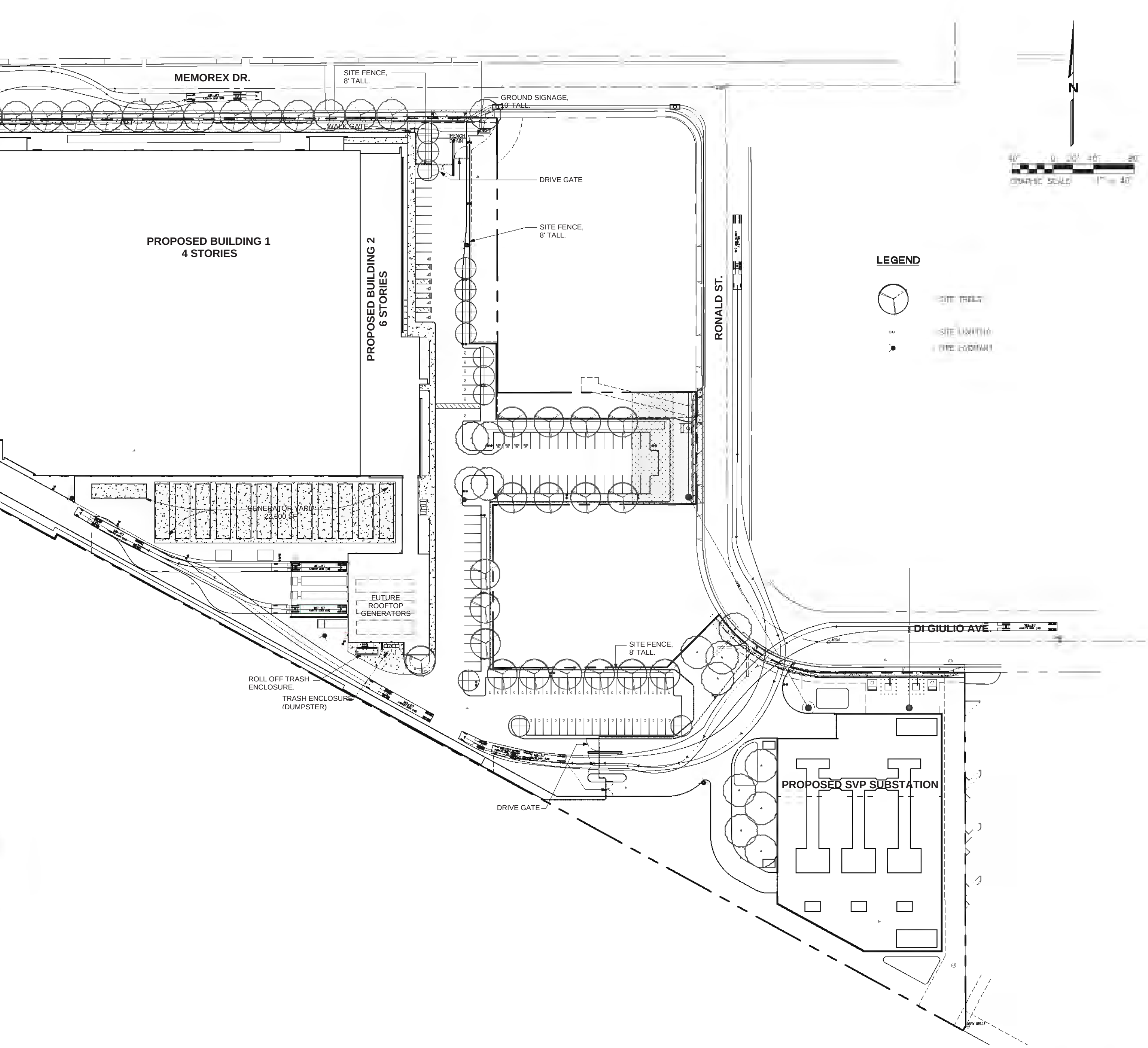
SKYBOX | CORGAN | R·G RUTH AND GOBKO, INC. | CRITICAL PROJECT SERVICES, LLC | kw mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

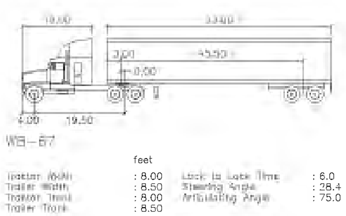
EXISTING UTILITY CONDITIONS

04.09.2020

DATA HALL | OFFICE | LD

C110





Project Number: 19110.0000

SKYBOX
CORGAN
RUTH AND GOING, INC.
CRITICAL PROJECT SERVICES, LLC
kW mission critical engineering
REED ASSOCIATES LANDSCAPE ARCHITECTURE

SITE ACCESS AND CIRCULATION PLAN

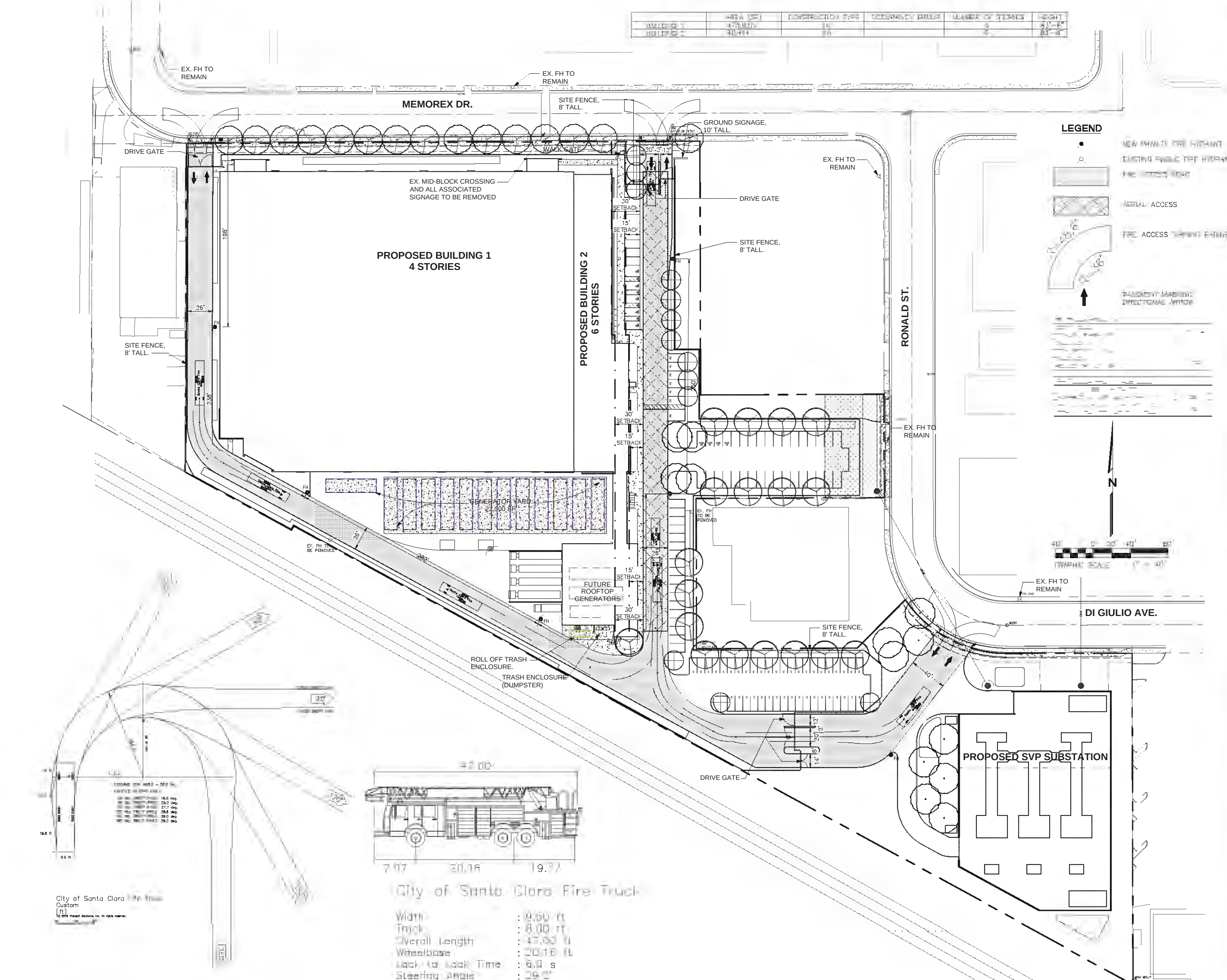
04.09.2020

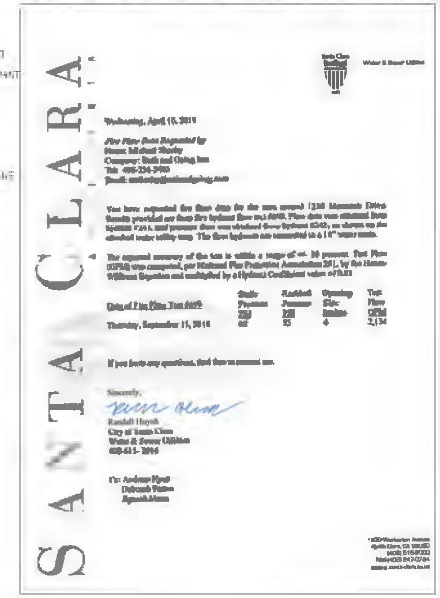
DATA HALL
OFFICE
LD

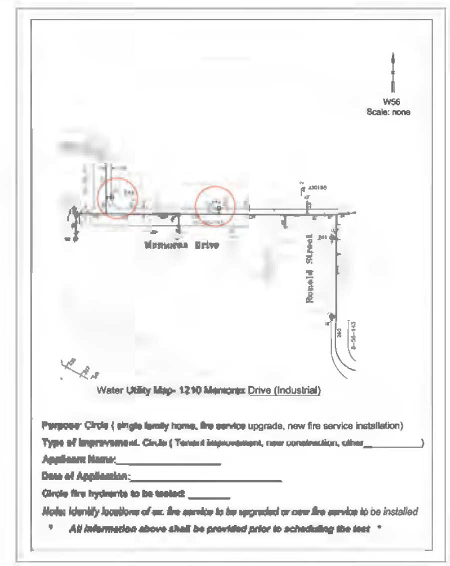
C200

NOTES

1. SECURITY GATES SHALL BE EQUIPPED WITH OPTICOM SWITCH OR APPROVED ALTERNATIVE FOR FIRE DEPARTMENT ACCESS.
2. SCFD DEFICIENCY: ALL PORTIONS OF THE BUILDING (SOUTH WALL NEAR THE GENERATORS) ARE NOT WITHIN 150 FEET FROM AN APPROVED FIRE DEPARTMENT ACCESS ROAD. THE DIMENSION OF 150 FEET IN RELATION TO FIRE DEPARTMENT ACCESS IS COMMONLY REFERRED TO AS HOSE PULL DISTANCE. HOSE PULL IS MEASURED ALONG THE PATH THAT SIMULATES THE ROUTE A FIRE FIGHTER MAY TAKE TO ACCESS ALL PORTIONS OF THE EXTERIOR OF A STRUCTURE FROM THE NEAREST FIRE ROAD.
3. AMMR: PROJECT DESIGN TEAM WILL SUBMIT AN AMM TO SCFD PROPOSING TO INCREASE BLDG FIRE SPRINKLER DENSITY TO SATISFY DEFICIENCY DURING PERMIT DOCS.







Project Number: 19110.0000

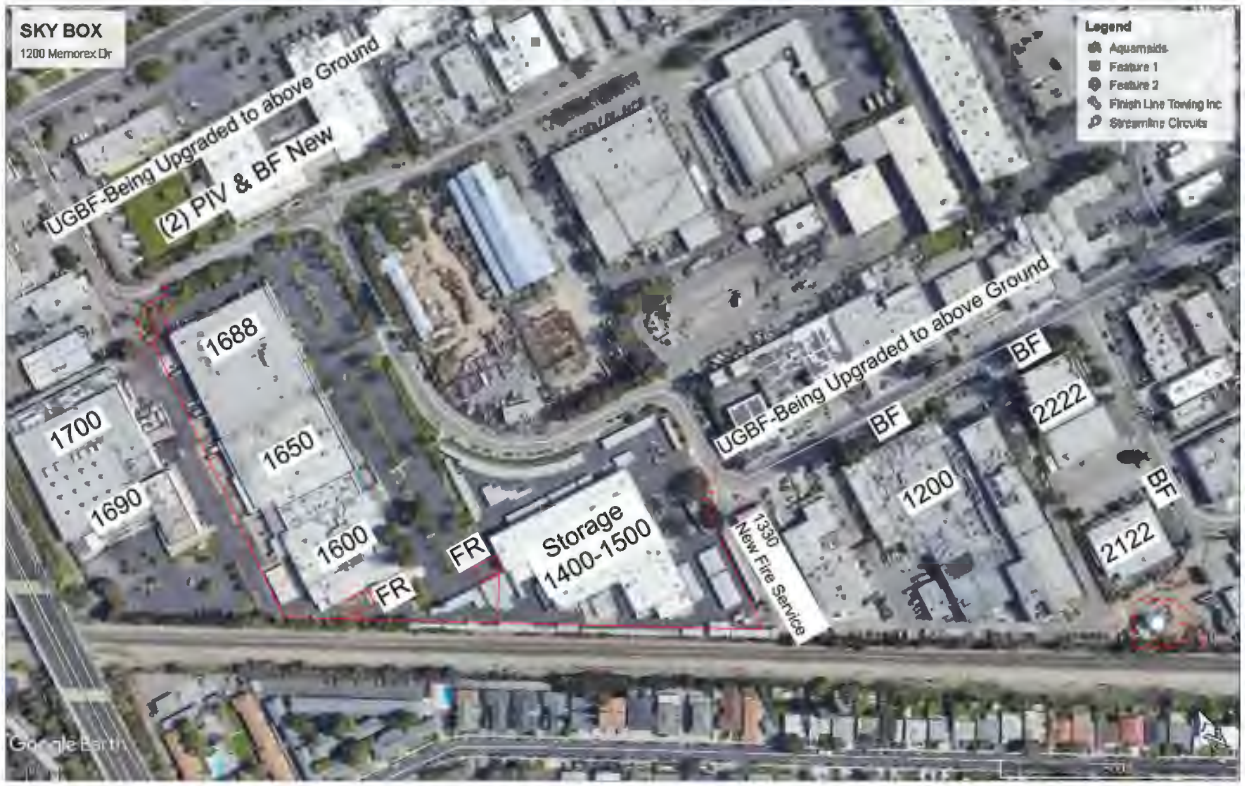
SKYBOX | CORGAN | R+G | CRITICAL | kW mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

FIRE ACCESS AND APPARATUS DIAGRAM

04.09.2020

DATA HALL | OFFICE | LD

C210



ABBREVIATIONS

1700	ADDRESS NUMBER
BF	DSC BACKFLOW
FR	FIRE RAISER
PIV	POST INDICATOR VALVE
UGBF	UNDERGROUND BACKFLOW

ADJACENT FIRE PERMITS

PERMIT #	ADDRESS
18-1101	1688 & 1700 RICHARD AVE
18-1084	1600, 1650 & 1660 RICHARD AVE

Project Number: 19110.0000

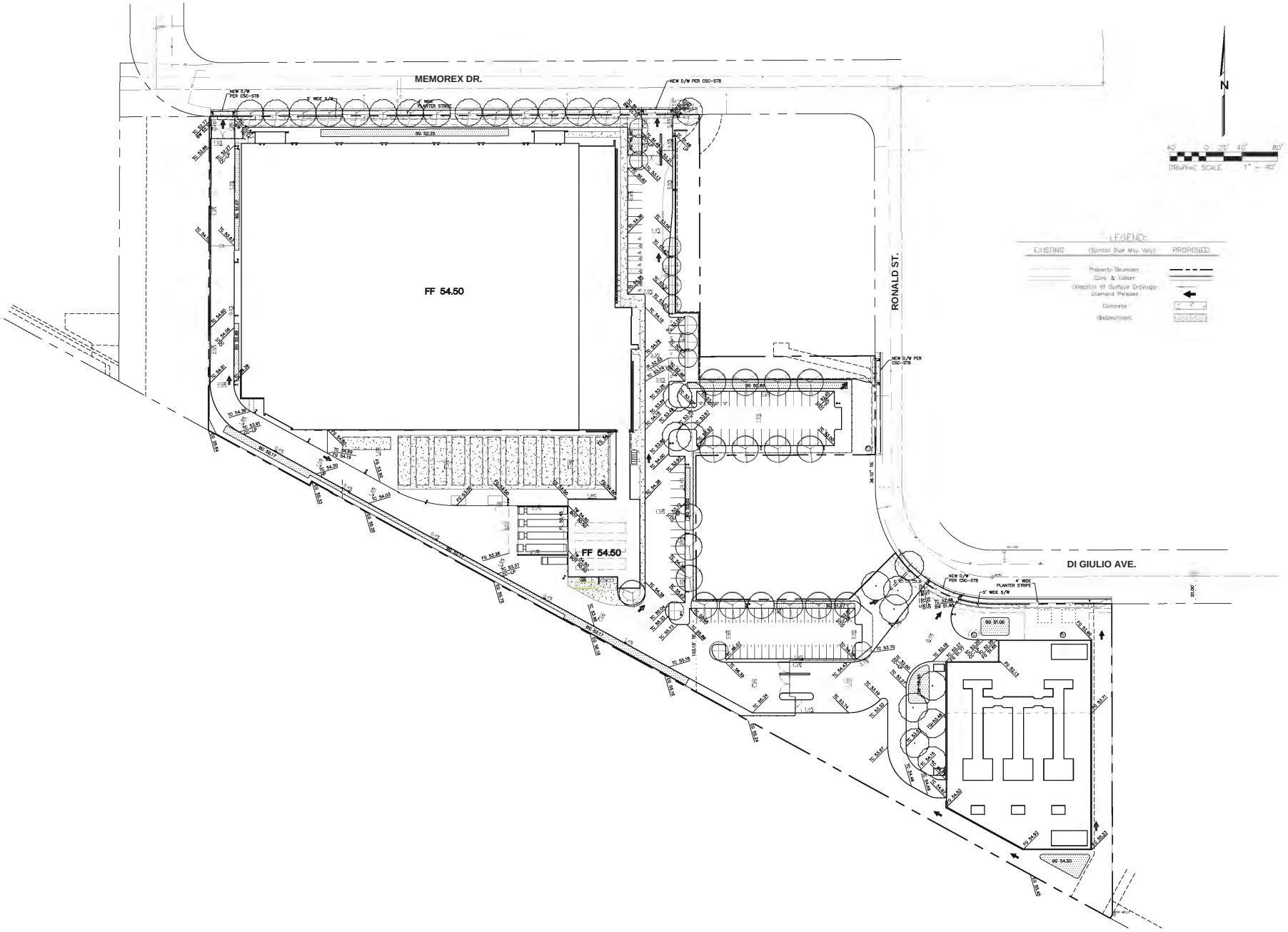
SKYBOX CORGAN R-G RUTH AND GOINS, INC. CRITICAL kW mission critical engineering REED ASSOCIATES LANDSCAPE ARCHITECTURE

ADJACENT PARCEL
EXISTING FIRE SERVICE PLAN

04.09.2020

DATA HALL OFFICE LD

C211



Project Number: 19110.0000

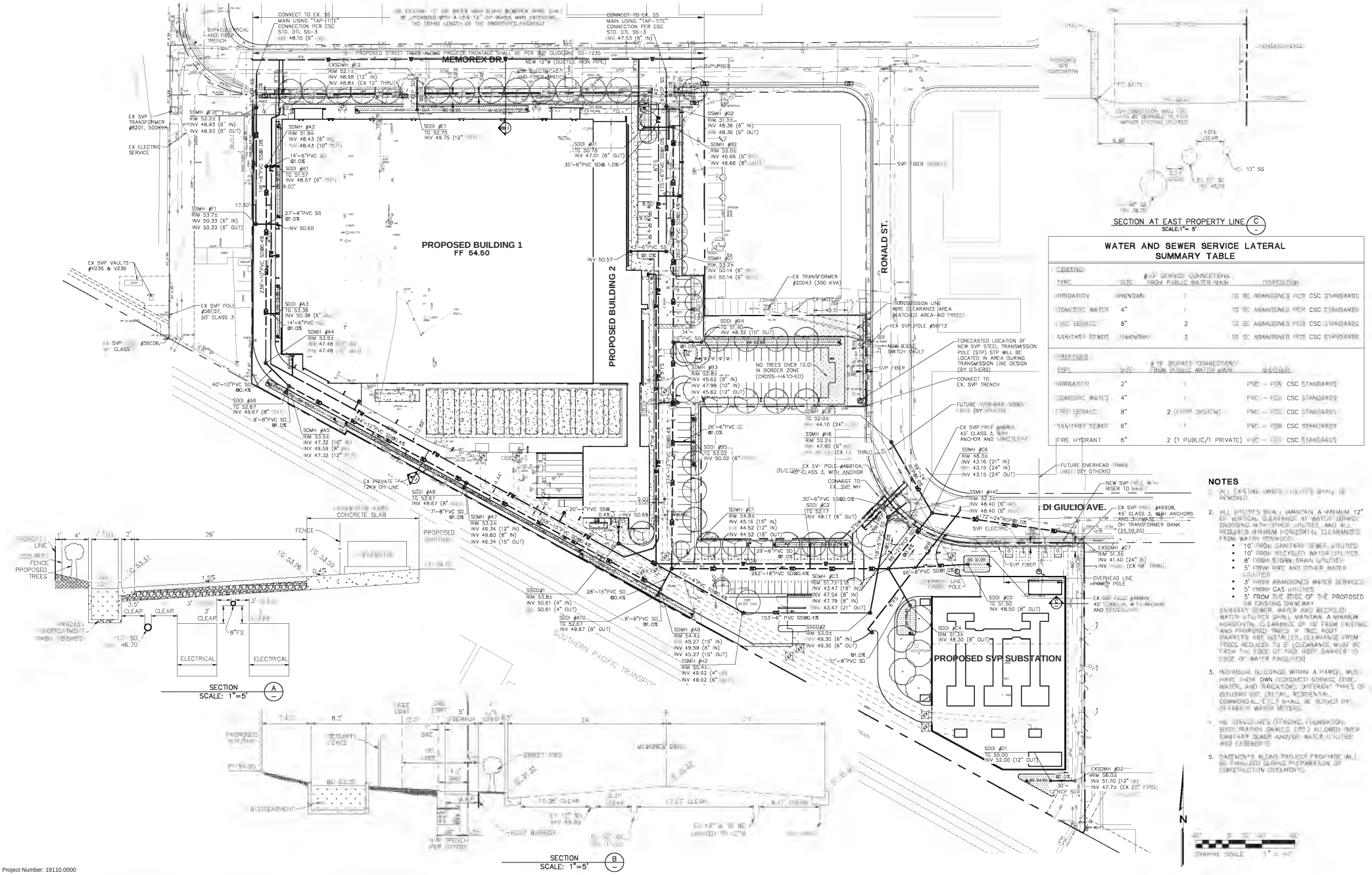
SKYBOX | CORGAN | RUTH AND GOINAL, INC. | CRITICAL | kW mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

PRELIMINARY GRADING AND DRAINAGE PLAN

04.09.2020

DATA HALL | OFFICE | LD

C300



WATER AND SEWER SERVICE LATERAL SUMMARY TABLE

EXISTING

TYPE	SIZE	# OF SERVICE CONNECTIONS FROM PUBLIC WATER MAIN	DISPOSITION
IRRIGATION	UNKNOWN	1	TO BE ABANDONED PER CSC STANDARDS
DOMESTIC WATER	4"	1	TO BE ABANDONED PER CSC STANDARDS
FIRE SERVICE	8"	2	TO BE ABANDONED PER CSC STANDARDS
SANITARY SEWER	UNKNOWN	1	TO BE ABANDONED PER CSC STANDARDS

PROPOSED

TYPE	SIZE	# OF PRIVATE CONNECTIONS FROM PUBLIC WATER MAIN	MATERIAL
IRRIGATION	2"	1	PVC – PER CSC STANDARDS
DOMESTIC WATER	4"	1	PVC – PER CSC STANDARDS
FIRE SERVICE	8"	2 (1 PER DIVISION)	PVC – PER CSC STANDARDS
SANITARY SEWER	6"	1	PVC – PER CSC STANDARDS
FIRE HYDRANT	6"	2 (1 PUBLIC/1 PRIVATE)	PVC – PER CSC STANDARDS

NOTES

1. ALL EXISTING UNDERGROUND UTILITIES SHALL BE REMOVED.
2. ALL UTILITIES SHALL MAINTAIN A MINIMUM 12" OF VERTICAL CLEARANCE AT WATER SERVICE CROSSINGS WITH OTHER UTILITIES, AND ALL REQUIRED MINIMUM HORIZONTAL CLEARANCES FROM WATER STRUCTURES:
   - 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 OR EXISTING DRIVEWAY

   SANITARY SEWER, WATER AND RECYCLED WATER UTILITIES SHALL MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 10' FROM EXISTING AND PROPOSED TREES. IF ROOT BARRIERS ARE INSTALLED, CLEARANCE FROM TREES REDUCES TO 5' (CLEARANCE MUST BE FROM THE EDGE OF TREE ROOT BARRIER TO EDGE OF WATER FACILITY).
3. INDIVIDUAL BUILDINGS WITHIN A PARCEL MUST HAVE THEIR OWN METERED SERVICE (FIRE, WATER, AND RECLAIM). DIFFERENT TYPES OF BUILDING USE (RETAIL, RESIDENTIAL, COMMERCIAL, ETC.) SHALL BE SERVED BY SEPARATE WATER METERS.
4. NO STRUCTURES (FENCING, FOUNDATION, BIOSWALES, ETC.) ALLOWED OVER SANITARY SEWER AND/OR WATER UTILITIES AND EASEMENTS.
5. EASEMENTS ALONG PROJECT FRONTAGE WILL BE FINALIZED DURING PREPARATION OF CONSTRUCTION DOCUMENTS.

Project Number: 19110.0000

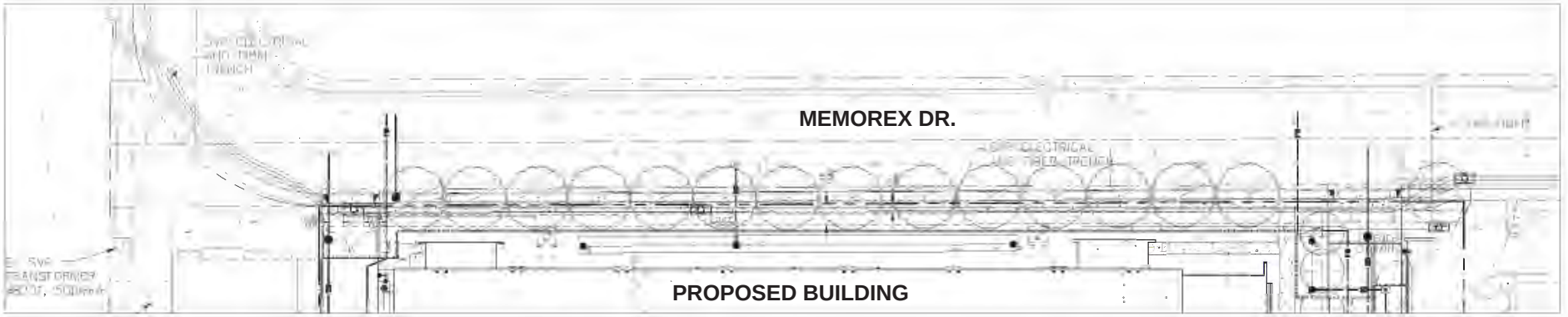
SKYBOX | CORGAN | R+G RUTH AND GOENKE, INC | CRITICAL PROJECT SERVICES, LLC | kw mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

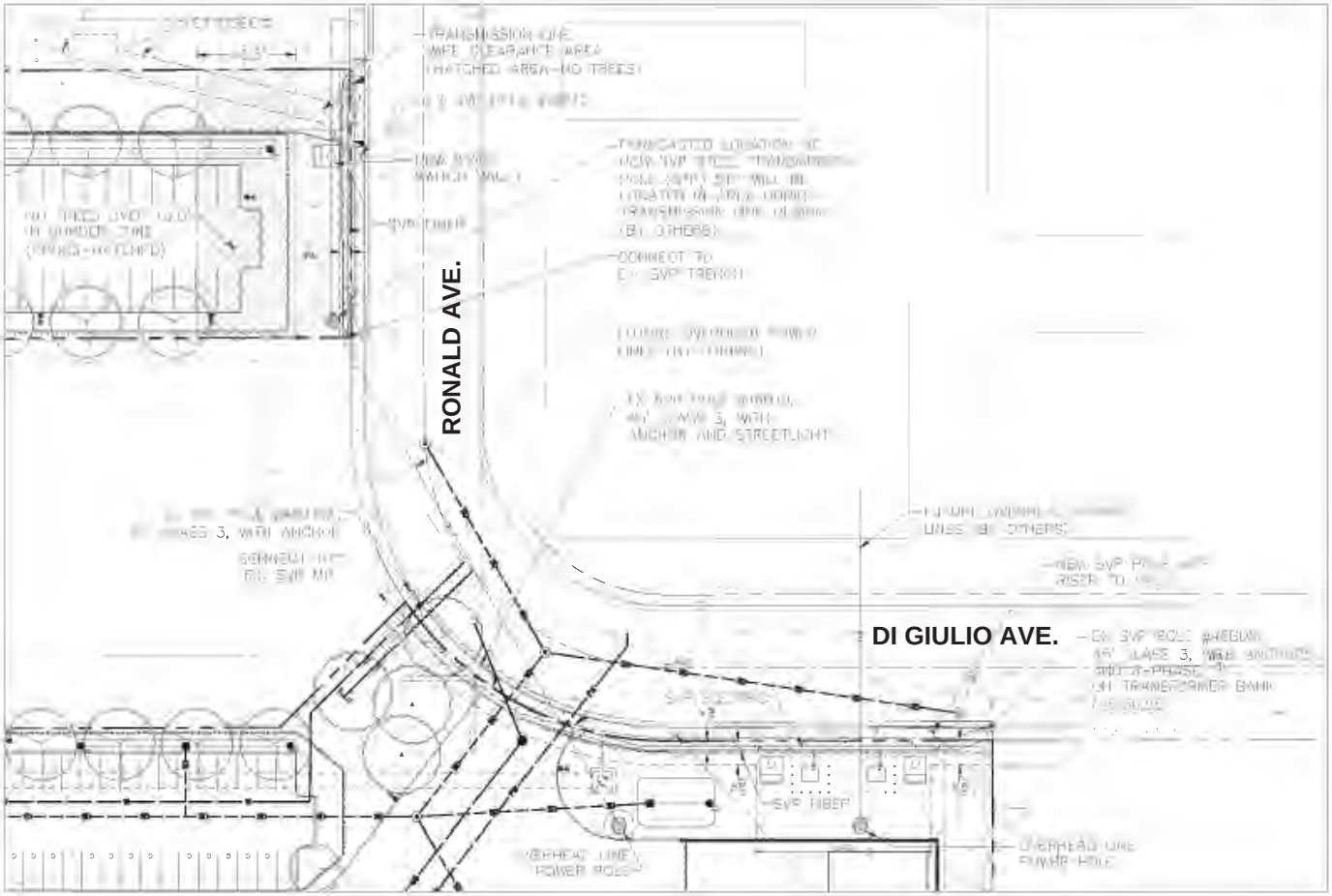
PRELIMINARY SITE UTILITY PLAN

04.09.2020

DATA HALL | OFFICE | LD

C400





Project Number: 19110.0000

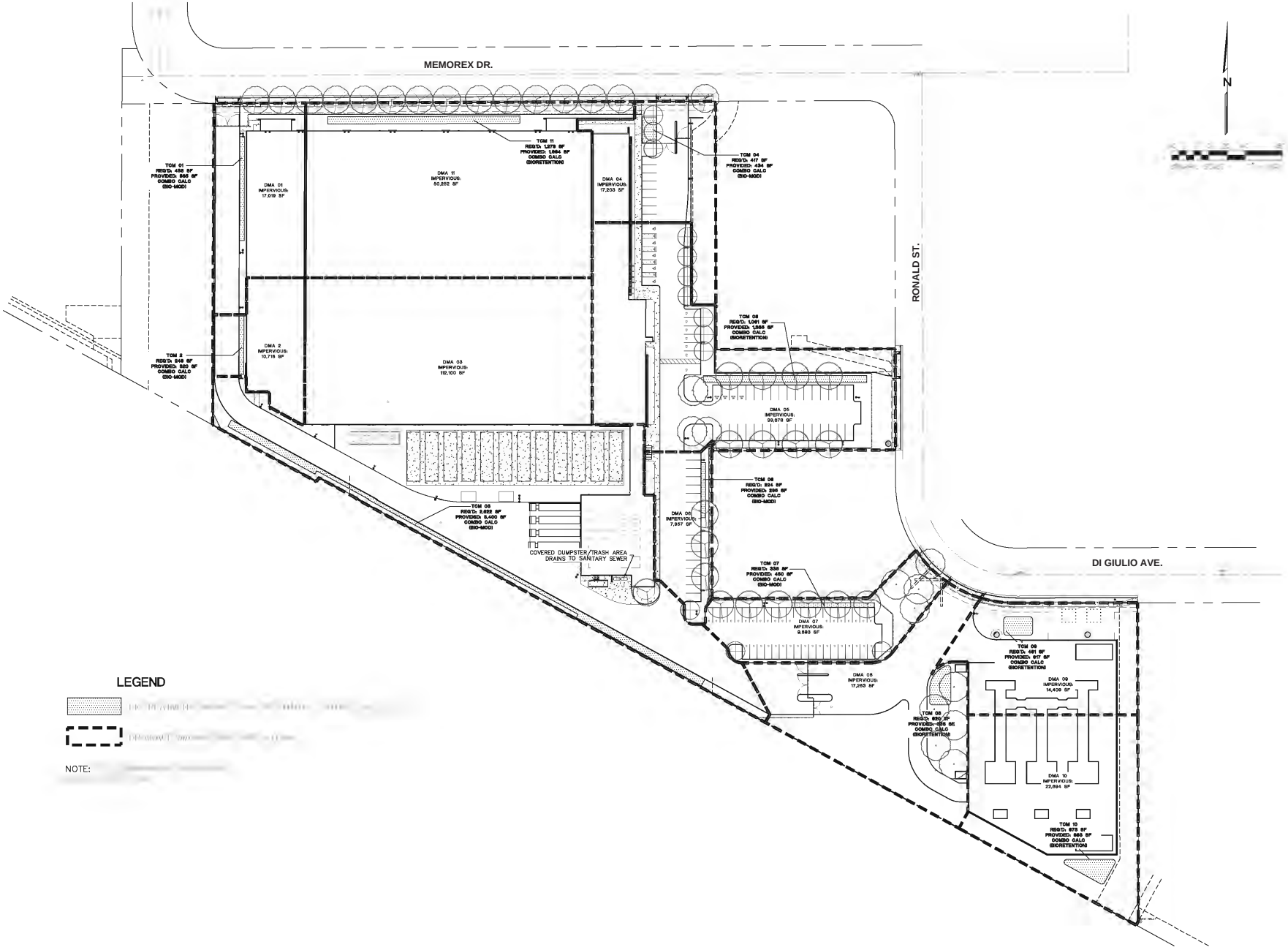
SKYBOX CORGAN R-G ELITE AND OSBIG, INC. CRITICAL PROJECT SERVICES LLC kw mission critical engineering REED ASSOCIATES LANDSCAPE ARCHITECTURE

ENLARGED SVP CLEARANCE PLAN

04.09.2020

DATA HALL OFFICE LD

C401



Project Number: 19110.0000

SKYBOX | CORGAN | RUTH AND GOEHRL, INC. | CRITICAL | kW mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

PRELIMINARY STORMWATER CONTROL PLAN

04.09.2020

DATA HALL OFFICE

LD

C500

BIOTREATMENT SOIL REQUIREMENTS

- [redacted]
- [redacted]

STANDARD STORMWATER CONTROL NOTES:

- STANDING WATER SHALL NOT REMAIN IN THE TREATMENT MEASURES FOR MORE THAN FIVE DAYS, TO PREVENT MOSQUITO GENERATION. SHOULD ANY MOSQUITO ISSUES ARISE, CONTACT THE SANTA CLARA VALLEY VECTOR CONTROL DISTRICT (DISTRICT). MOSQUITO LARVICIDES SHALL BE APPLIED ONLY WHEN ABSOLUTELY NECESSARY, AS INDICATED BY THE DISTRICT, AND THEN ONLY BY A LICENSED PROFESSIONAL OR CONTRACTOR. CONTACT INFORMATION FOR THE DISTRICT IS PROVIDED BELOW
- DO NOT USE PESTICIDES OR OTHER CHEMICAL APPLICATIONS TO TREAT DISEASED PLANTS. CONTROL WEEDS OR REMOVED UNWANTED GROWTH. EMPLOY NON-CHEMICAL CONTROLS (BIOLOGICAL, PHYSICAL AND CULTURAL CONTROLS) TO TREAT A PEST PROBLEM. PRUNE PLANTS PROPERLY AND AT THE APPROPRIATE TIME OF YEAR. PROVIDE ADEQUATE IRRIGATION FOR LANDSCAPE PLANTS. DO NOT OVER WATER

1. [redacted]
2. [redacted]
3. [redacted]
4. [redacted]
5. [redacted]
6. [redacted]

PROJECT SITE INFORMATION:

1. SOILS TYPE:
2. GROUND WATER DEPTH:
3. NAME OF RECEIVING BODY:
4. FLOOD ZONE: ZONE X - AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD
5. FLOOD ELEVATION (IF APPLICABLE):

OPERATION AND MAINTENANCE INFORMATION:

I. PROPERTY INFORMATION:

[redacted]

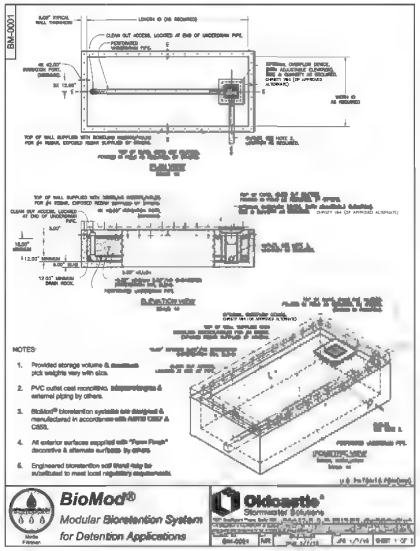
II. RESPONSIBLE PARTY FOR MAINTENANCE:

[redacted]

[redacted]

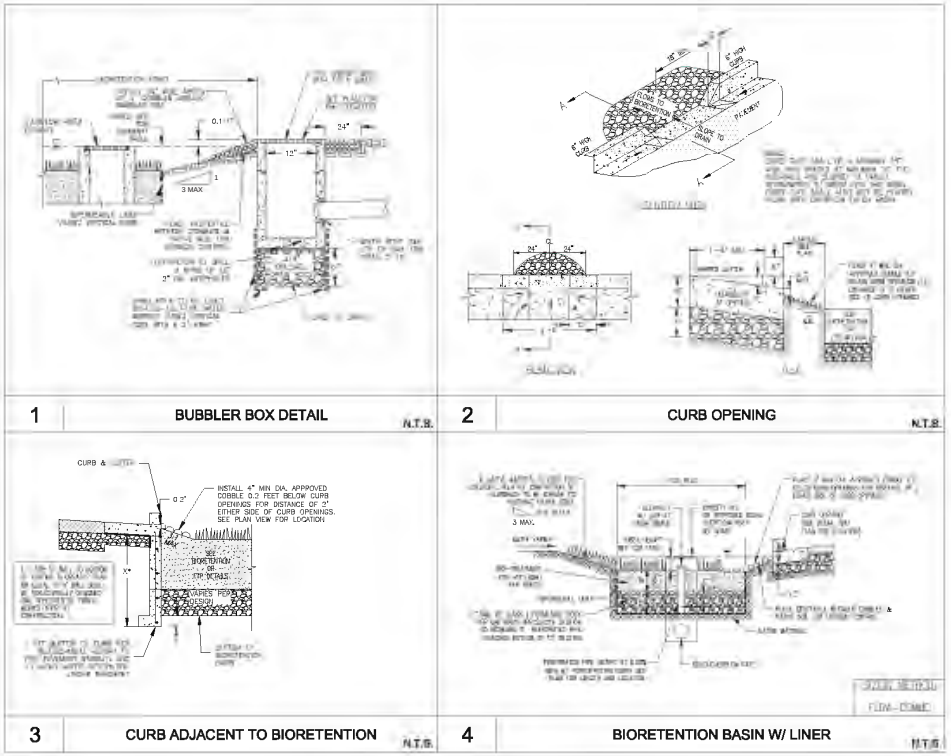
1. [redacted]
2. [redacted]
3. [redacted] SYSTEMS.
4. [redacted]
5. [redacted]

1. [redacted]
2. [redacted]
3. [redacted] AREAS:
4. [redacted]
5. [redacted] ROOFS, [redacted]
6. [redacted]
7. [redacted] AREAS
8. PARKING:
   a. [redacted]



PERVIOUS AND IMPERVIOUS SURFACES COMPARISON TABLE

a. Total Site Area: 9.15 acres	b. Total Site Area Disturbed: 9.05 acres			
	Pre-project (Existing) (A) (ft²)	Existing (A) Retained Area (ft²)	Existing (A) Replaced with (A) (ft²)	New (A) Created (ft²) (B)	Total Post-Project (A+B) (ft²)
Roof	142,849	0	142,849	367	143,216
Surface Parking	31,361	0	15,342	0	15,342
Sidewalks, streets, etc.	380,151	68,759	146,276	0	429,510
c. Total Impervious Area	554,361	68,759	304,467	367	518,843
d. Total new and replaced impervious area			305,159		
Pervious Area (P)	Pre-project (Existing) (A) (ft²)				Total Area (Future P (ft²))
Landscaping	93,650				93,650
Pervious Paving	0				0
Other (e.g. Green Roof)	0				0
e. Total Pervious Area	93,650				93,650
f. Total Area (IA+PA)	648,011				648,493
g. Percent Replacement of IA in Redevelopment Project					58.81 %



TREATMENT CONTROL MEASURE SUMMARY TABLE

DMA #	TCM #	Location	Treatment Type	LID or Non-LID	Sizing Method	Drainage Area (a.f.)	Impervious Area (a.f.)	Pervious Area (Permeable Pavement) (a.f.)	Pervious Area (Other) (a.f.)	% Onsite Area Treated by LID or Non-LID TCM	Bioretention Area Required (s.f.)	Bioretention Area Provided (s.f.)	Overflow Riser Height (in)	Comments
1	1	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	20,439	17,019	0	3,420	5.11%	433	585	6	
2	2	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	11,358	10,718	0	640	2.84%	246	320	6	
3	3	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	120,939	112,100	0	8,839	30.23%	2,822	3,400	6	
4	4	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	19,400	17,203	0	2,197	4.85%	417	434	11	
5	5	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	50,925	39,678	0	11,247	12.73%	1,051	1,335	7	
6	6	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	10,889	7,957	0	2,932	2.72%	224	265	6	
7	7	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	17,148	9,893	0	7,255	4.29%	335	450	6	
8	8	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	32,265	17,253	0	15,012	8.07%	620	836	6	
9	9	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	23,258	14,409	0	8,849	5.81%	461	617	6	
10	10	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	33,283	22,694	0	10,589	8.32%	673	863	6	
11	11	Onsite	Bioretention lined* w/ underdrain	LID	3. Flow-Volume Combo	60,134	50,252	0	9,882	15.03%	1,273	1,864	6	
					Totals:	400,038	319,176	0	80,862	100.00%				

Footnotes:
* "Lined" refers to an impermeable liner placed on the bottom of a Bioretention basin or a concrete Flow-Through Planter, such that no infiltration into native soil occurs.

TABLE 1
ROUTINE MAINTENANCE ACTIVITIES FOR BIORETENTION AREAS

NO.	MAINTENANCE TASK	FREQUENCY OF TASK
1	REMOVE OBSTRUCTIONS, WEEDS, DEBRIS AND TRASH FROM BIORETENTION AREA AND ITS INLETS AND OUTLETS; AND DISPOSE OF PROPERLY.	QUARTERLY, OR AS NEEDED AFTER STORM EVENTS
2	INSPECT BIORETENTION AREA FOR STANDING WATER. IF STANDING WATER DOES NOT DRAIN WITHIN 2-3 DAYS, TILL AND REPLACE THE SURFACE BIOTREATMENT SOIL WITH THE APPROVED SOIL MIX AND REPLANT.	QUARTERLY, OR AS NEEDED AFTER STORM EVENTS
3	CHECK UNDERDRAINS FOR CLOGGING. USE THE CLEANOUT RISER TO CLEAN ANY CLOGGED UNDERDRAINS.	QUARTERLY, OR AS NEEDED AFTER STORM EVENTS
4	MAINTAIN THE IRRIGATION SYSTEM AND ENSURE THAT PLANTS ARE RECEIVING THE CORRECT AMOUNT OF WATER (IF APPLICABLE).	QUARTERLY
5	ENSURE THAT THE VEGETATION IS HEALTHY AND DENSE ENOUGH TO PROVIDE FILTERING AND PROTECT SOILS FROM EROSION. PRUNE AND WEED THE BIORETENTION AREA. REMOVE AND/OR REPLACE ANY DEAD PLANTS.	ANNUALLY, BEFORE THE WET SEASON BEGINS
6	USE COMPOST AND OTHER NATURAL SOIL AMENDMENTS AND FERTILIZERS INSTEAD OF SYNTHETIC FERTILIZERS, ESPECIALLY IF THE SYSTEM USES AN UNDERDRAIN.	ANNUALLY, BEFORE THE WET SEASON BEGINS
7	CHECK THAT MULCH IS AT APPROPRIATE DEPTH (2 - 3 INCHES PER SOIL SPECIFICATIONS) AND REPLENISH AS NECESSARY BEFORE WET SEASON BEGINS. IT IS RECOMMENDED THAT 2" – 3" OF ARBOR MULCH BE REAPPLIED EVERY YEAR.	ANNUALLY, BEFORE THE WET SEASON BEGINS
8	INSPECT THE ENERGY DISSIPATION AT THE INLET TO ENSURE IT IS FUNCTIONING ADEQUATELY, AND THAT THERE IS NO SCOUR OF THE SURFACE MULCH. REMOVE ACCUMULATED SEDIMENT.	ANNUALLY, BEFORE THE WET SEASON BEGINS
9	INSPECT OVERFLOW PIPE TO ENSURE THAT IT CAN SAFELY CONVEY EXCESS FLOWS TO A STORM DRAIN. REPAIR OR REPLACE DAMAGED PIPING.	ANNUALLY, BEFORE THE WET SEASON BEGINS
10	REPLACE BIOTREATMENT SOIL AND MULCH, IF NEEDED. CHECK FOR STANDING WATER, STRUCTURAL FAILURE AND CLOGGED OVERFLOWS. REMOVE TRASH AND DEBRIS. REPLACE DEAD PLANTS.	
11	INSPECT BIORETENTION AREA USING THE ATTACHED INSPECTION CHECKLIST.	ANNUALLY, BEFORE THE WET SEASON

Project Number: 19110.0000

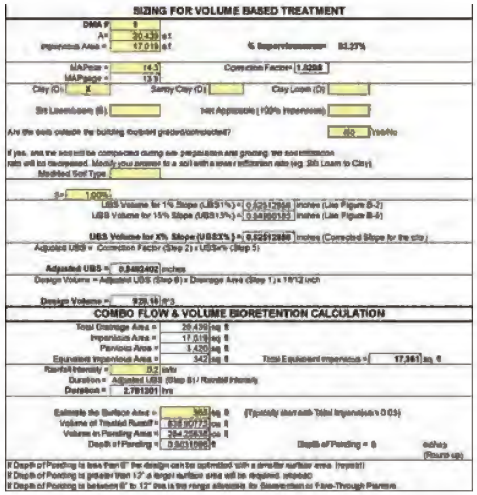
SKYBOX | CORGAN | RUTH AND GOINES, INC. | CRITICAL PROJECT SERVICES LLC | kw mission critical engineering | REED ASSOCIATES LANDSCAPE ARCHITECTURE

STORMWATER CONTROL DETAILS

04.09.2020

DATA HALL | OFFICE | LD

C510


SIZING FOR VOLUME BASED TREATMENT

DMA # 1
A= 20.439 s.f
Impervious Area = 17,019 s.f
% Imperviousness= 83.27%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.52512896 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.34990183 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.52512896 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.5402402 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

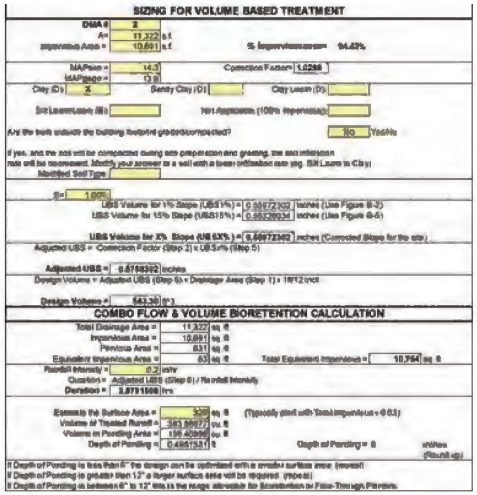
Design Volume = 920.16 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 20,439 sq. ft
Impervious Area = 17,019 sq. ft
Pervious Area = 3,420 sq. ft
Equivalent Impervious Area = 542 sq. ft Total Equivalent Impervious = 17,561 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.7012201 hrs

Estimate the Surface Area = 365 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 838.807723 cu. ft
Volume of Ponding Area = 284.255838 cu. ft
Depth of Ponding = 0.9431099 ft Depth of Ponding = 0 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 2
A= 11,322 s.f
Impervious Area = 10,691 s.f
% Imperviousness= 94.43%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.49272302 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.32820934 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.49272302 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.5069392 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

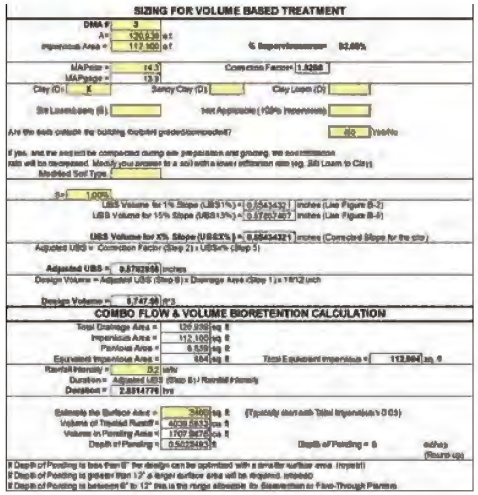
Design Volume = 543.36 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 11,322 sq. ft
Impervious Area = 10,691 sq. ft
Pervious Area = 631 sq. ft
Equivalent Impervious Area = 63 sq. ft Total Equivalent Impervious = 10,754 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.5771508 hrs

Estimate the Surface Area = 330 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 383.399677 cu. ft
Volume of Ponding Area = 159.403896 cu. ft
Depth of Ponding = 0.4861581 ft Depth of Ponding = 0 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 3
A= 120,539 s.f
Impervious Area = 112,900 s.f
% Imperviousness= 93.66%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.5543432 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.3700267 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.5543432 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.5702908 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

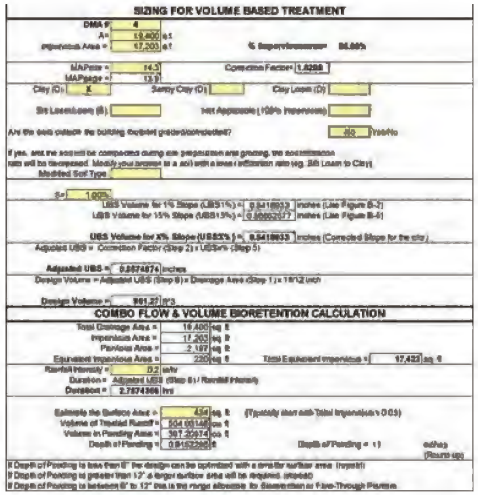
Design Volume = 5,747.99 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 120,539 sq. ft
Impervious Area = 112,900 sq. ft
Pervious Area = 6,539 sq. ft
Equivalent Impervious Area = 654 sq. ft Total Equivalent Impervious = 113,554 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.8514776 hrs

Estimate the Surface Area = 3390 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 4038.13833 cu. ft
Volume of Ponding Area = 1707.39797 cu. ft
Depth of Ponding = 0.5037983 ft Depth of Ponding = 0 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 4
A= 19,400 s.f
Impervious Area = 17,203 s.f
% Imperviousness= 88.69%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.5418833 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.3609277 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.5418833 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.5574874 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

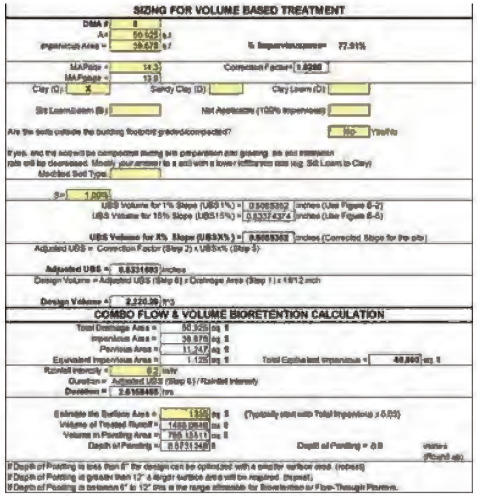
Design Volume = 901.27 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 19,400 sq. ft
Impervious Area = 17,203 sq. ft
Pervious Area = 2,197 sq. ft
Equivalent Impervious Area = 220 sq. ft Total Equivalent Impervious = 17,423 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.7874306 hrs

Estimate the Surface Area = 454 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 504.661446 cu. ft
Volume of Ponding Area = 397.259714 cu. ft
Depth of Ponding = 0.9162296 ft Depth of Ponding = 11 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 5
A= 50,525 s.f
Impervious Area = 39,678 s.f
% Imperviousness= 77.91%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.5065352 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.3374374 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.5065352 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.5331493 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

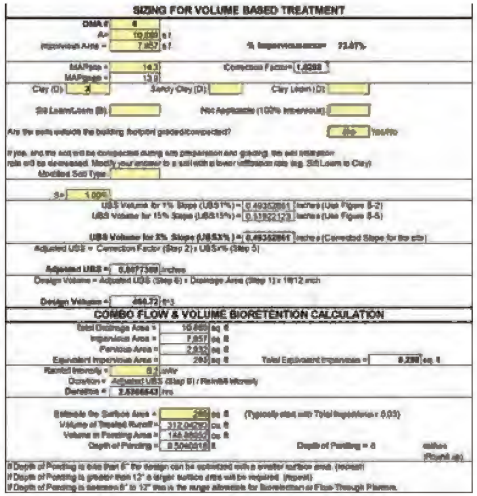
Design Volume = 2,220.39 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 50,525 sq. ft
Impervious Area = 39,678 sq. ft
Pervious Area = 11,247 sq. ft
Equivalent Impervious Area = 1,125 sq. ft Total Equivalent Impervious = 40,803 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.6158465 hrs

Estimate the Surface Area = 1,190 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 1488.08448 cu. ft
Volume of Ponding Area = 795.13511 cu. ft
Depth of Ponding = 0.8731348 ft Depth of Ponding = 0.9 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 6
A= 19,699 s.f
Impervious Area = 7,857 s.f
% Imperviousness= 72.07%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.4932861 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.3288212 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.4932861 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.5073309 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

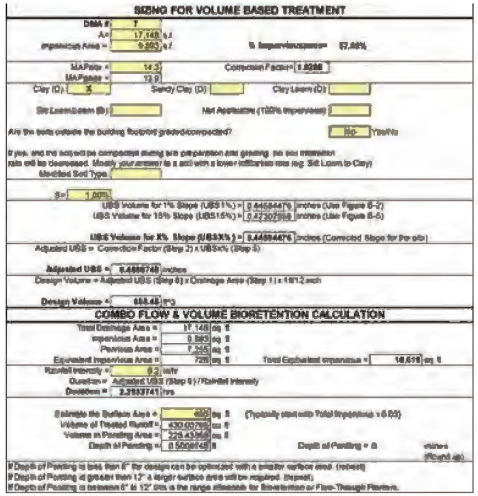
Design Volume = 464.72 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 19,699 sq. ft
Impervious Area = 7,857 sq. ft
Pervious Area = 2,932 sq. ft
Equivalent Impervious Area = 293 sq. ft Total Equivalent Impervious = 8,150 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.5906543 hrs

Estimate the Surface Area = 280 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 312.04297 cu. ft
Volume of Ponding Area = 148.39992 cu. ft
Depth of Ponding = 0.5040818 ft Depth of Ponding = 6 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 7
A= 17,148 s.f
Impervious Area = 9,952 s.f
% Imperviousness= 57.80%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.4468447 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.4730788 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.4468447 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.4595748 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

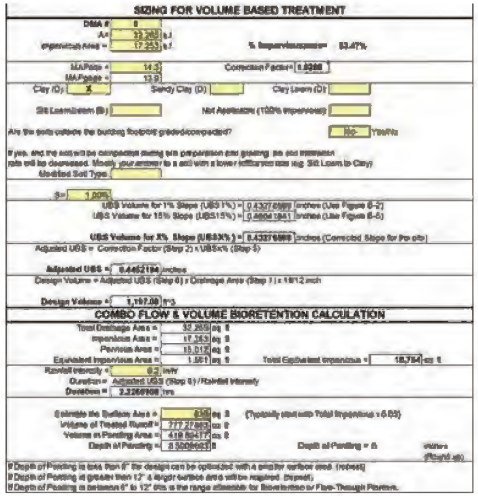
Design Volume = 653.45 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 17,148 sq. ft
Impervious Area = 9,952 sq. ft
Pervious Area = 7,196 sq. ft
Equivalent Impervious Area = 720 sq. ft Total Equivalent Impervious = 10,672 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.3153741 hrs

Estimate the Surface Area = 480 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 430.007676 cu. ft
Volume of Ponding Area = 229.43466 cu. ft
Depth of Ponding = 0.5006748 ft Depth of Ponding = 6 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.


SIZING FOR VOLUME BASED TREATMENT

DMA # 8
A= 33,263 s.f
Impervious Area = 17,253 s.f
% Imperviousness= 53.47%

MAPrain = 14.3 Correction Factor= 1.0288
MAPsnow = 13.9
Clay (C) = X Sandy Clay (D) = Clay Loam (D) =
Silt Loam/Loam (B) = Not Applicable (100% Impervious) =

Are the soils outside the building footprint graded/compacted? No Yes/No

If yes, and the soil will be compacted during site preparation and grading, the soil infiltration rate will be decreased. Modify your answer to a soil with a lower infiltration rate (eg. Silt Loam to Clay).
Modified Soil Type =

S= 1.00%
LBS Volume for 1% Slope (LBS1%) = 0.4327688 inches (Use Figure B-2)
LBS Volume for 15% Slope (LBS15%) = 0.4804361 inches (Use Figure B-5)

UBS Volume for X% Slope (UBS1%) = 0.4327688 inches (Corrected Slope for the site)
Adjusted UBS = Correction Factor (Step 2) x UBS1% (Step 5)

Adjusted UBS = 0.4452184 inches
Design Volume = Adjusted UBS (Step 6) x Drainage Area (Step 1) x 1/12 inch

Design Volume = 1,197.00 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 33,263 sq. ft
Impervious Area = 17,253 sq. ft
Pervious Area = 15,010 sq. ft
Equivalent Impervious Area = 1,501 sq. ft Total Equivalent Impervious = 18,754 sq. ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted UBS (Step 8) / Rainfall Intensity
Duration = 2.2369908 hrs

Estimate the Surface Area = 830 sq. ft (Typically start with Total Impervious x 0.03)
Volume of Treated Runoff = 777.278963 cu. ft
Volume of Ponding Area = 419.59477 cu. ft
Depth of Ponding = 0.5006963 ft Depth of Ponding = 6 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area. (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required. (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters.

Project Number: 19110.0000

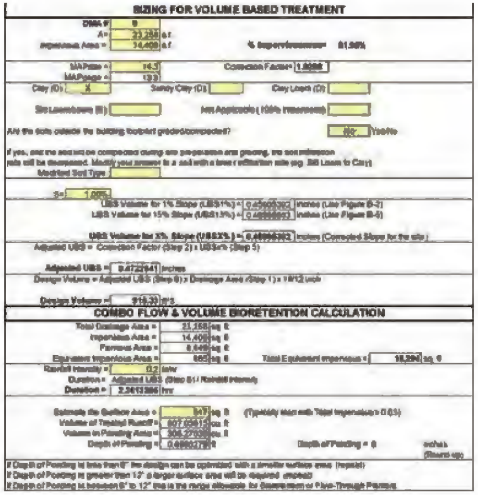
SKYBOX CORGAN RUTH AND GOING, INC. CRITICAL kw mission critical engineering REED ASSOCIATES LANDSCAPE ARCHITECTURE

PRELIMINARY STORMWATER CALCULATIONS

04.09.2020

DATA HALL OFFICE LD

C520



SIZING FOR VOLUME BASED TREATMENT

DMA #: 9
A= 33,258 s.f.
Impervious Area = 14,409 s.f. % Imperviousness= 61.50%

MAPsite = 16.5 Conversion Factor= 1.0086
MAPgage = 13.9
City (C): X Sandy Clay (D): Clay Loam (D):
Site Loam/clay (B): Net Applicable (100% Impervious):

Are the soils outside the building footprint graded/compacted? NO Yes/No

If yes, are the soils to be compacted during site preparation are grazing, no soil reference soils will be decompact. Modify your answer to a soil with a lower infiltration rate (eg. SD Loam to Clay)
Modified Soil Type:

S= 1.00%
LIBS Volume for 1% Slope (LIBS1%) = 0.4540[illegible] inches (Use Figure B-2)
LIBS Volume for 15% Slope (LIBS15%) = 0.4[illegible] inches (Use Figure B-5)

LIBS Volume for X% Slope (LIBS?%) = 0.4[illegible] inches (Corrected Slope for the site)
Adjusted LIBS = Correction Factor (Step 2) x LIBS=% (Step 5)

Adjusted LIBS = 0.4722941 inches
Design Volume = Adjusted LIBS (Step 6) x Drainage Area (Step 1) x 1ft/12 inch

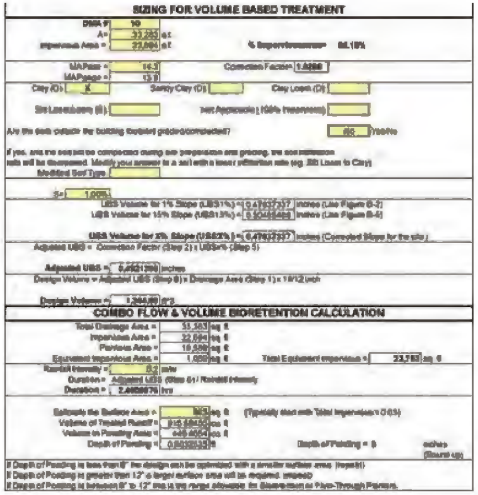
Design Volume = 910.20 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 33,258 sq ft
Impervious Area = 14,409 sq ft
Pervious Area = 8,649 sq ft
Equivalent Impervious Area = 865 sq ft Total Equivalent Impervious = 15,294 sq ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted LIBS (Step 6) / Rainfall Intensity
Duration = 2.3612286 hrs

Estimate the Surface Area = 347 sq ft (Typically start with Total Impervious / 0.03)
Volume of Treated Runoff = 607.69815 cu ft
Volume in Ponding Area = 302.27326 cu ft
Depth of Ponding = 0.6980278 ft Depth of Ponding = 8 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters



SIZING FOR VOLUME BASED TREATMENT

DMA #: 10
A= 37,283 s.f.
Impervious Area = 27,994 s.f. % Imperviousness= 84.19%

MAPsite = 16.5 Conversion Factor= 1.0086
MAPgage = 13.9
City (C): X Sandy Clay (D): Clay Loam (D):
Site Loam/clay (B): Net Applicable (100% Impervious):

Are the soils outside the building footprint graded/compacted? NO Yes/No

If yes, are the soils to be compacted during site preparation are grazing, no soil reference soils will be decompact. Modify your answer to a soil with a lower infiltration rate (eg. SD Loam to Clay)
Modified Soil Type:

S= 1.00%
LIBS Volume for 1% Slope (LIBS1%) = 0.47[illegible] inches (Use Figure B-2)
LIBS Volume for 15% Slope (LIBS15%) = 0.50[illegible] inches (Use Figure B-5)

LIBS Volume for X% Slope (LIBS?%) = 0.47[illegible] inches (Corrected Slope for the site)
Adjusted LIBS = Correction Factor (Step 2) x LIBS=% (Step 5)

Adjusted LIBS = 0.4921200 inches
Design Volume = Adjusted LIBS (Step 6) x Drainage Area (Step 1) x 1ft/12 inch

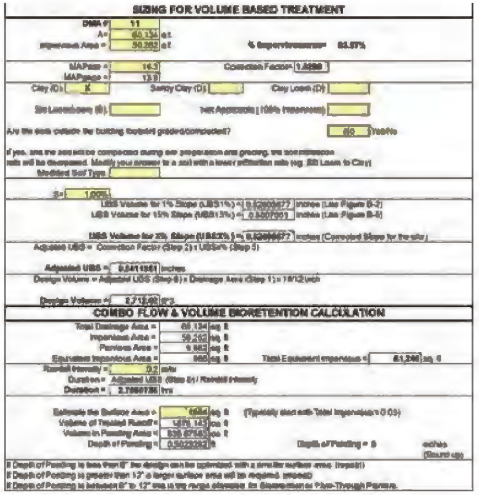
Design Volume = 1,344.89 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 37,283 sq ft
Impervious Area = 27,994 sq ft
Pervious Area = 10,289 sq ft
Equivalent Impervious Area = 1,029 sq ft Total Equivalent Impervious = 23,783 sq ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted LIBS (Step 6) / Rainfall Intensity
Duration = 2.4629976 hrs

Estimate the Surface Area = 503 sq ft (Typically start with Total Impervious / 0.03)
Volume of Treated Runoff = 945.4844 cu ft
Volume in Ponding Area = 445.4654 cu ft
Depth of Ponding = 0.8853513 ft Depth of Ponding = 11 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters



SIZING FOR VOLUME BASED TREATMENT

DMA #: 11
A= 60,134 s.f.
Impervious Area = 50,282 s.f. % Imperviousness= 83.67%

MAPsite = 16.5 Conversion Factor= 1.0086
MAPgage = 13.9
City (C): X Sandy Clay (D): Clay Loam (D):
Site Loam/clay (B): Net Applicable (100% Impervious):

Are the soils outside the building footprint graded/compacted? NO Yes/No

If yes, are the soils to be compacted during site preparation are grazing, no soil reference soils will be decompact. Modify your answer to a soil with a lower infiltration rate (eg. SD Loam to Clay)
Modified Soil Type:

S= 1.00%
LIBS Volume for 1% Slope (LIBS1%) = 0.5[illegible] inches (Use Figure B-2)
LIBS Volume for 15% Slope (LIBS15%) = 0.5[illegible] inches (Use Figure B-5)

LIBS Volume for X% Slope (LIBS?%) = 0.5[illegible] inches (Corrected Slope for the site)
Adjusted LIBS = Correction Factor (Step 2) x LIBS=% (Step 5)

Adjusted LIBS = 0.5411951 inches
Design Volume = Adjusted LIBS (Step 6) x Drainage Area (Step 1) x 1ft/12 inch

Design Volume = 2,712.66 ft^3

COMBO FLOW & VOLUME BIORETENTION CALCULATION

Total Drainage Area = 60,134 sq ft
Impervious Area = 50,282 sq ft
Pervious Area = 9,852 sq ft
Equivalent Impervious Area = 985 sq ft Total Equivalent Impervious = 51,266 sq ft
Rainfall Intensity = 0.2 in/hr
Duration = Adjusted LIBS (Step 6) / Rainfall Intensity
Duration = 2.7060786 hrs

Estimate the Surface Area = 1684 sq ft (Typically start with Total Impervious / 0.03)
Volume of Treated Runoff = 1,676.143 cu ft
Volume in Ponding Area = 839.67145 cu ft
Depth of Ponding = 0.5822352 ft Depth of Ponding = 7 inches (Round up)

If Depth of Ponding is less than 6" the design can be optimized with a smaller surface area (repeat)
If Depth of Ponding is greater than 12" a larger surface area will be required (repeat)
If Depth of Ponding is between 6" to 12" this is the range allowable for Bioretention or Flow-Through Planters

Project Number: 19110.0000

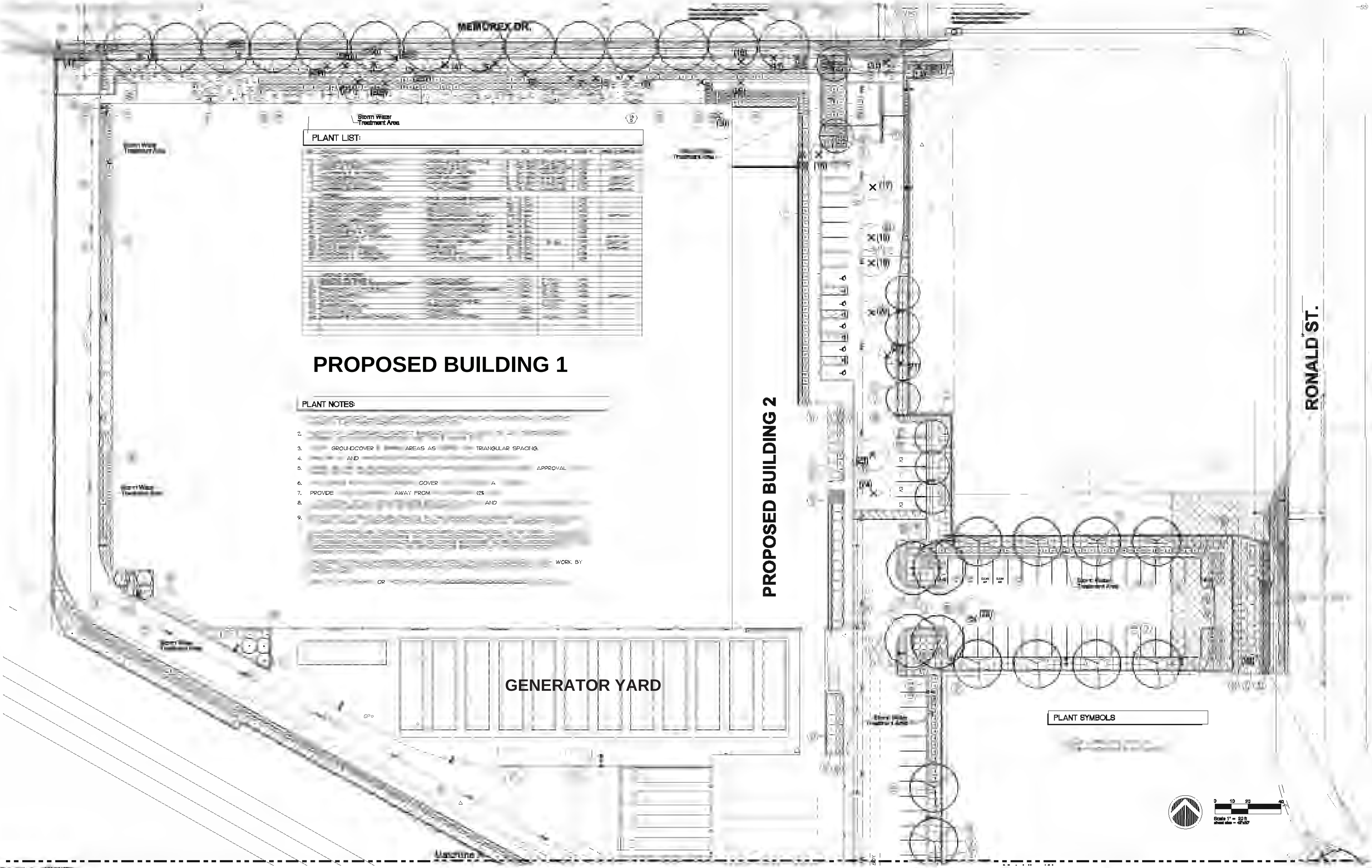
SKYBOX CORGAN RIMKUS CONSULTING GROUP, INC. CRITICAL PROJECT SERVICES LLC kw mission critical engineering REED ASSOCIATES LANDSCAPE ARCHITECTURE

PRELIMINARY STORMWATER CALCULATIONS

04.09.2020

DATA HALL OFFICE LD

C521



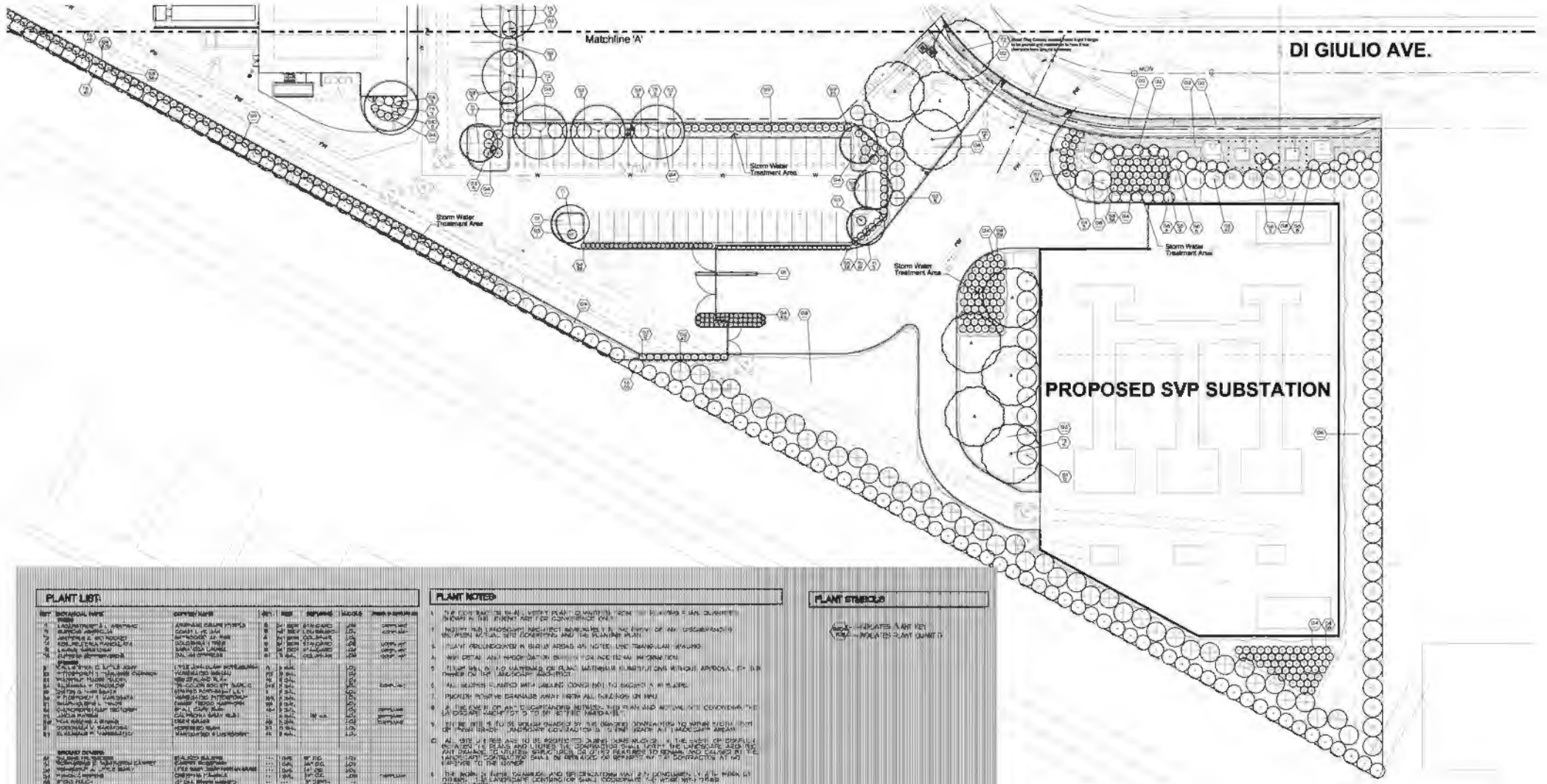
SKYBOX
CORGAN
RUTH AND GOING, INC.
CRITICAL PROJECT SERVICES, LLC
kW mission critical engineering
REED ASSOCIATES LANDSCAPE ARCHITECTURE

LANDSCAPE PLANTING PLAN

04-09-2020

PAUL JAY REED
STATE OF CALIFORNIA

L-100



PLANT LIST:

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS	WUCOLS	WATER & MAINTENANCE
	TREES						
	LAGERSTROEMIA L. 'MUSKOGEE'	CRAPE MYRTLE	6	36" BOX	STANDARD		
	ARBUTUS 'MARINA'	STRAWBERRY TREE	4	36" BOX	STANDARD		
	ARBUTUS X 'RED ROCKET'	RED ROCKET STRAWBERRY TREE	4	36" BOX	STANDARD		
	KOELREUTERIA PANICULATA	GOLDENRAIN TREE	4	36" BOX	STANDARD		
	LAURUS NOBILIS 'SARATOGA'	SARATOGA LAUREL	4	36" BOX	STANDARD		
	OLEA EUROPAEA 'SWAN HILL'	SWAN HILL OLIVE	4	36" BOX	COLUMNAR		
	SHRUBS						
	ARBUTUS U. 'LITTLE JOHN'	LITTLE JOHN DWARF STRAWBERRY	7	5 GAL.			
	CISTUS X 'SUNSET'	SUNSET ROCKROSE	7	5 GAL.			
	ERIOGONUM 'ROSE MOUND'	ROSE MOUND BUCKWHEAT	7	5 GAL.			
	LAVANDULA X 'PHENOMENAL'	PHENOMENAL LAVENDER	24	5 GAL.			
	MYRTUS COMMUNIS 'COMPACTA'	COMPACT MYRTLE	24	5 GAL.			
	PHORMIUM X 'DUET'	DUET NEW ZEALAND FLAX	24	5 GAL.			
	PHORMIUM X 'MAORI SUNRISE'	MAORI SUNRISE NEW ZEALAND FLAX	24	5 GAL.			
	PHORMIUM X 'YANOCK GOLD'	YANOCK GOLD NEW ZEALAND FLAX	24	5 GAL.			
	RHAMNUS C. 'LEPRECHAUN'	LEPRECHAUN COFFEEBERRY	24	5 GAL.			
	ROSMARINUS O. 'TUSCAN BLUE'	TUSCAN BLUE ROSEMARY	24	5 GAL.			
	SALVIA C. 'WINNIFRED GILMAN'	WINNIFRED GILMAN SAGE	24	5 GAL.			
	SALVIA X 'MARCIAN'	MARCIAN SAGE	24	5 GAL.			
	SALVIA X 'WAVERLY'	WAVERLY SAGE	24	5 GAL.			
	VIBURNUM T. 'SUSPENSUM'	SANDANKWA VIBURNUM	24	5 GAL.			
	GROUND COVERS						
	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW		FLATS	10" O.C.		
	CAREX PANSA	CALIFORNIA MEADOW SEDGE		FLATS	10" O.C.		
	ROSMARINUS P. 'PROSTRATUS'	PROSTRATE ROSEMARY		1 GAL.	36" O.C.		
	TRACHELOSPERMUM J. 'MINIMA'	MINIMA STAR JASMINE		1 GAL.	36" O.C.		
	VINCA MINOR	DWARF PERIWINKLE		FLATS	12" O.C.		
	HYDROSEED MIX	HYDROSEED MIX					
	SOD	BERMUDA SOD					

PLANT NOTES:

1. THE CONTRACTOR SHALL VERIFY PLANT QUANTITIES SHOWN ON PLANTING PLAN. QUANTITIES SHOWN IN THE PLANT KEY ARE FOR CONVENIENCE ONLY.
2. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND THE PLANTING PLAN.
3. PLANT ARRANGEMENT IN SHRUB AREAS AS NOTED USE TRIANGULAR SPACING.
4. SEE DETAIL AND SPECIFICATION SHEETS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL NOT MAKE ANY SUBSTITUTIONS OF PLANT MATERIALS SPECIFIED ON THESE PLANS WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
6. ALL SHRUBS PLANTED WITH GRADE CONSTRUCTION SHALL BE SLOPED AWAY FROM BUILDINGS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS ON SITE.
8. THE CONTRACTOR SHALL COORDINATE WITH THE CIVIL ENGINEER TO ENSURE THAT THE PLANTING AND IRRIGATION PLANS ARE CONSISTENT WITH THE GRADING AND DRAINAGE PLANS.
9. ALL SITE WORK SHALL BE DONE IN ACCORDANCE WITH THE CONDITIONS AND REQUIREMENTS OF THE GRADING PERMIT.
10. ALL SITE WORK AND TO BE ADJUSTED DURING HOME BUILDING TO ENSURE THAT ALL PLANTING AREAS ARE PROPERLY GRADED TO DRAIN AWAY FROM BUILDINGS AND TO PREVENT PONDING OF WATER. FINAL GRADES SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND THE CIVIL ENGINEER.
11. THE WORK IS SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE PLANNING DEPARTMENT. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH THESE CONDITIONS.
12. PRIOR TO ANY DIGGING OR TRENCHING, CALL UNDERGROUND SERVICE ALERT (811) AT LEAST

PLANT SYMBOLS:

XXX = INDICATES PLANT KEY
XX = INDICATES PLANT QUANTITY

Project Number: 19110.0000

SKYBOX | CORGAN | RG | CRITICAL | kW | REED ASSOCIATES

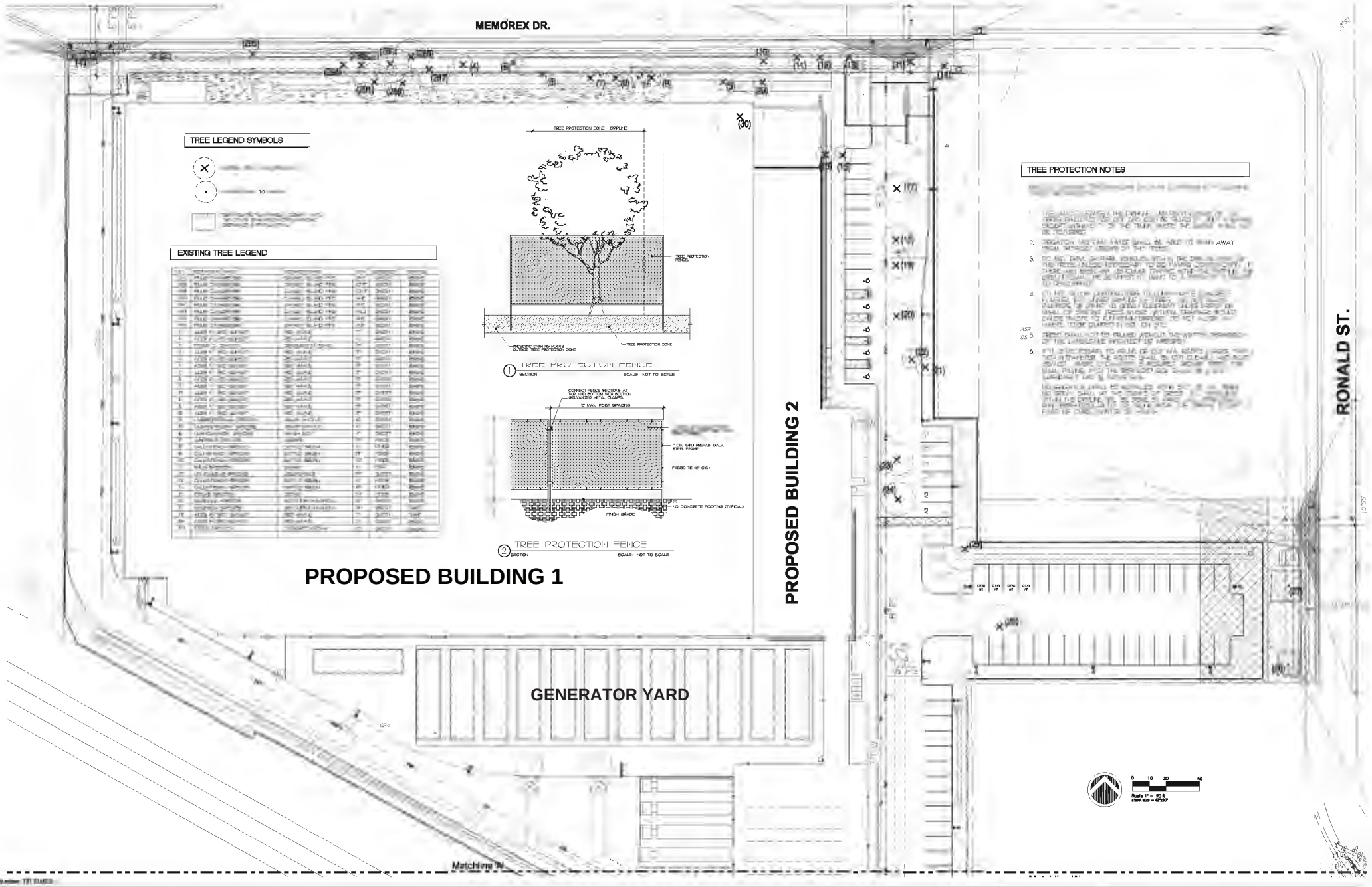
LANDSCAPE PLANTING PLAN

04-09-2020

DATA HALL OFFICE

LD

L-101



SKYBOX · CORGAN · R-G · CRITICAL · kW mission critical engineering · REED ASSOCIATES LANDSCAPE ARCHITECTURE

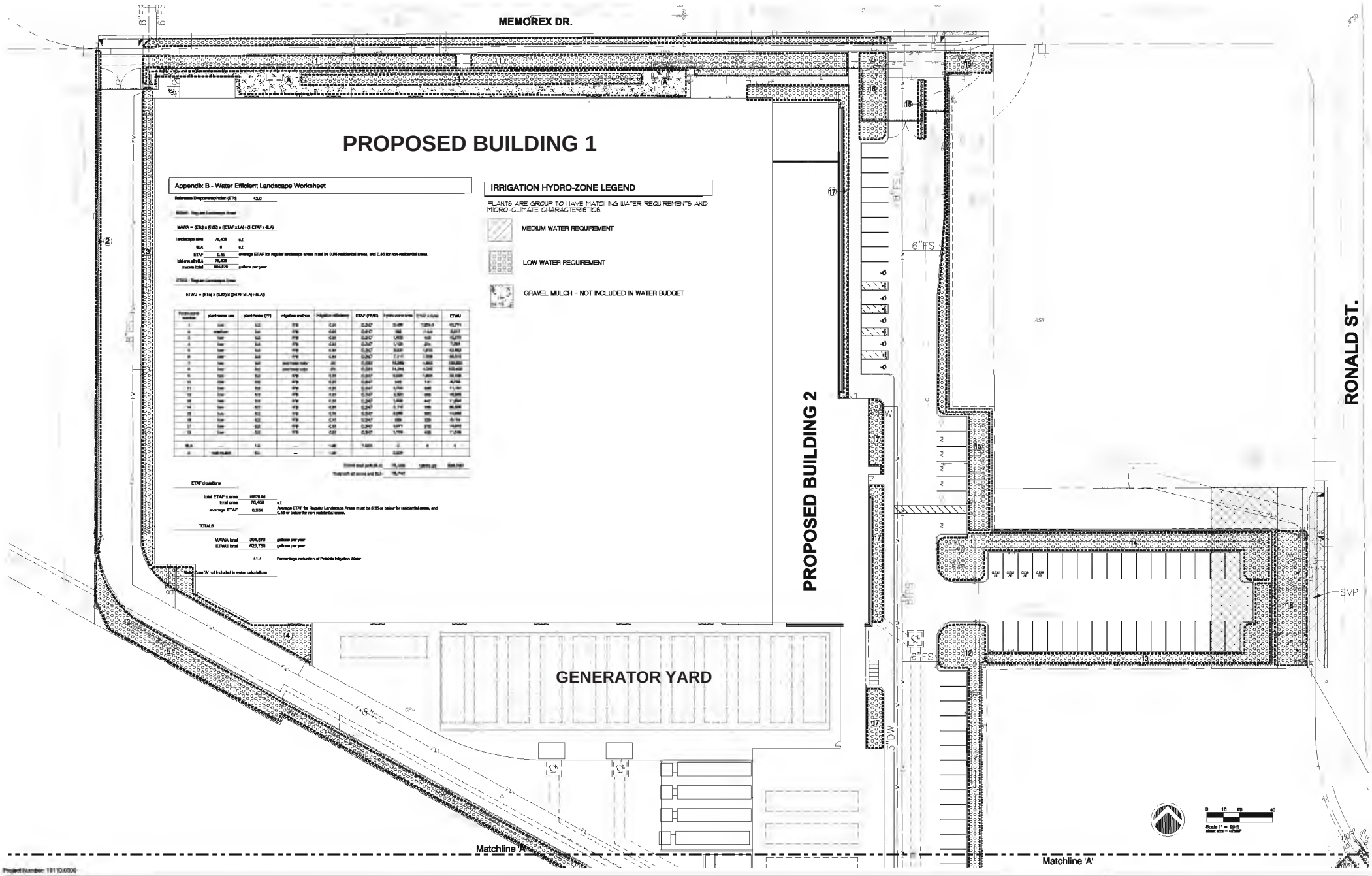
EXISTING TREE PLAN

04-09-2020

PAUL JAY REED No. 2002 EXP. 9/30/2021 REGISTERED LANDSCAPE ARCHITECT STATE OF CALIFORNIA

DATA HALL OFFICE

L-102



SKYBOX CORGAN R-G ELITE AND OGDEN, INC. CRITICAL PROJECT SERVICES, LLC kW mission critical engineering REED ASSOCIATES LANDSCAPE ARCHITECTURE

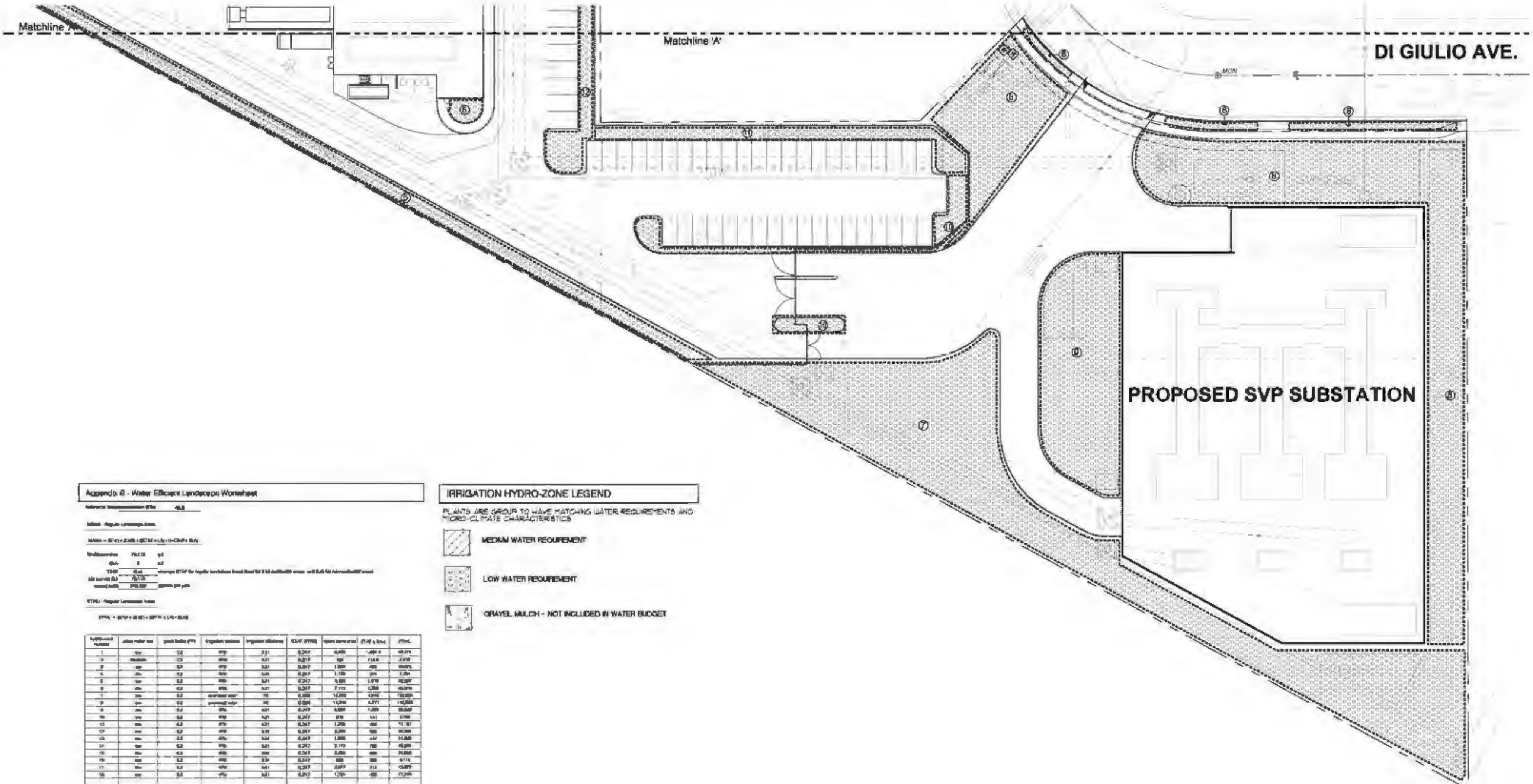
LANDSCAPE HYDROZONE PLAN

04-09-2020

PAUL RAY REED No. 2002 EXP. 9/30/2021 REGISTERED LANDSCAPE ARCHITECT STATE OF CALIFORNIA

DATA HALL OFFICE

L-103



Appendix B - Water Efficient Landscape Worksheet

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

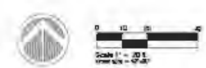
IRRIGATION HYDRO-ZONE LEGEND

PLANTS ARE GROUP TO HAVE MATCHING WATER REQUIREMENTS AND MICRO-CLIMATE CHARACTERISTICS

MEDIUM WATER REQUIREMENT

LOW WATER REQUIREMENT

GRAVEL MULCH - NOT INCLUDED IN WATER BUDGET



Project Number: 18110.0000

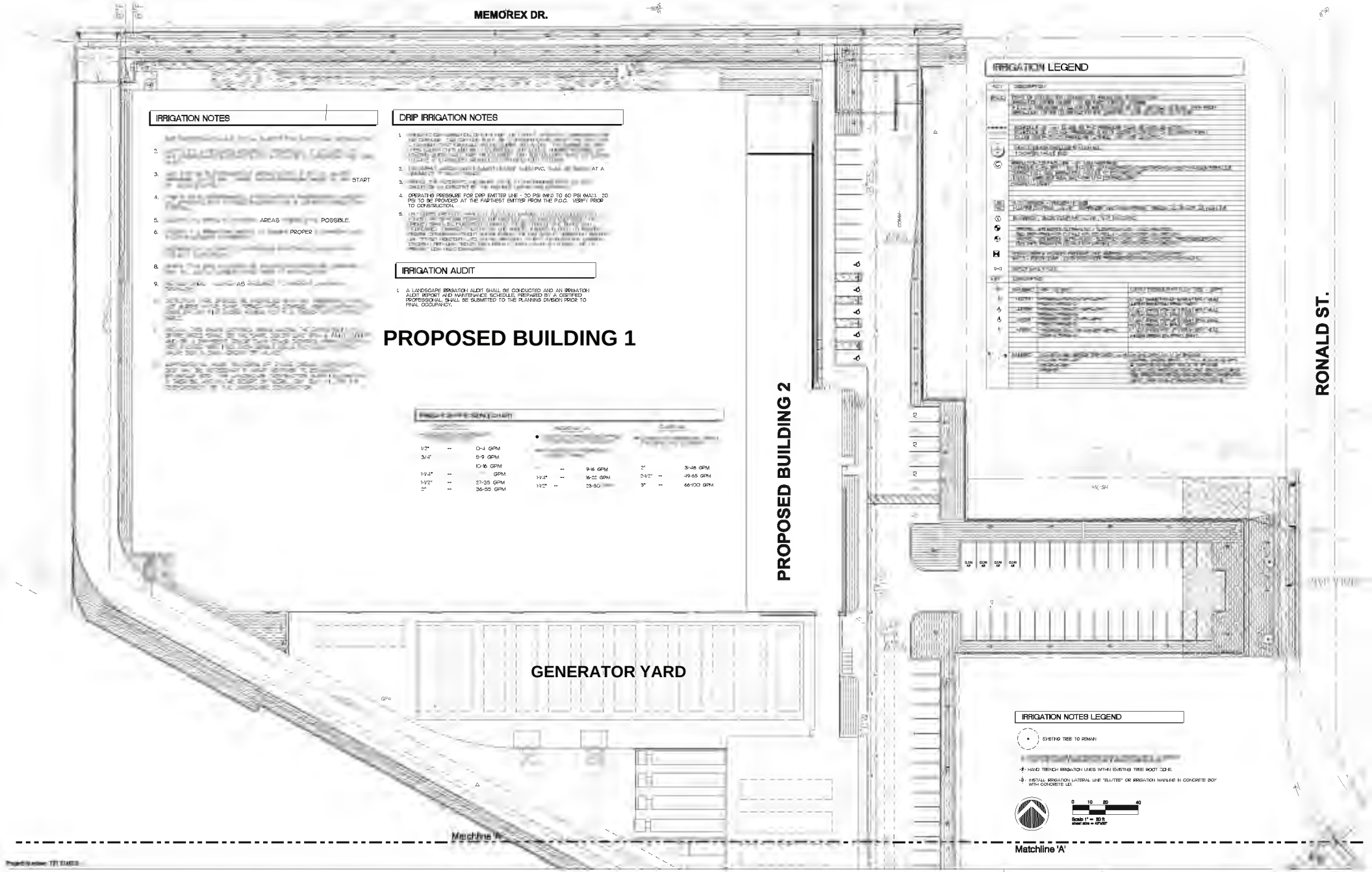
SKYBOX | CORGAN | CRITICAL | kW | REED ASSOCIATES

LANDSCAPE HYDROZONE PLAN

04-09-2020

DATA HALL | OFFICE

L-104



SKYBOX · CORGAN · R-G · CRITICAL · kW mission critical engineering · REED ASSOCIATES LANDSCAPE ARCHITECTURE

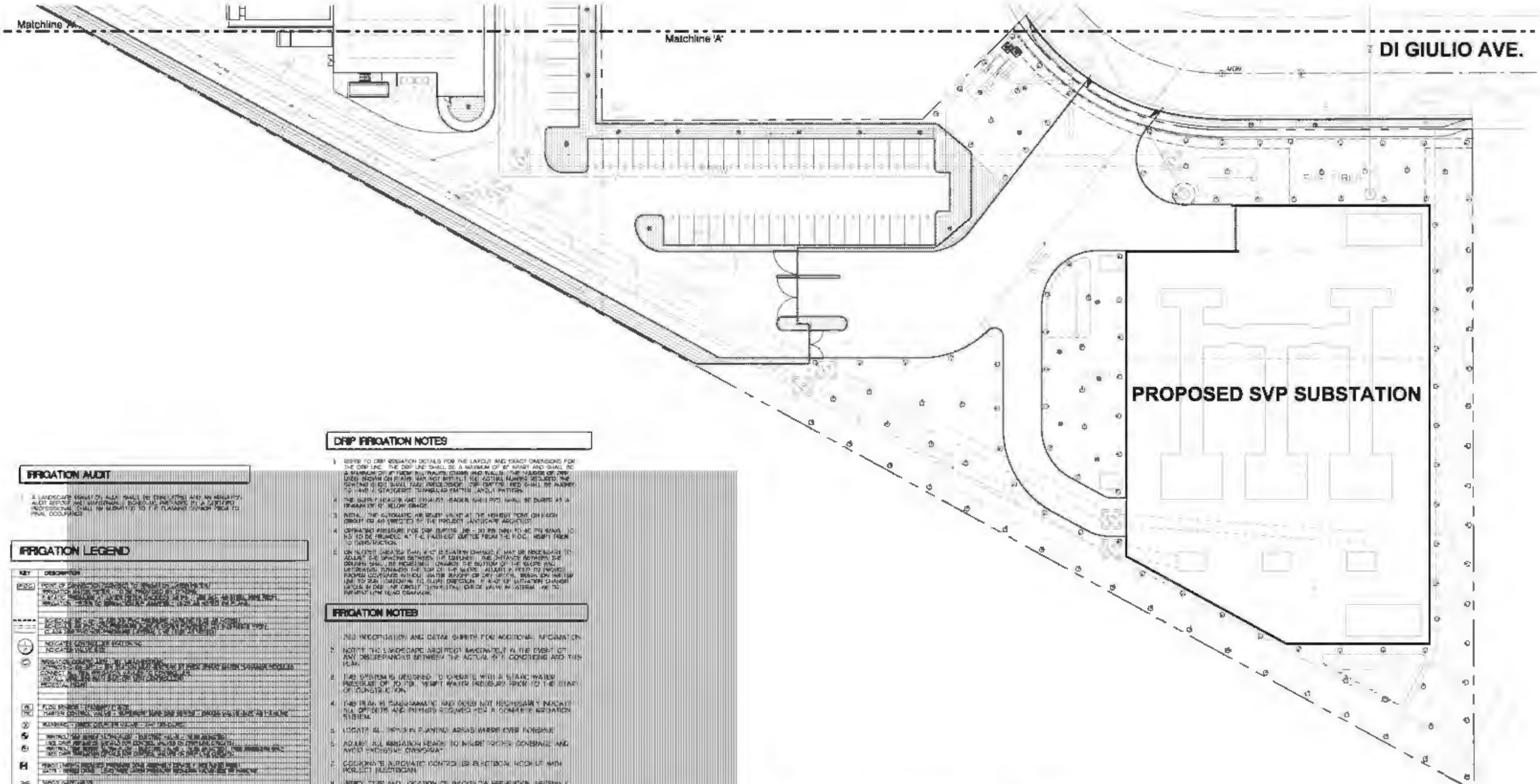
PRELIMINARY IRRIGATION PLAN

04-09-2020

PAUL JAY REED No. 2002 EXP. 9/30/2020 REGISTERED LANDSCAPE ARCHITECT STATE OF CALIFORNIA

DATA HALL OFFICE

L-105



IRRIGATION AUDIT

1. A LANDSCAPE IRRIGATION AUDIT SHALL BE CONDUCTED AND AN IRRIGATION AUDIT REPORT [illegible] PRIOR TO FINAL OCCUPANCY.

IRRIGATION LEGEND

[illegible]

DRIP IRRIGATION NOTES

1. REFER TO DRIP IRRIGATION DETAILS FOR THE LAYOUT AND EXACT DIMENSIONS FOR THE DRIP LINE. THE DRIP LINE SHALL BE A MAXIMUM OF [illegible] APART AND SHALL BE [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]

IRRIGATION NOTES

1. SEE [illegible] AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.
2. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE ACTUAL SITE CONDITIONS AND THIS PLAN.
3. THIS SYSTEM IS DESIGNED TO OPERATE WITH A STATIC WATER PRESSURE OF [illegible] PSI. VERIFY WATER PRESSURE PRIOR TO THE START OF CONSTRUCTION.
4. THIS PLAN IS DIAGRAMMATIC AND DOES NOT NECESSARILY INDICATE ALL OFFSETS AND FITTINGS REQUIRED FOR A COMPLETE IRRIGATION SYSTEM.
5. LOCATE ALL [illegible] IN PLANTING AREAS WHERE EVER POSSIBLE.
6. ADJUST ALL IRRIGATION HEADS TO INSURE PROPER COVERAGE AND AVOID EXCESSIVE OVERSPRAY.
7. COORDINATE AUTOMATIC CONTROLLER ELECTRICAL HOOK UP WITH PROJECT ELECTRICIAN.
8. VERIFY TYPE AND LOCATION OF BACKFLOW PREVENTION ASSEMBLY WITH ALL LOCAL JURISDICTIONS PRIOR TO INSTALLATION.
9. INSTALL CHECK VALVES AS REQUIRED TO PREVENT LOW-HEAD DRAINAGE.
10. [illegible]
11. [illegible]
12. [illegible]

IRRIGATION PIPE SIZING CHART

[illegible]

IRRIGATION NOTES LEGEND

[illegible]

Project Number: [illegible]

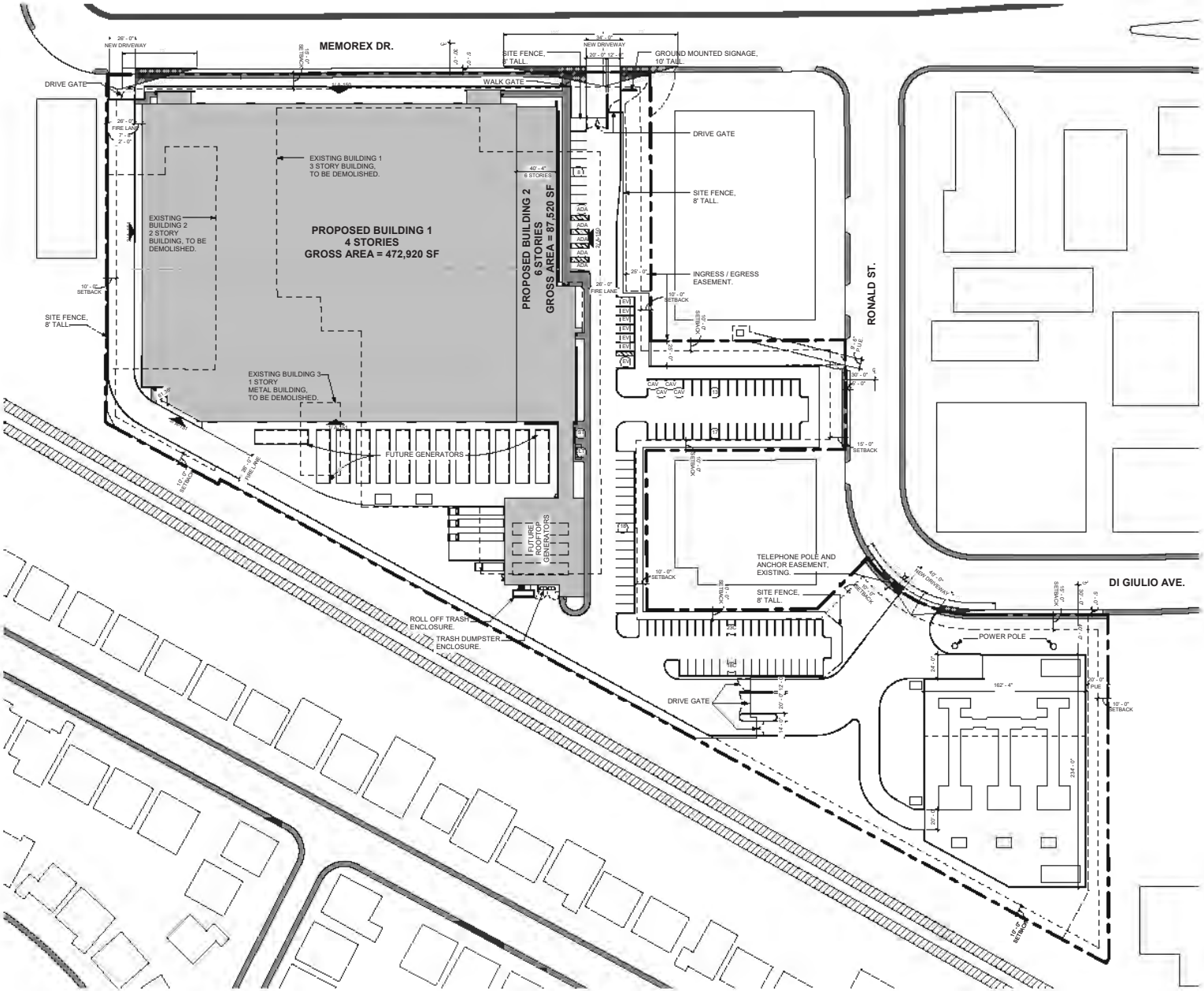
SKYBOX CORGAN CRITICAL kW

PRELIMINARY IRRIGATION PLAN

04-09-2020

DATA HALL OFFICE LD

L-106



EXISTING

LOT SIZE - 400,038± SF - 9.18 ACRES

3 EXISTING BUILDINGS - TO BE DEMOLISHED

BUILDING 1 - FACTORY - 3 STORIES @ 116,679± SF BUILDING FOOTPRINT
BUILDING 2 - FACTORY - 2 STORIES @ 22,996± SF BUILDING FOOTPRINT
BUILDING 3 - STORAGE - 1 STORY @ 2,944± SF BUILDING FOOTPRINT

LOT COVERAGE - 142,619± SF - 36%

PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

PARKING

112 REQUIRED SPACES @ 1 PER 5,000 SF
113 PARKING SPACES PROVIDED
56 PARKING SPACES
41 COMPACT PARKING SPACES (C)
11 CLEAN AIR VEHICLE PARKING SPACES (CAV)
7 FUTURE EV CHARGING SPACES (EV)
5 ADA ACCESSIBLE SPACES (ADA)

BICYCLE PARKING - 5% SHORT & LONG TERM
6 SHORT TERM SPACES (ST)
6 LONG TERM SPACES (LT)

Project Number: 19110.0000

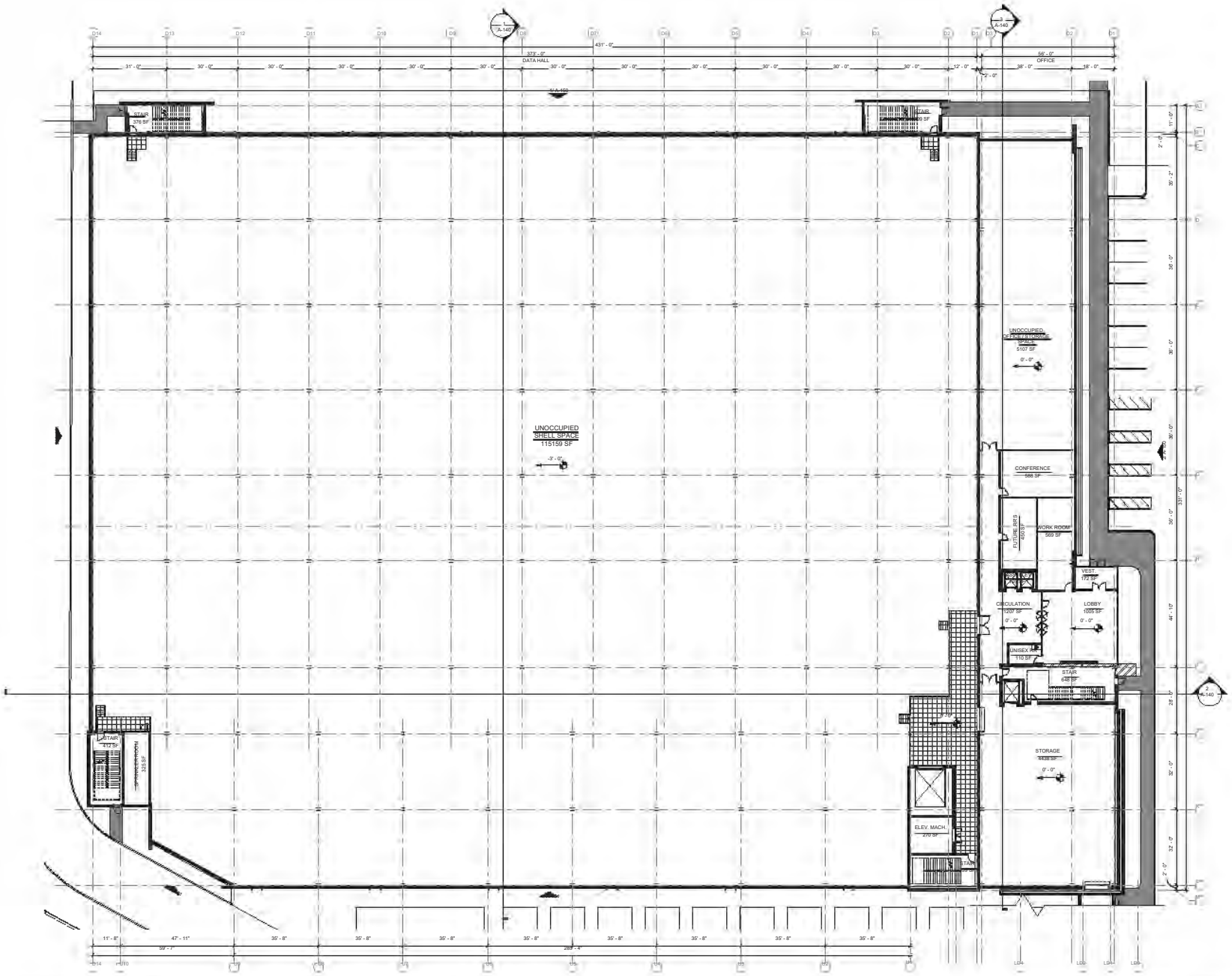
SKYBOX CORGAN RG CRITICAL kW

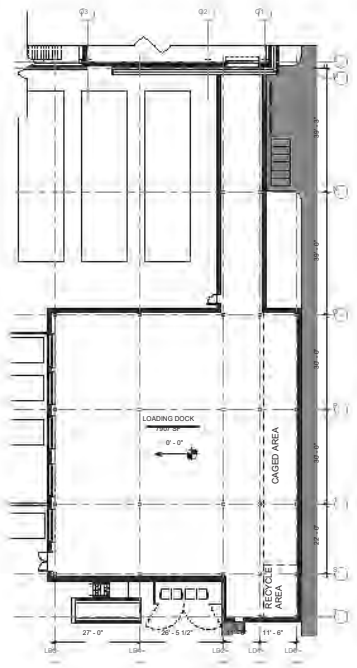
SITE PLAN

1" = 40'-0"
04.09.2020

DATA HALL
OFFICE

A-110





PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87'0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 870" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

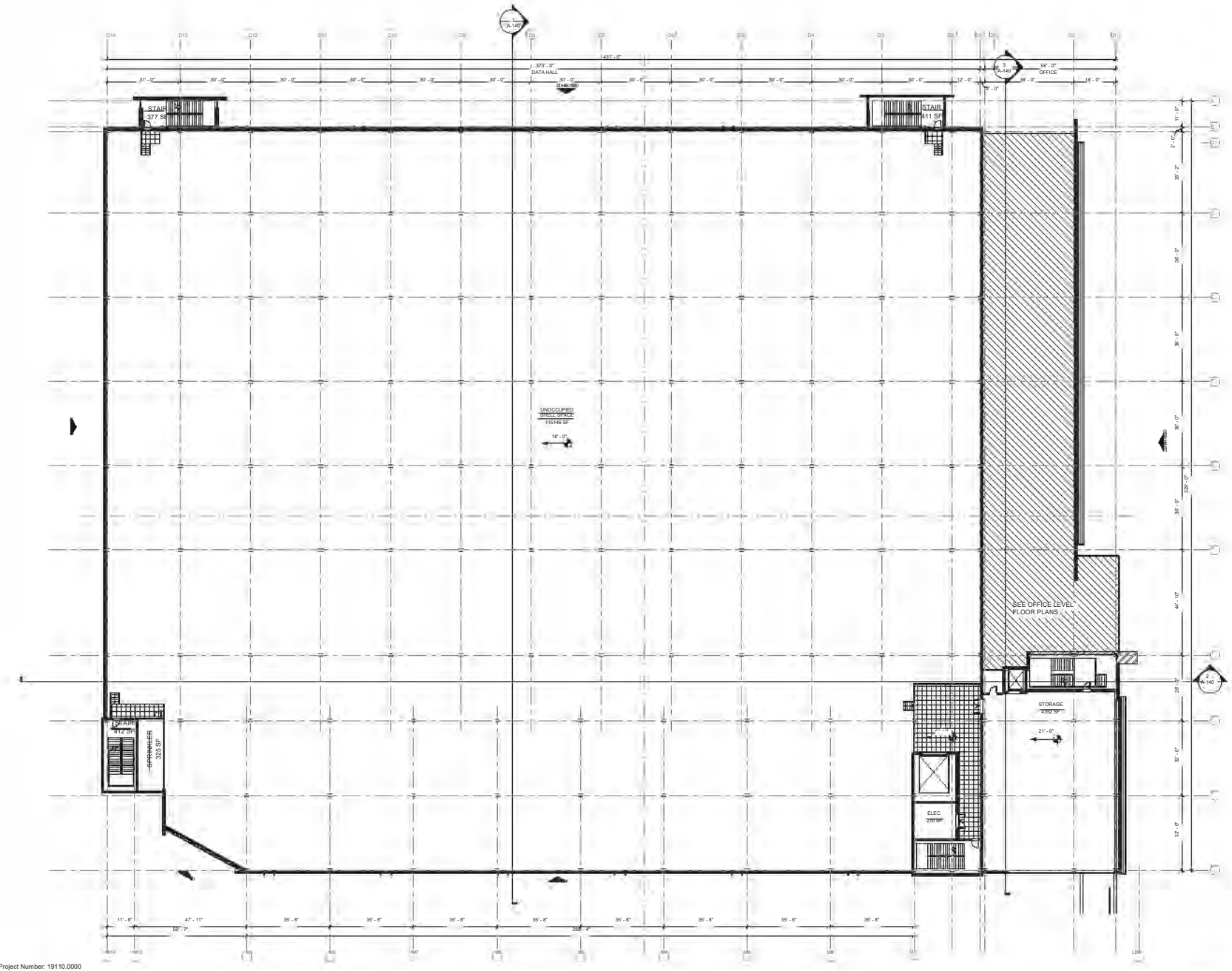
SKYBOX CORGAN RG CRITICAL kW

LEVEL 1 FLOOR PLAN

1/16" = 1'-0"
04.09.2020

DATA HALL OFFICE

A-121



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARAPET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

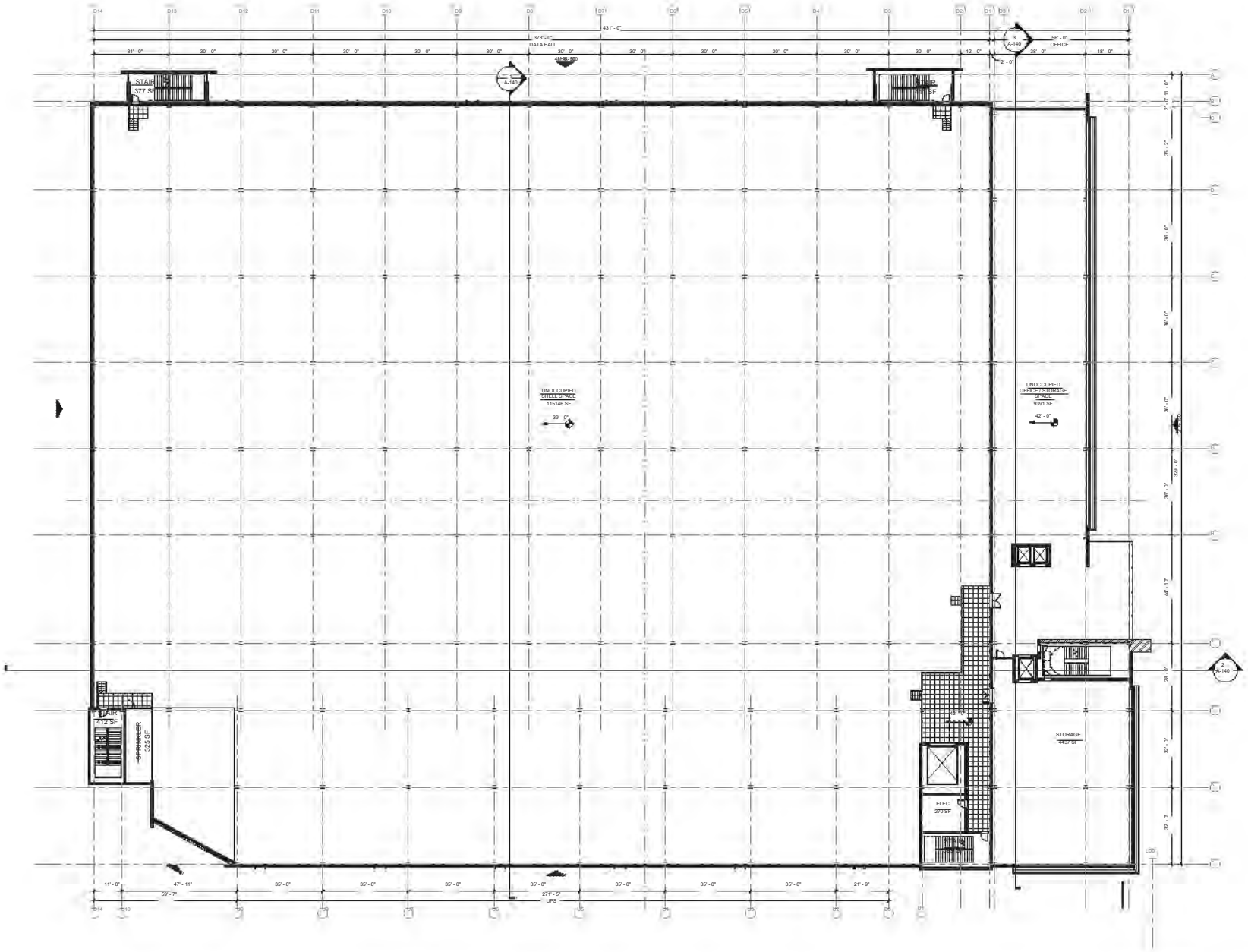
SKYBOX CORGAN RG CRITICAL kW

LEVEL 2 FLOOR PLAN

1/16" = 1'-0"
04.09.2020

DATA HALL

A-122



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

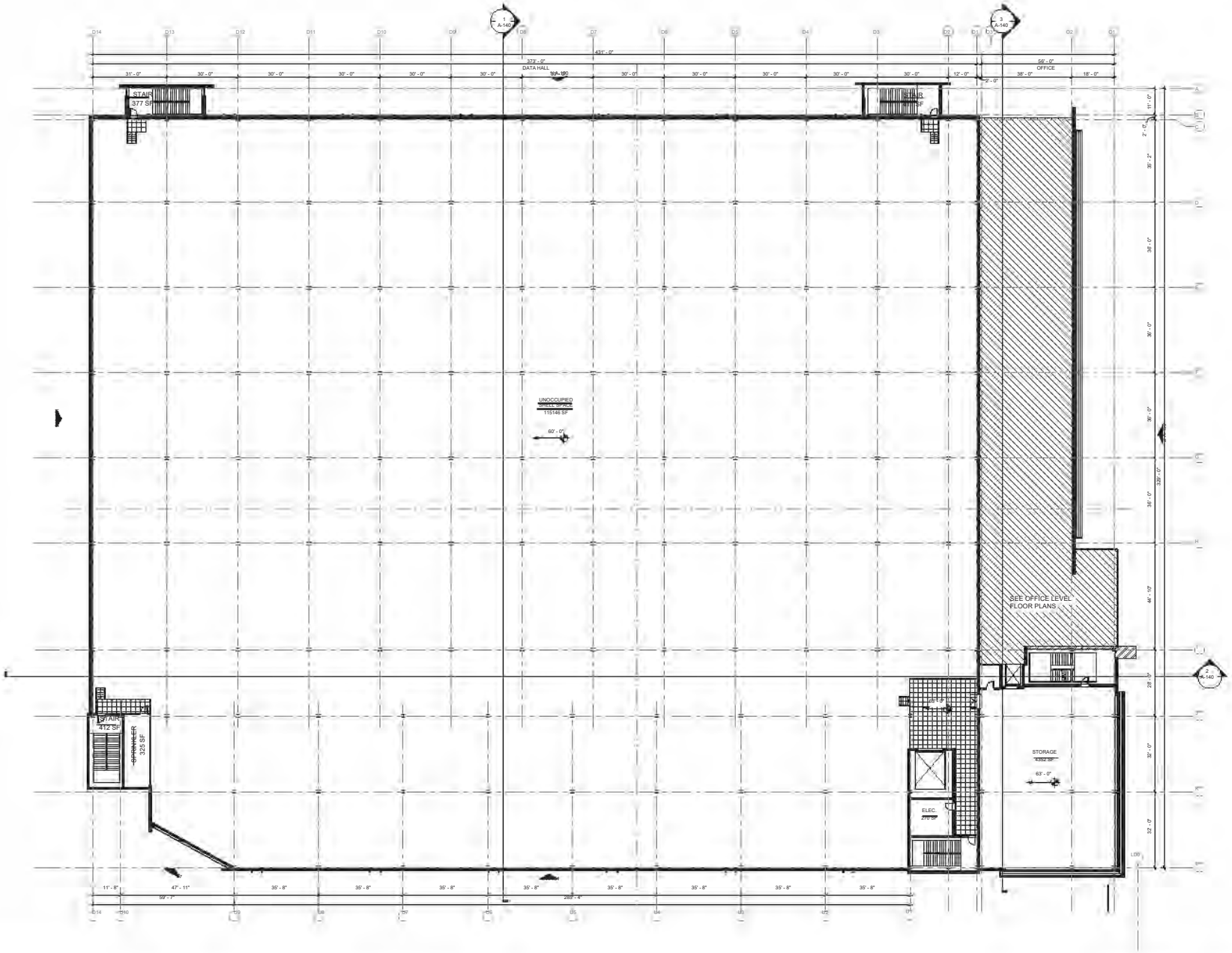
SKYBOX CORGAN RG CRITICAL kW

LEVEL 3 FLOOR PLAN

1/16" = 1'-0"
04.09.2020

DATA HALL

A-123



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 870" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

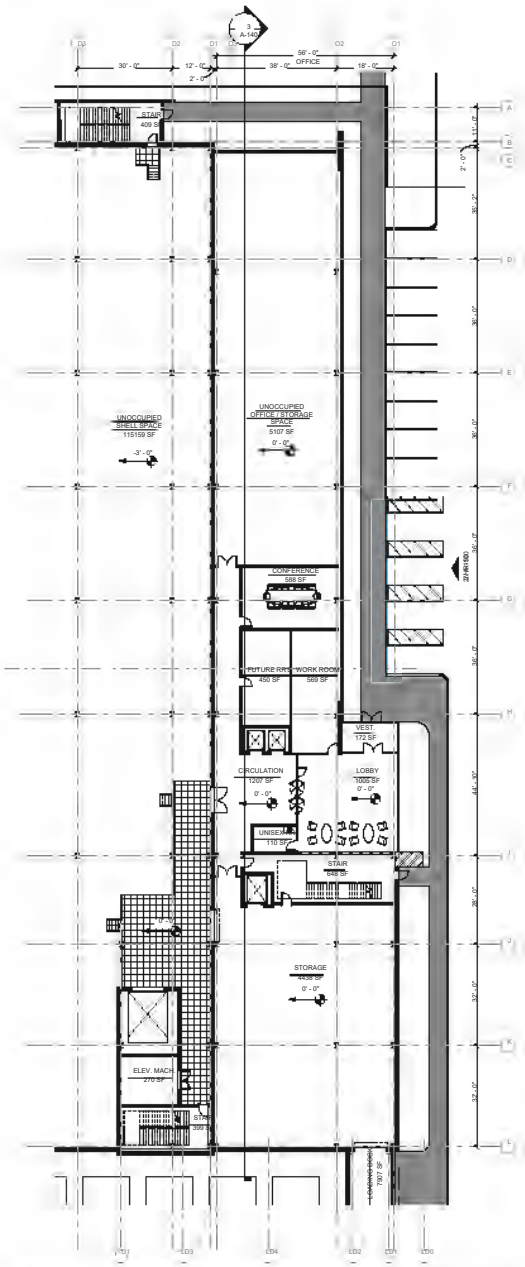
SKYBOX CORGAN RG CRITICAL kW

LEVEL 4 FLOOR PLAN

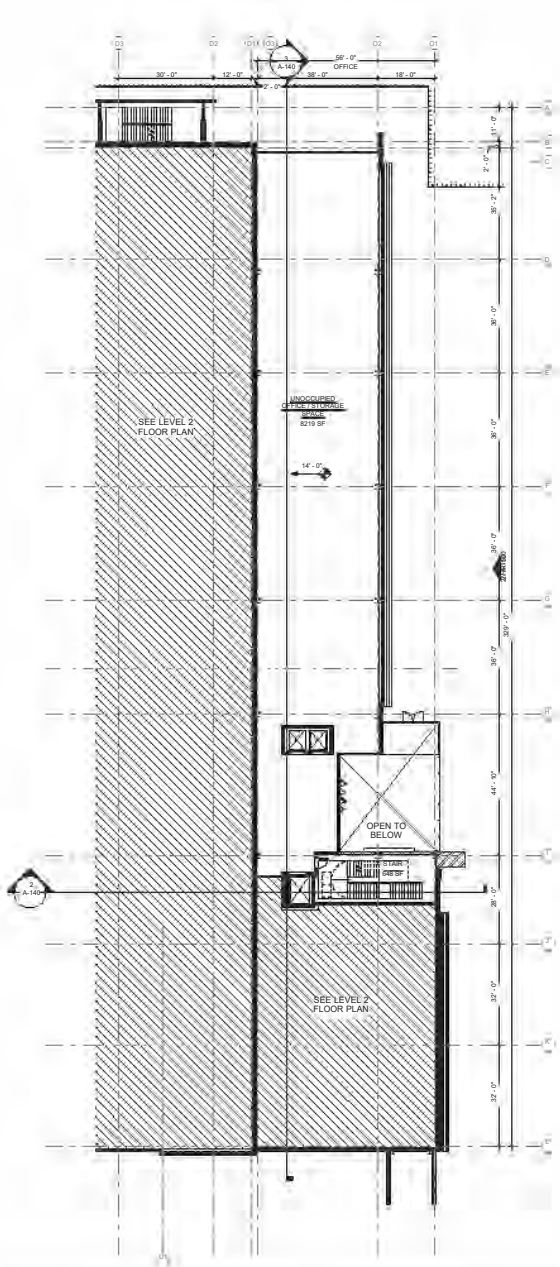
1/16" = 1'-0"
04.09.2020

DATA HALL | MECH | LOD

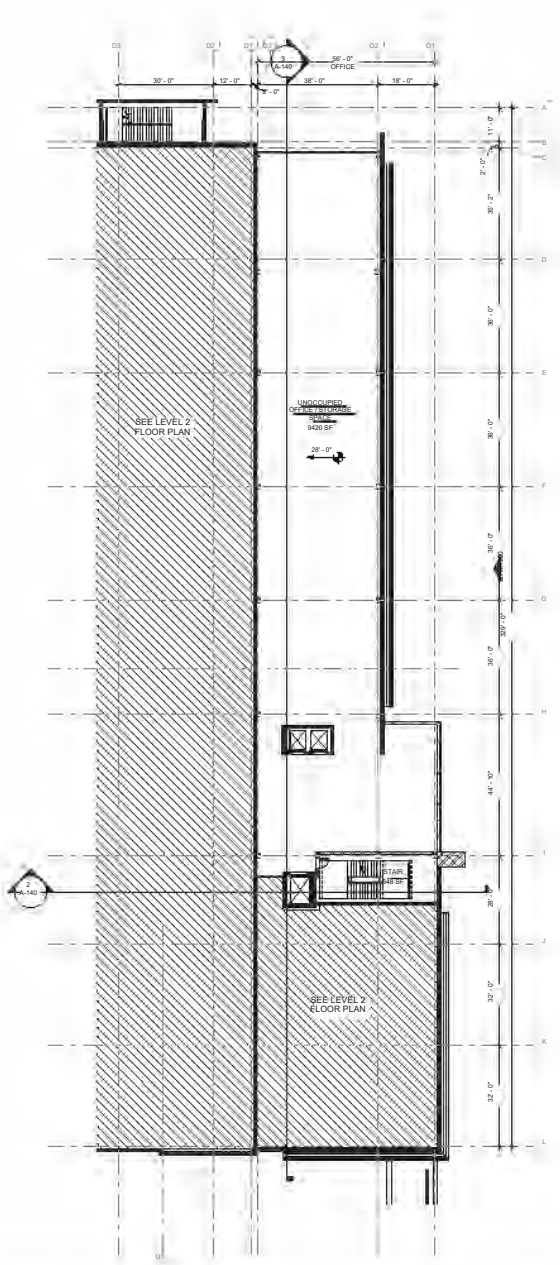
A-124



1 LEVEL 1 FLOOR PLAN - OFFICE
1/16" = 1'-0"



2 LEVEL 1.5 FLOOR PLAN - OFFICE
1/16" = 1'-0"



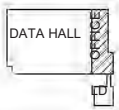
3 LEVEL 2.5 FLOOR PLAN - OFFICE
1/16" = 1'-0"

Project Number: 19110.0000

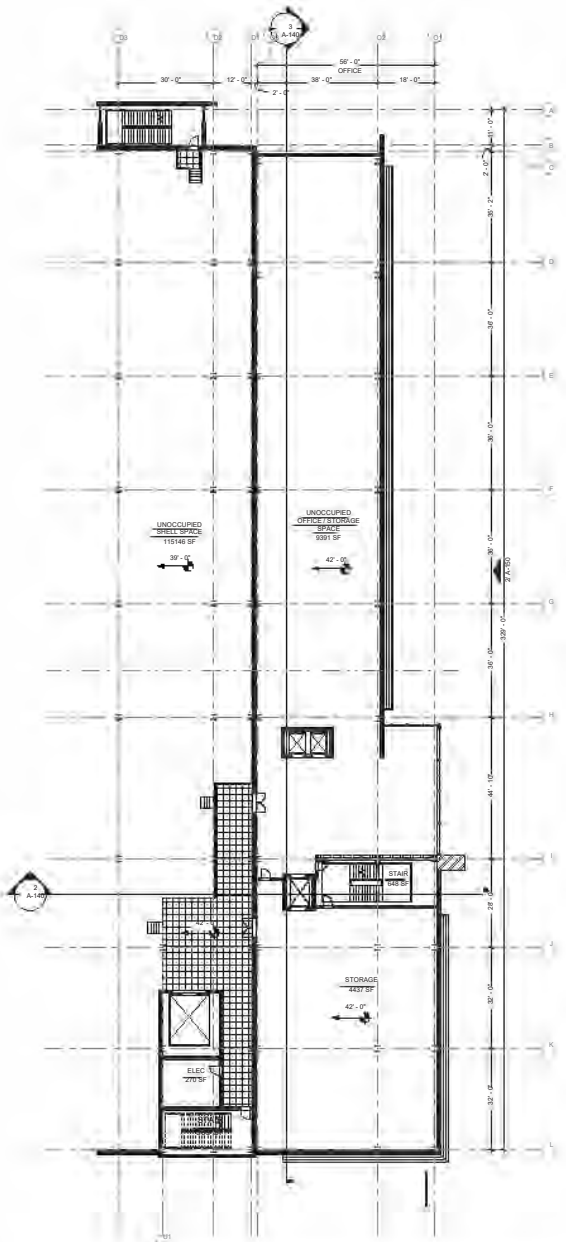
SKYBOX CORGAN RG CRITICAL kW

OFFICE LEVEL - FLOOR PLANS

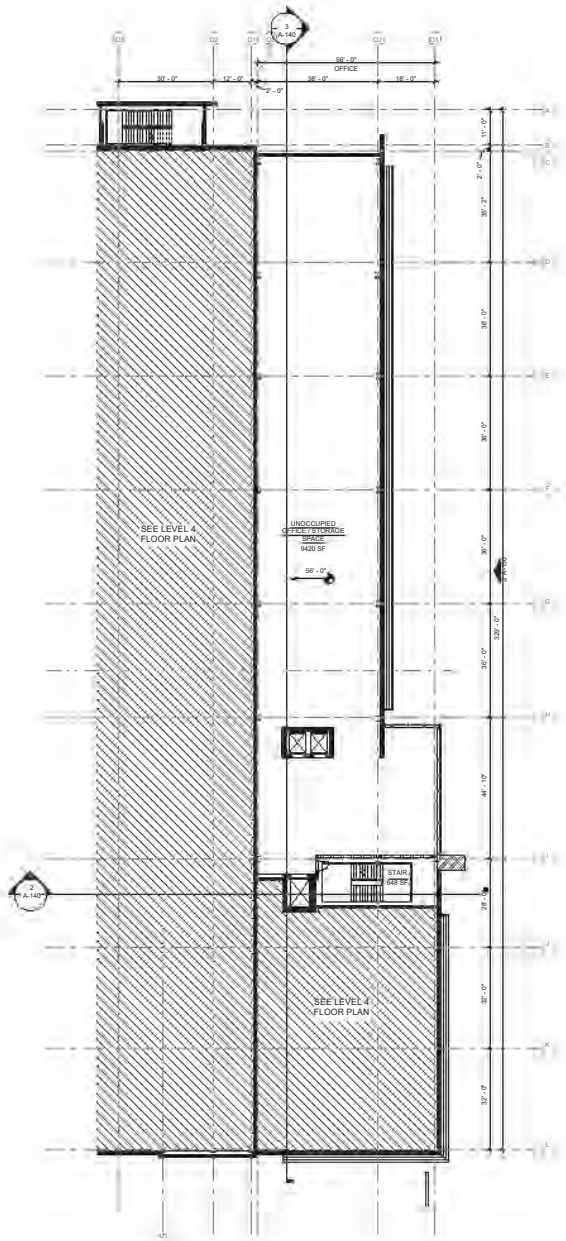
1/16" = 1'-0"
04.09.2020



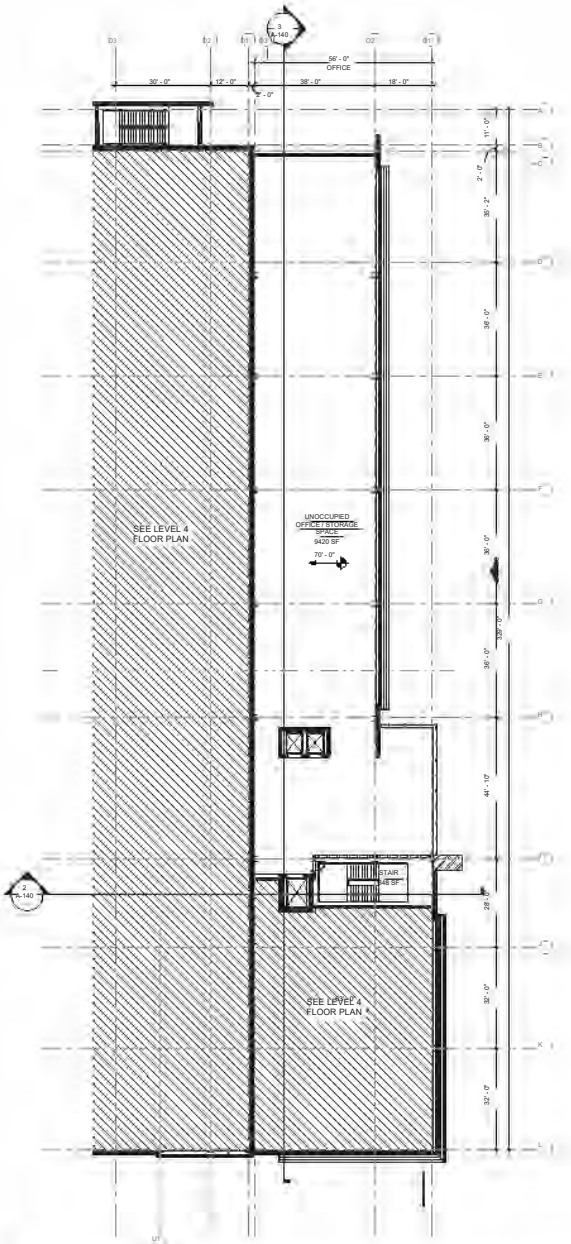
A-125



1 LEVEL 3 FLOOR PLAN - OFFICE
1/16" = 1'-0"



2 LEVEL 3.5 FLOOR PLAN - OFFICE
1/16" = 1'-0"



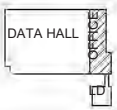
3 LEVEL 4.5 - FLOOR PLAN OFFICE
1/16" = 1'-0"

Project Number: 19110.0000

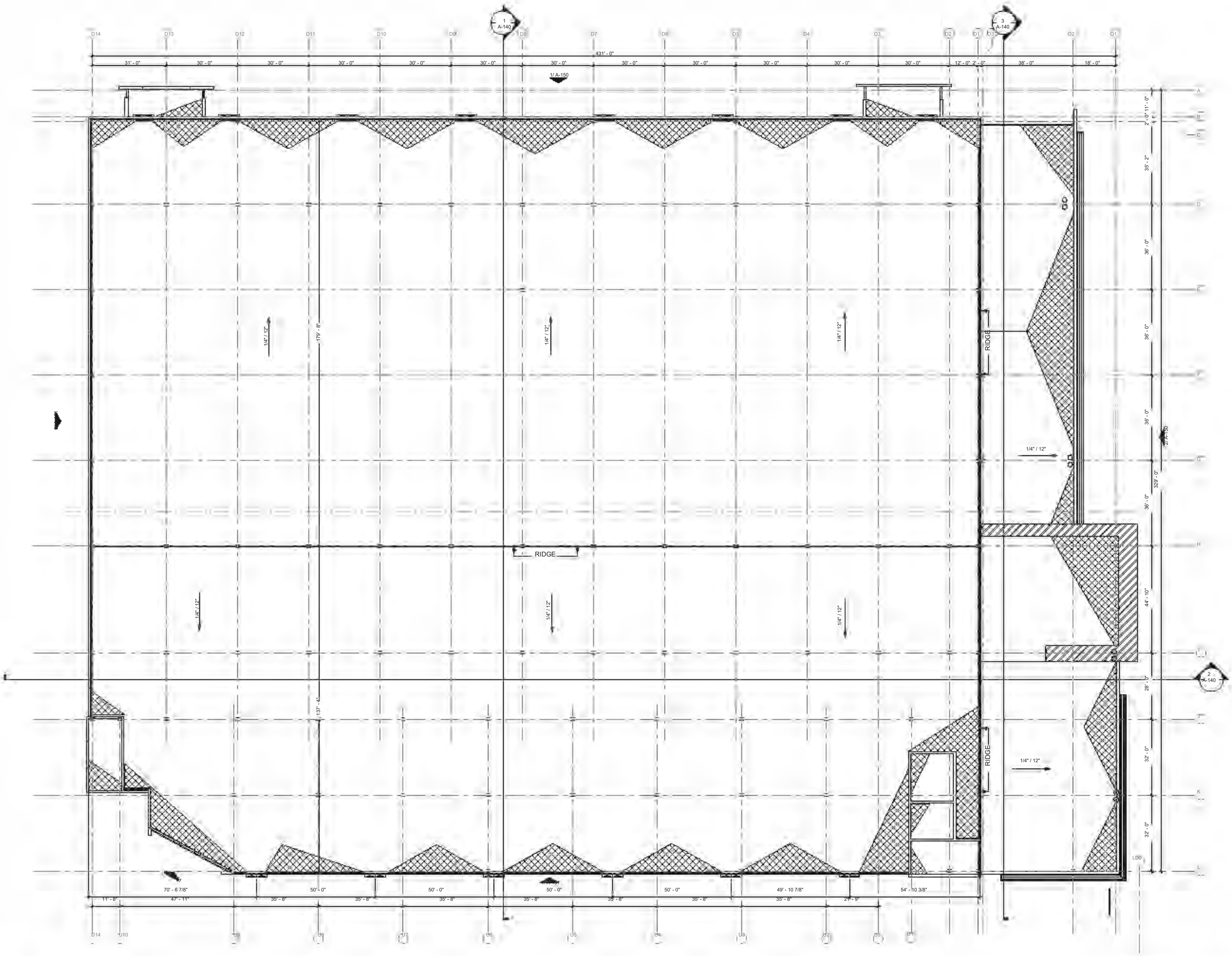
SKYBOX CORGAN RG CRITICAL kW

OFFICE LEVEL - FLOOR PLANS

1/16" = 1'-0"
04.09.2020



A-126



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA

BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF   GROSS - 472,920 SF±
PARAPET - 87' 0"   MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF   GROSS - 87,520 SF±
PARPAET - 87'0"   MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF

PROD. DATA HALL	- 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL	- 6 @ 19,780 SF = 118,680 SF
MECH GALLERY	- 24 @ 3,536 SF = 84,860 SF
UPS	- 30 @ 2,275 SF =68,250 SF
OPEN OFFICE	- 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC.	-118,970 SF

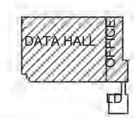
* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

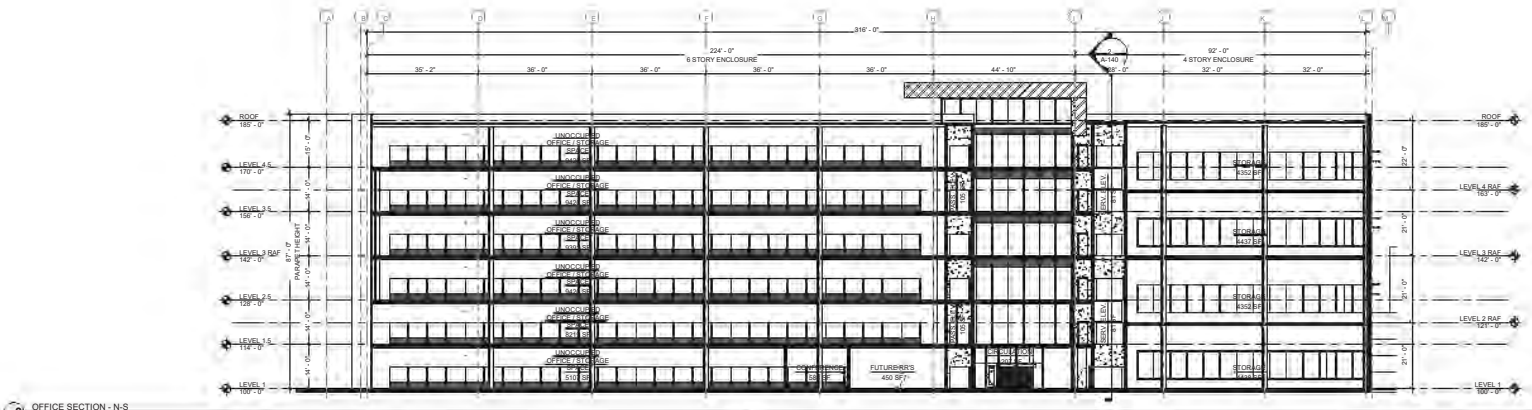
SKYBOX
CORGAN
CRITICAL
kW

ROOF PLAN

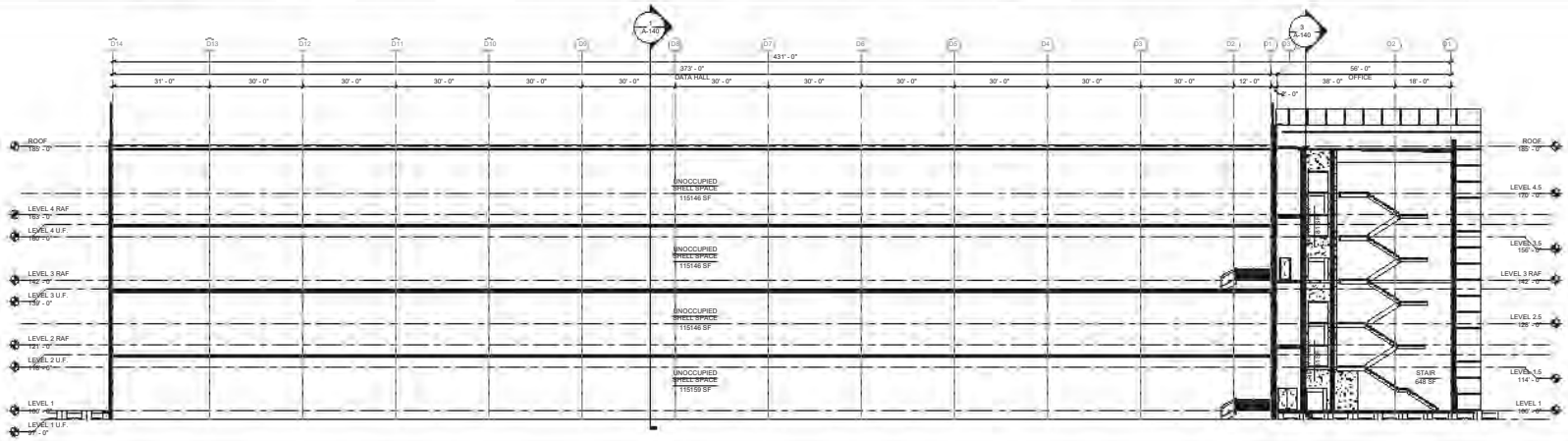
1/16" = 1'-0"
04.09.2020



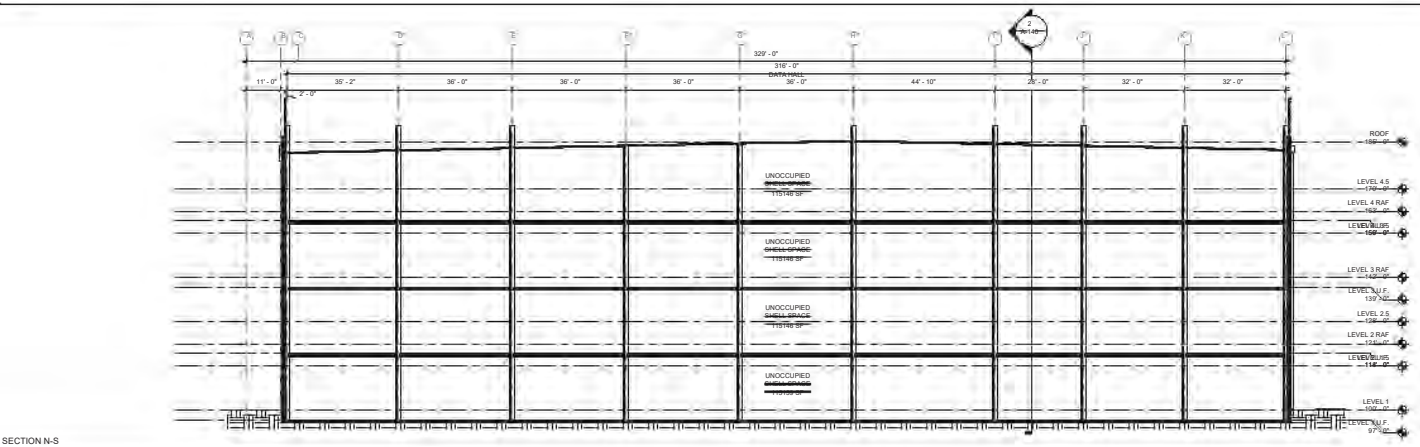
A-130



3 OFFICE SECTION - N-S
1/16" = 1'-0"



2 BUILDING SECTION E-W
1/16" = 1'-0"



1 DATA HALL SECTION N-S
N.T.S.

Project Number: 19110.0000

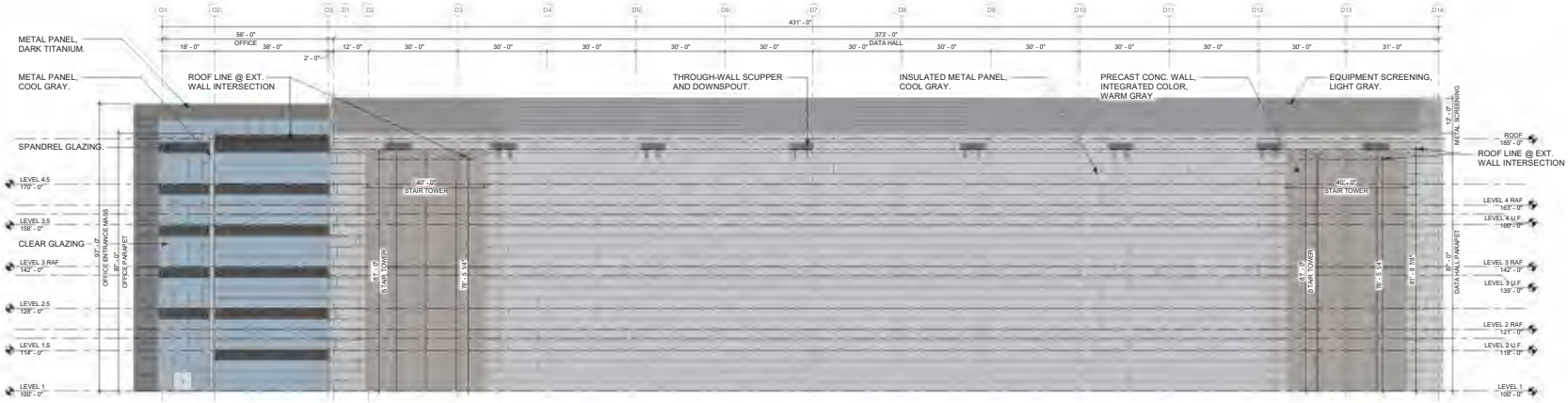
SKYBOX
CORGAN
RG
CRITICAL
kW

BUILDING SECTION

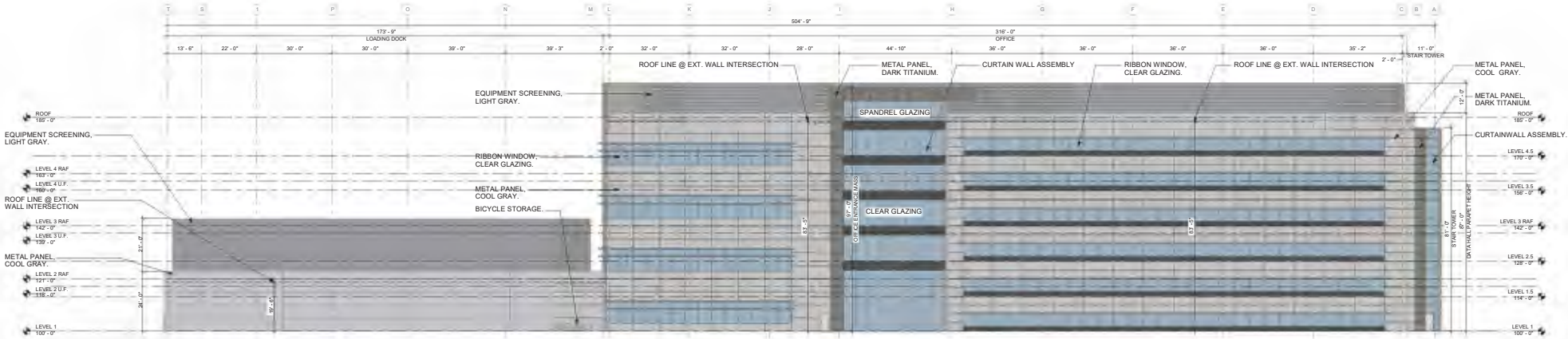
1/16" = 1'-0"
04.09.2020

DATA HALL

A-140



1 NORTH
1/16" = 1'-0"



2 EAST
1/16" = 1'-0"

Project Number: 19110.0000

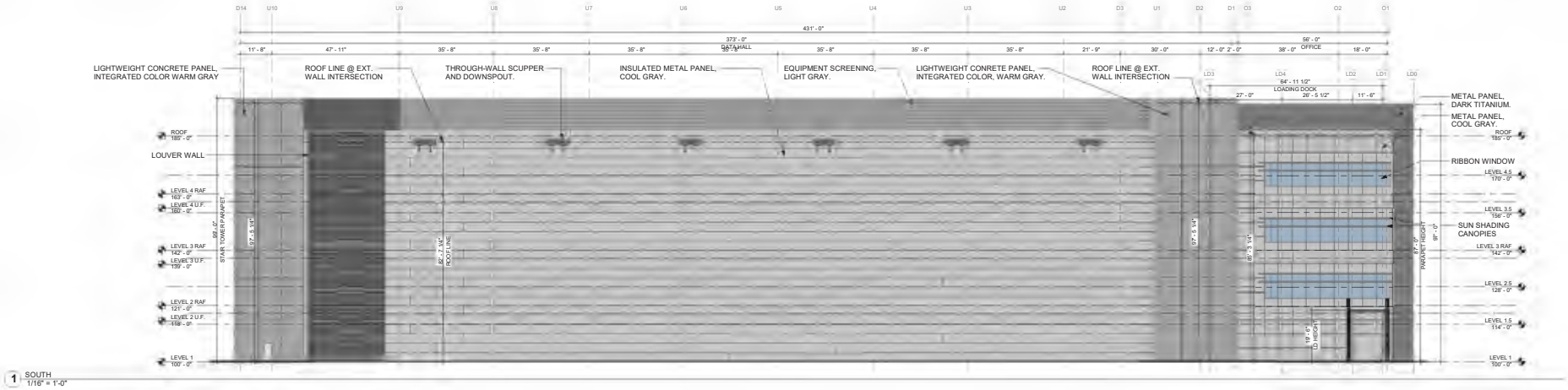
SKYBOX CORGAN RG CRITICAL kw REED ASSOCIATES

ELEVATIONS

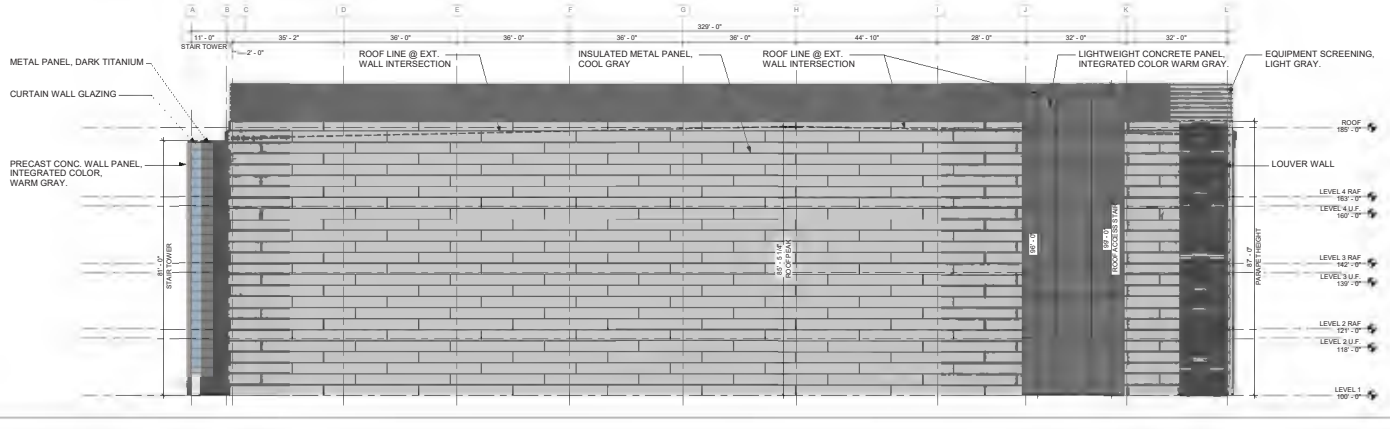
1/16" = 1'-0"
04.09.2020

DATA HALL OFFICE LD

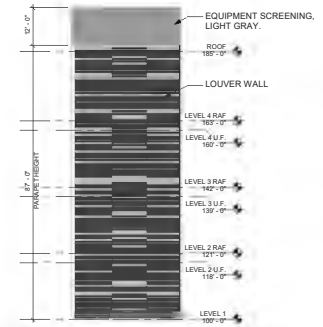
A-150



1 SOUTH
1/16" = 1'-0"



2 WEST
1/16" = 1'-0"



3 ELEVATION - SW CORNER
1/16" = 1'-0"

Project Number: 19110.0000

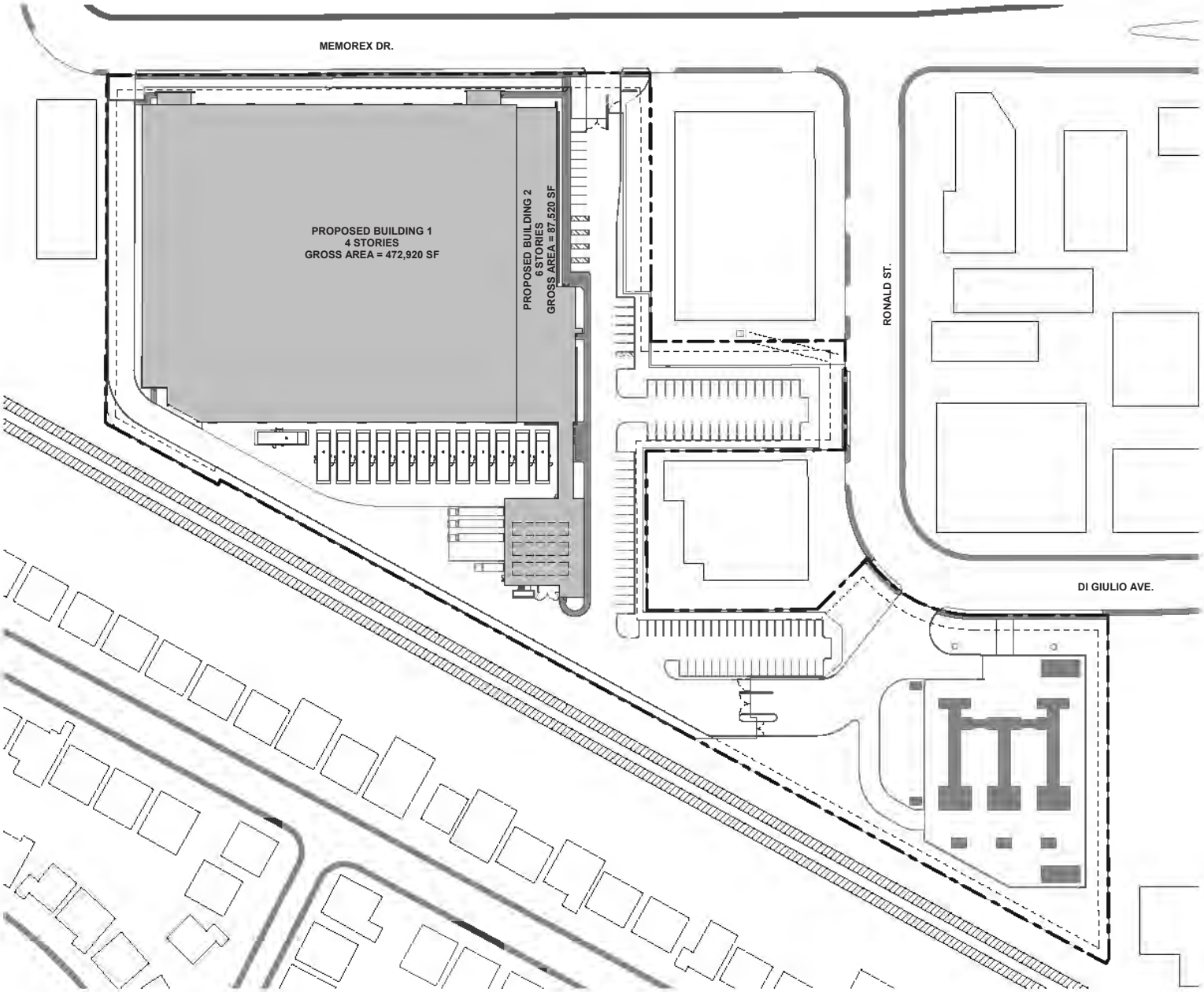
SKYBOX CORGAN RG CRITICAL kw REED ASSOCIATES

ELEVATIONS

1/16" = 1'-0"
04.09.2020

DATA HALL OFFICE LD

A-151



EXISTING

LOT SIZE - 400,038± SF - 9.18 ACRES

3 EXISTING BUILDINGS - TO BE DEMOLISHED

BUILDING 1 - FACTORY - 3 STORIES @ 116,679± SF BUILDING FOOTPRINT
BUILDING 2 - FACTORY - 2 STORIES @ 22,996± SF BUILDING FOOTPRINT
BUILDING 3 - STORAGE - 1 STORY @ 2,944± SF BUILDING FOOTPRINT

LOT COVERAGE - 142,619± SF - 36%

PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

PARKING

112 REQUIRED SPACES @ 1 PER 5,000 SF
113 PARKING SPACES PROVIDED
56 PARKING SPACES
41 COMPACT PARKING SPACES (C)
11 CLEAN AIR VEHICLE PARKING SPACES (CAV)
7 FUTURE EV CHARGING SPACES (EV)
5 ADA ACCESSIBLE SPACES (ADA)

BICYCLE PARKING - 5% SHORT & LONG TERM
6 SHORT TERM SPACES (ST)
6 LONG TERM SPACES (LT)

Project Number: 19110.0000

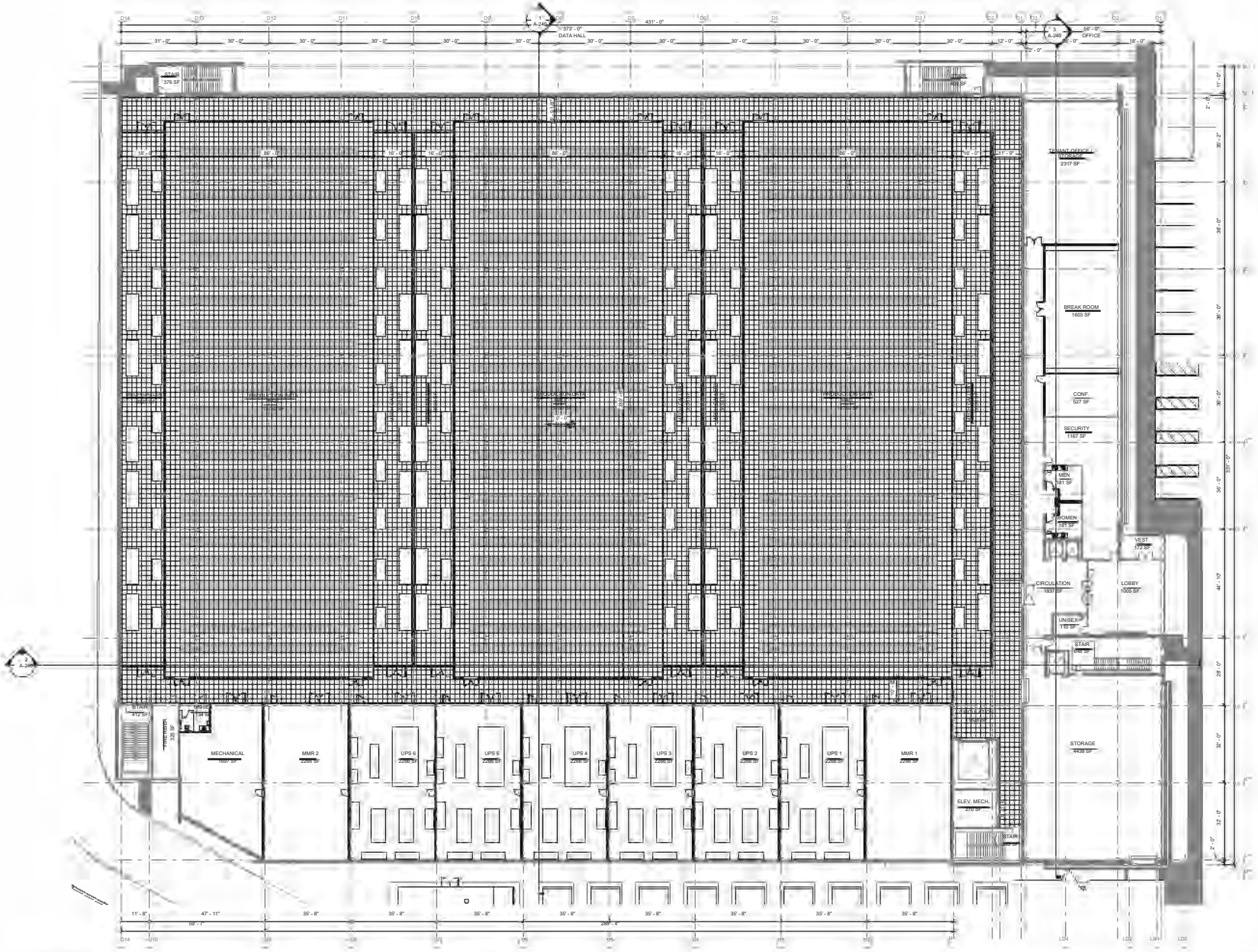
SKYBOX CORGAN RG CRITICAL kW

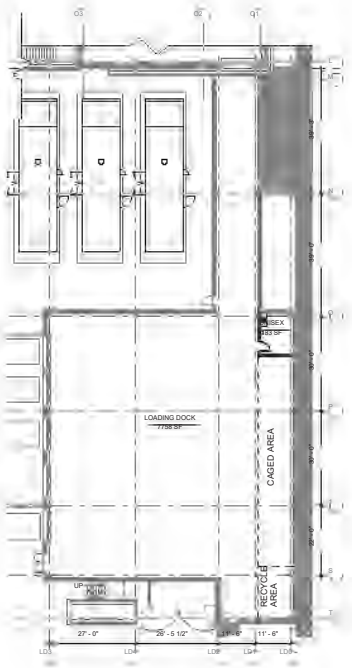
SITE PLAN - MP

1" = 40'-0"
04.09.2020

DATA HALL OFFICE UP

A-210





PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF

PROD. DATA HALL	- 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL	- 6 @ 19,780 SF = 118,680 SF
MECH GALLERY	- 24 @ 3,536 SF = 84,860 SF
UPS	- 30 @ 2,275 SF =68,250 SF
OPEN OFFICE	- 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC.	-118,970 SF

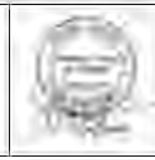
* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

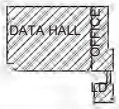
Project Number: 19110.0000

SKYBOX CORGAN RG CRITICAL kw

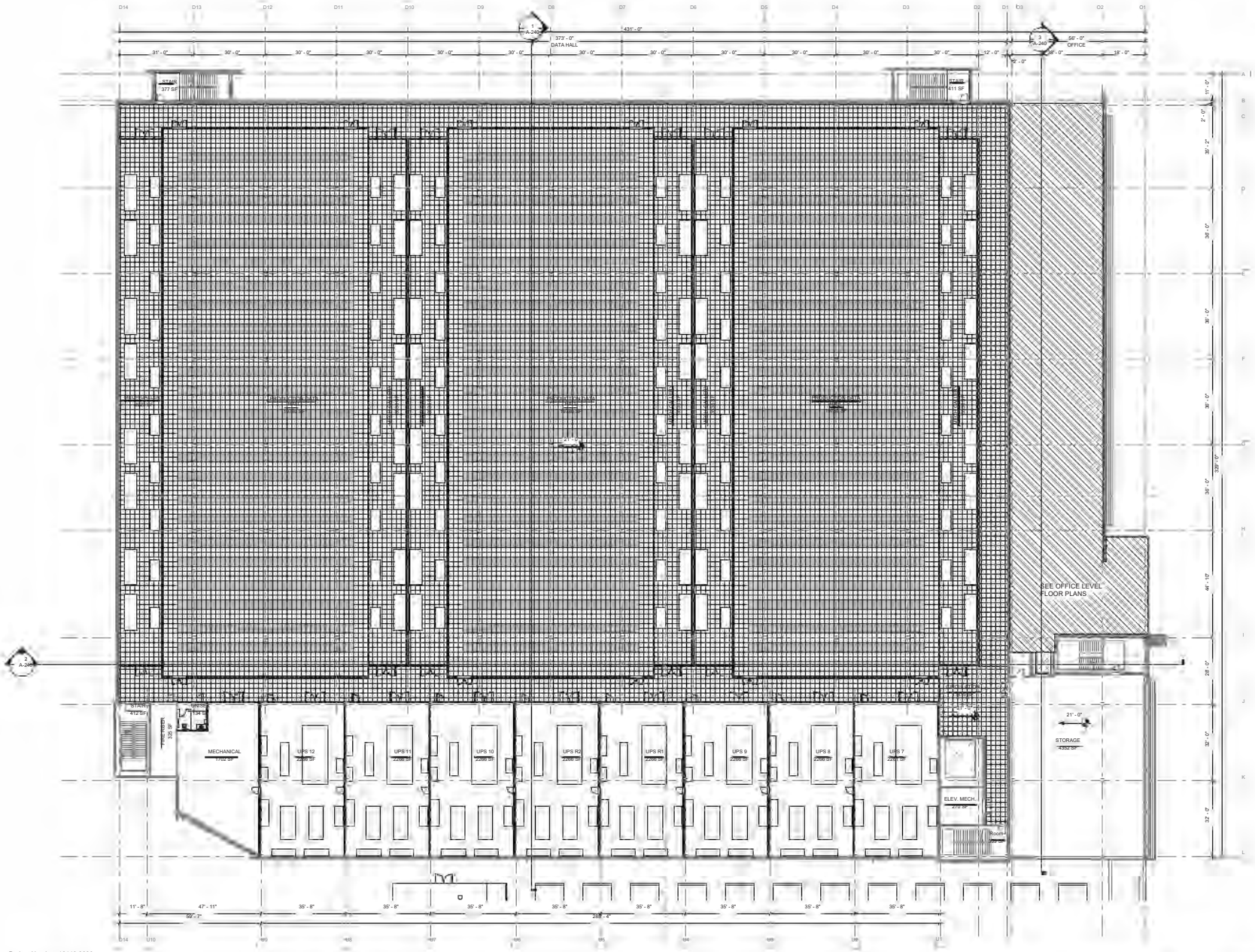
LEVEL 1 FLOOR PLAN - MP

1/16" = 1'-0"
04.09.2020





A-221



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87'0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

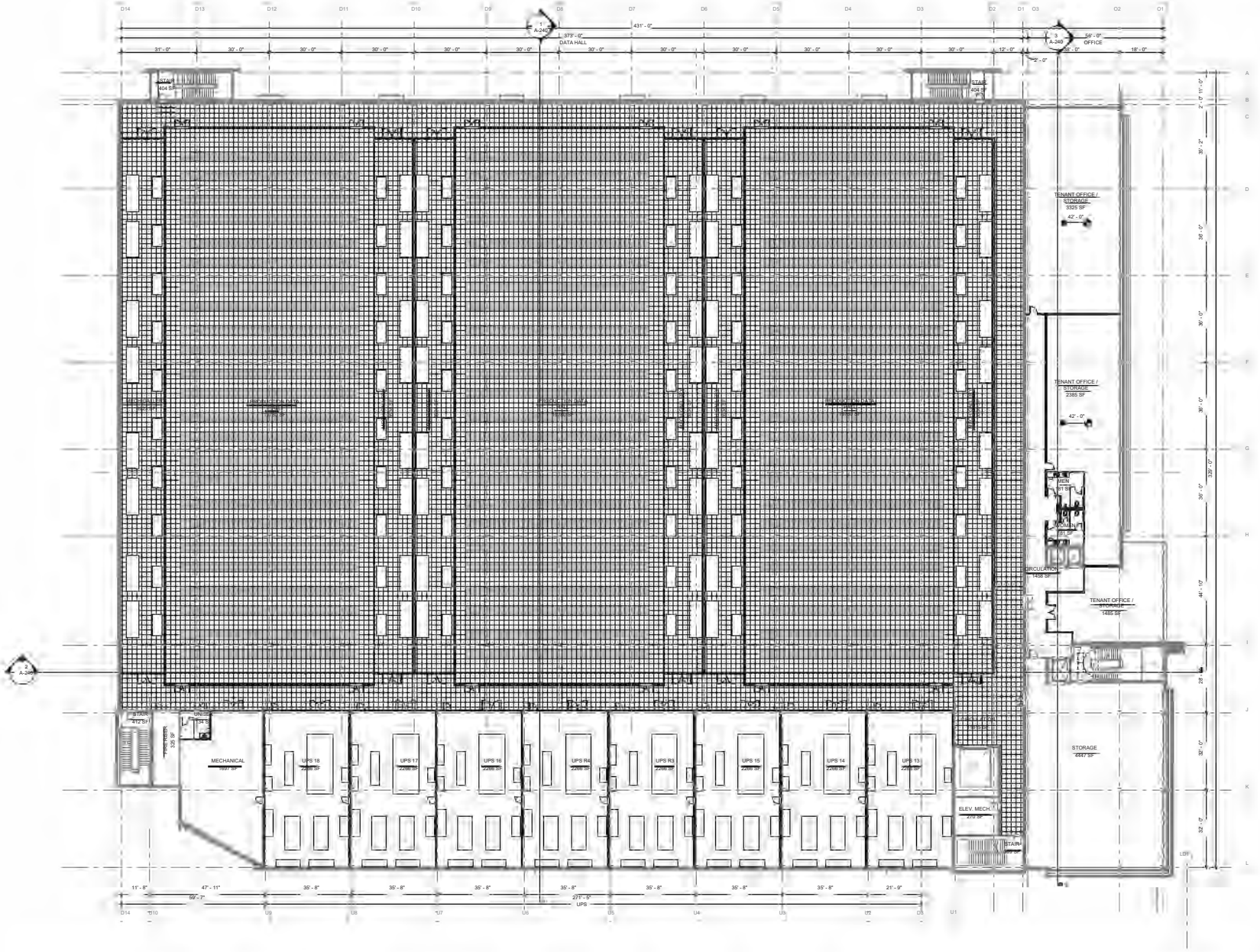
SKYBOX CORGAN RG CRITICAL kw

LEVEL 2 FLOOR PLAN - MP

1/16" = 1'-0"
04.09.2020

DATA HALL

A-222



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87'0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5, 100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

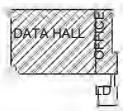
* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

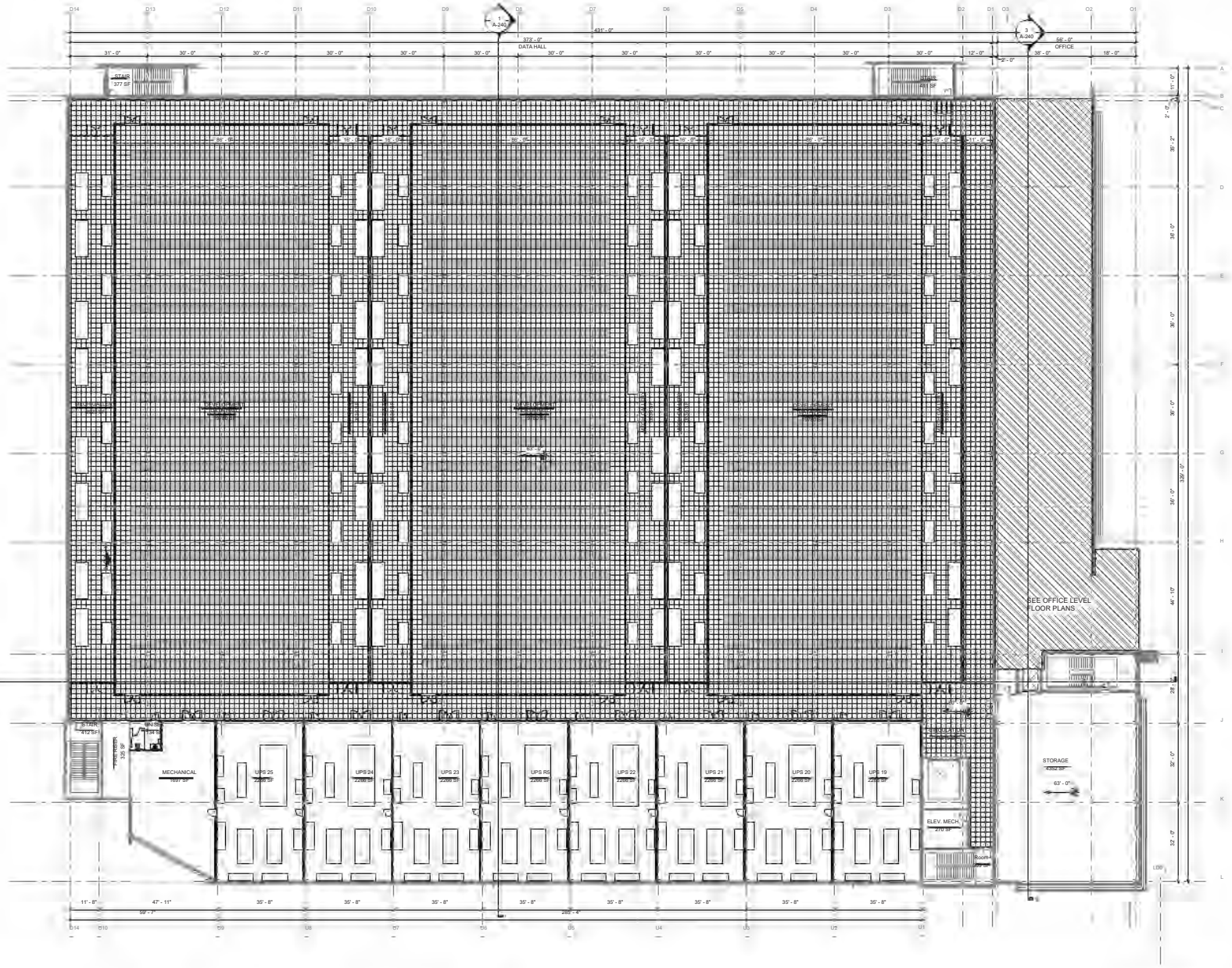
SKYBOX CORGAN RG CRITICAL kW

LEVEL 3 FLOOR PLAN - MP

1/16" = 1'-0"
04.09.2020



A-223



PROPOSED

LOT SIZE - 400,038± SF - 9.18 ACRES

2 PROPOSED BUILDINGS - TYPE IIA
BUILDING 1 - STORAGE II - 4 STORIES @ 118,230± SF GROSS - 472,920 SF±
PARAPET - 87' 0" MID SLOPE OF ROOF - 83' 6"
BUILDING 2 - STORAGE II - 6 STORIES @ 14,585± SF GROSS - 87,520 SF±
PARPAET - 87'0" MID SLOPE OF ROOF - 83' 6"

FAR - 1.40
LOT COVERAGE - 143,300± SF - 36%
OUTDOOR EQUIP STORAGE - 22,300± SF - 6%

GROSS BUILDING - 560,440± SF
PROD. DATA HALL - 6 @ 19,780 SF = 118,680SF
DEV. DATA HALL - 6 @ 19,780 SF = 118,680 SF
MECH GALLERY - 24 @ 3,536 SF = 84,860 SF
UPS - 30 @ 2,275 SF =68,250 SF
OPEN OFFICE - 5,100 SF + 8,220 SF + 4 @ 9420 SF = 51,000 SF
MISC. -118,970 SF

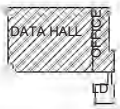
* PRODUCTION AND DEVELOPMENT DATA HALLS ARE IDENTIFIABLE BY THEIR BACKUP POWER GENERATION.
- PRODUCTION DATA HALL - BACKUP POWER GENERATION PROVIDED FOR 100% OF LOAD
- DEVELOPMENT DATA HALL - NO BACKUP POWER GENERATION PROVIDED.

Project Number: 19110.0000

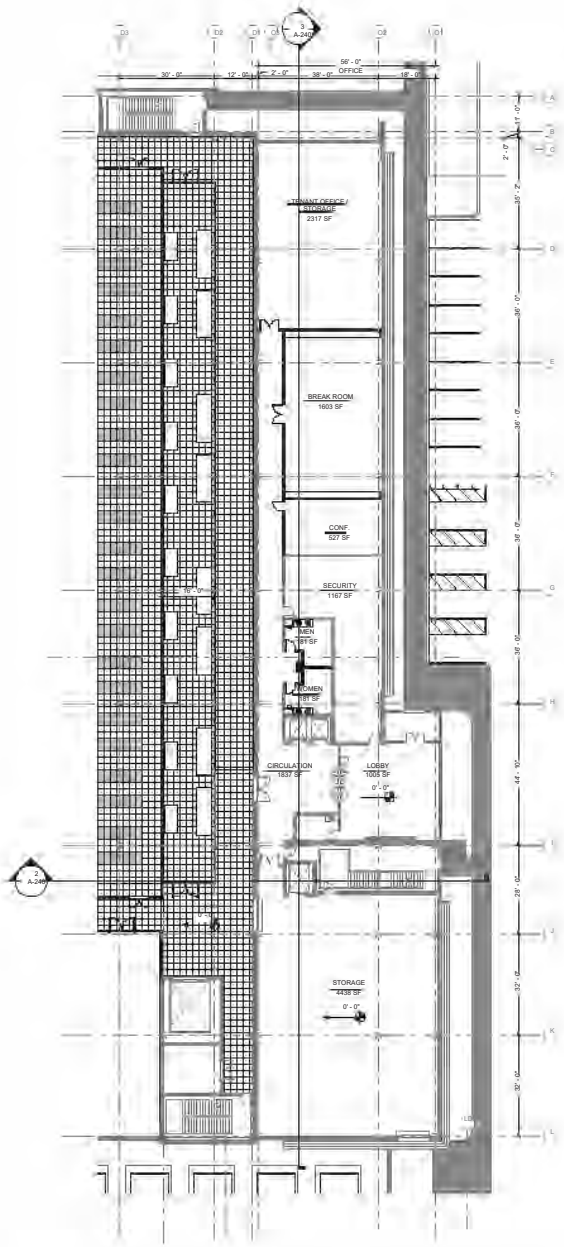
SKYBOX CORGAN RG CRITICAL kw

LEVEL 4 FLOOR PLAN - MP

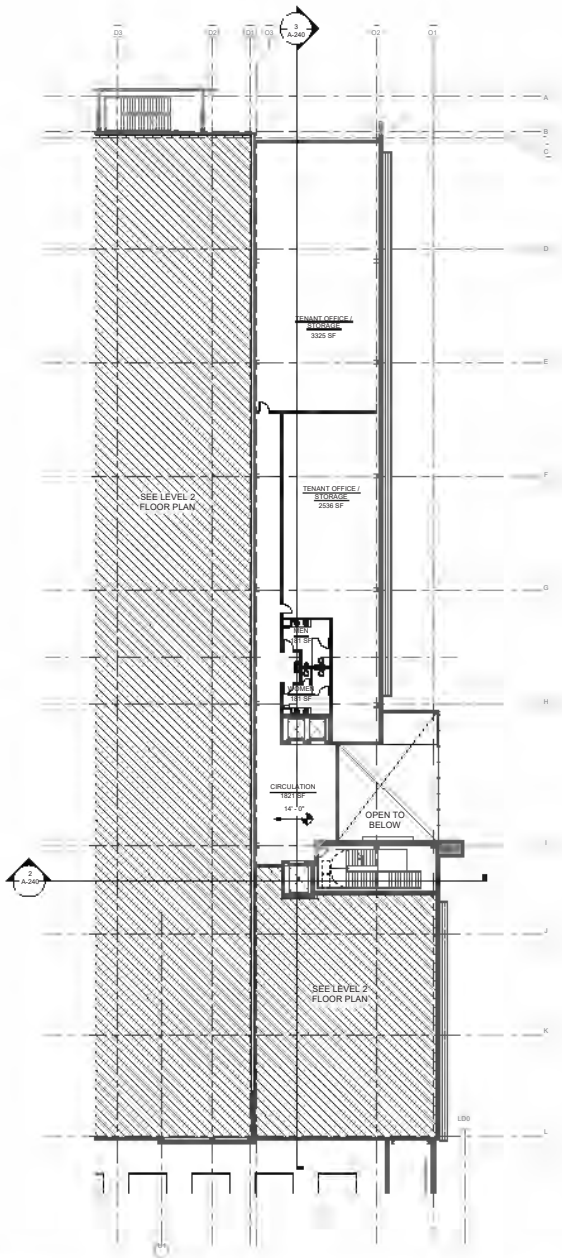
1/16" = 1'-0"
04.09.2020



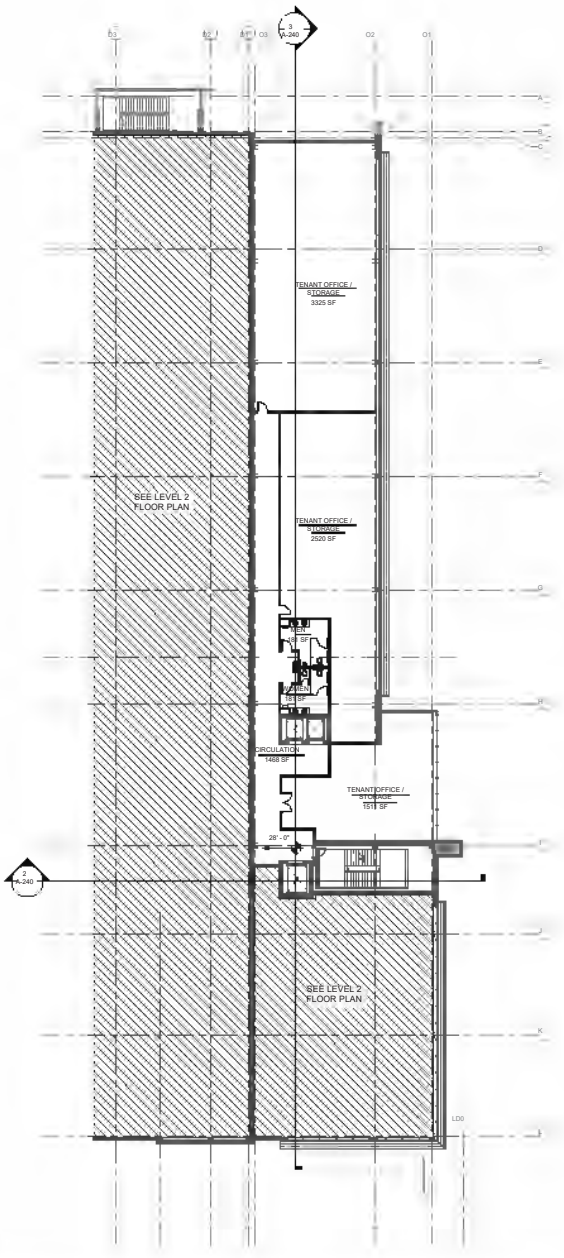
A-224



1 LEVEL 1 FLOOR PLAN - OFFICE - MP
1/16" = 1'-0"



2 LEVEL 1.5 FLOOR PLAN - OFFICE - MP
1/16" = 1'-0"



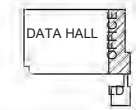
3 LEVEL 2.5 FLOOR PLAN - OFFICE - MP
1/16" = 1'-0"

Project Number: 19110.0000

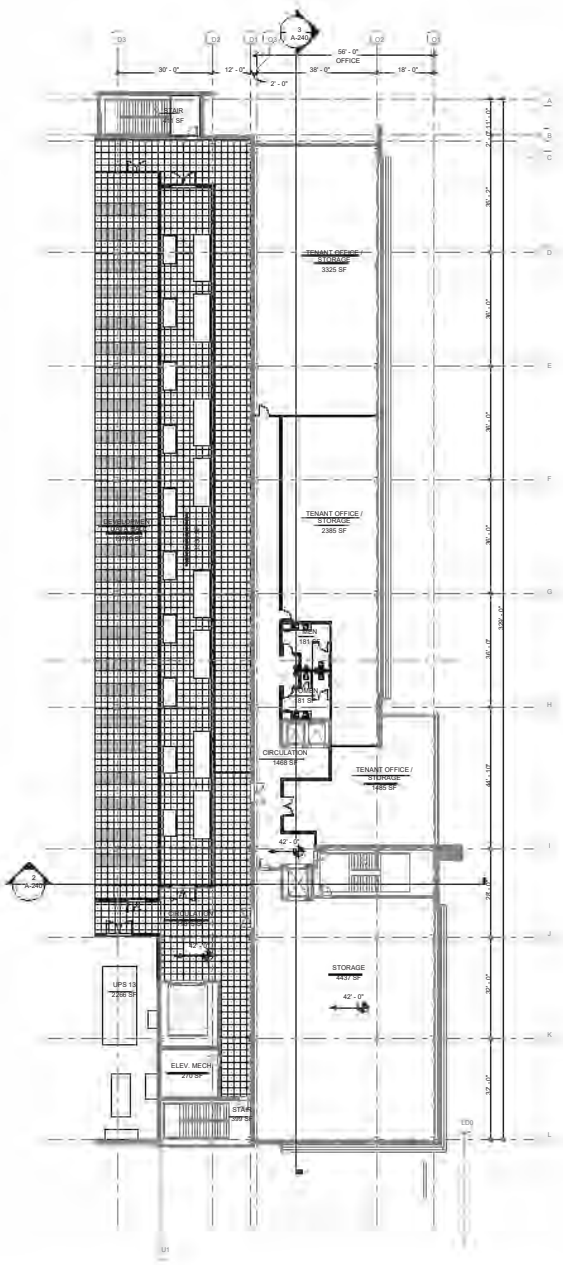
SKYBOX CORGAN RG CRITICAL kw

OFFICE LEVEL - FLOOR PLANS - MP

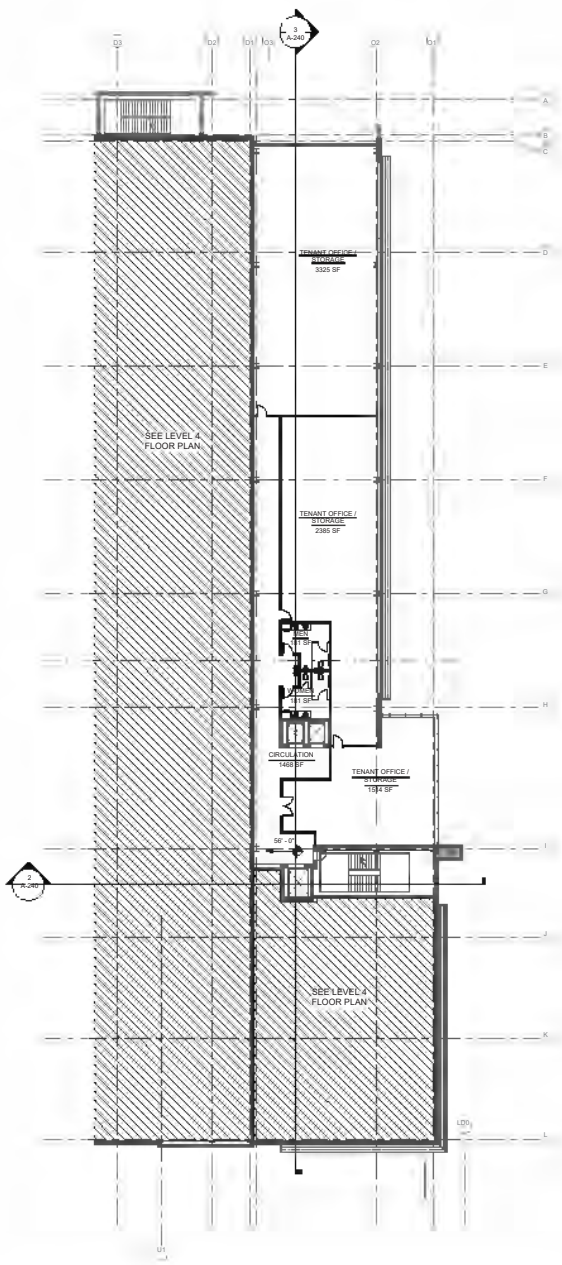
1/16" = 1'-0"
04.09.2020



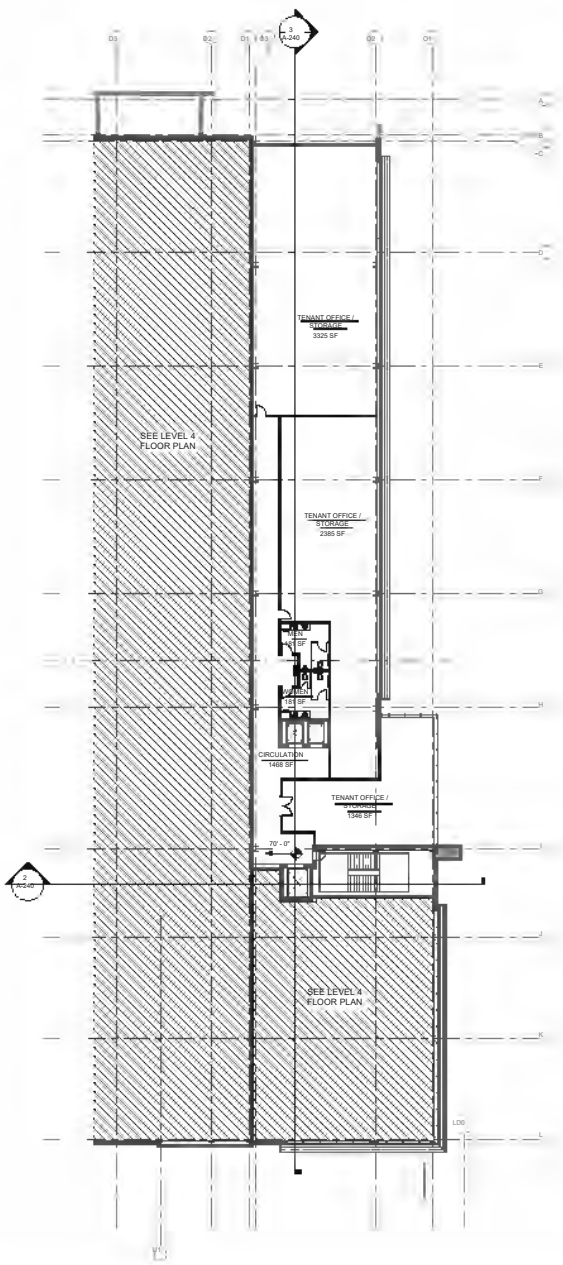
A-225



1 LEVEL 3 FLOOR PLAN - OFFICE - MP
1/16" = 1'-0"



2 LEVEL 3.5 FLOOR PLAN - OFFICE - MP
1/16" = 1'-0"



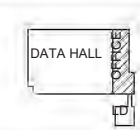
3 LEVEL 4.5 - FLOOR PLAN OFFICE - MP
1/16" = 1'-0"

Project Number: 19110.0000

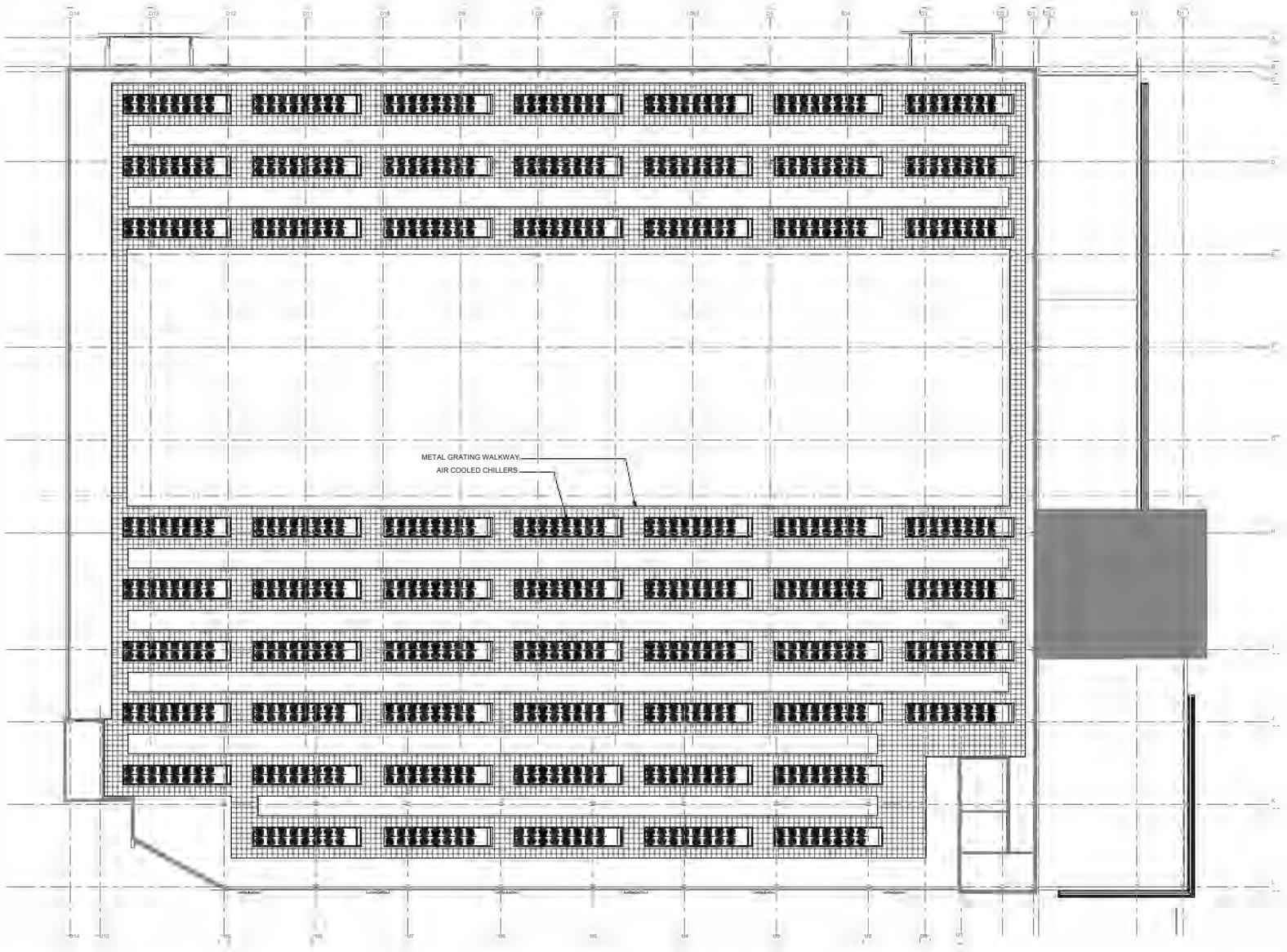
SKYBOX CORGAN RG CRITICAL kw

OFFICE LEVEL - FLOOR PLANS - MP

1/16" = 1'-0"
04.09.2020



A-226

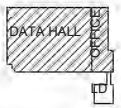


Project Number: 19110.0000

SKYBOX CORGAN RG CRITICAL kW

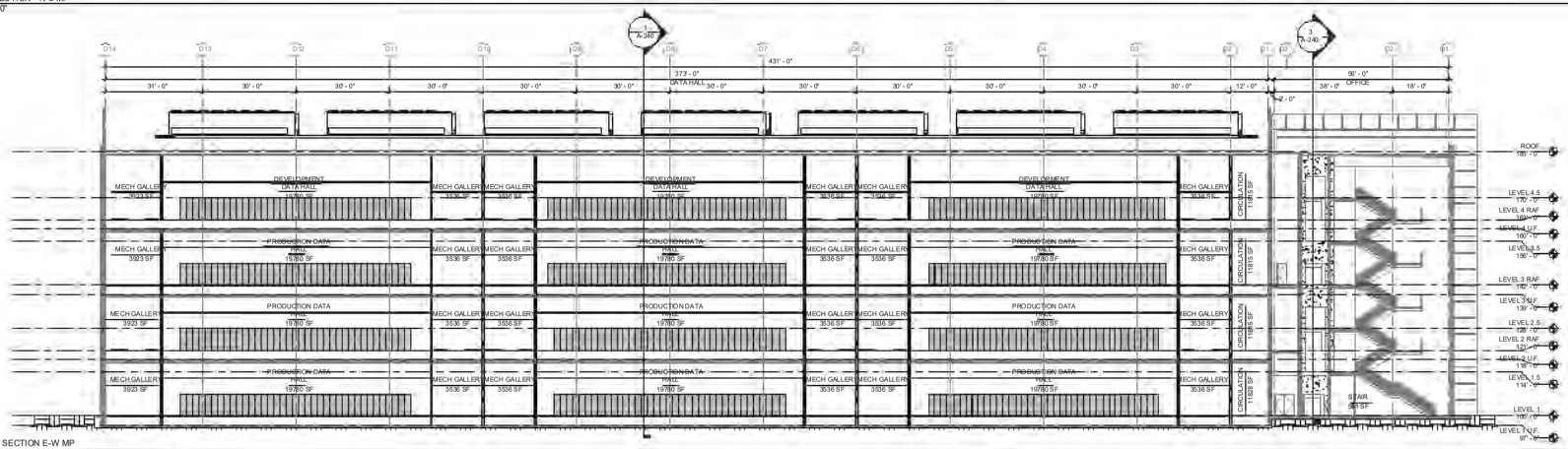
ROOFTOP EQUIPMENT PLAN - MP

1/16" = 1'-0"
04.09.2020

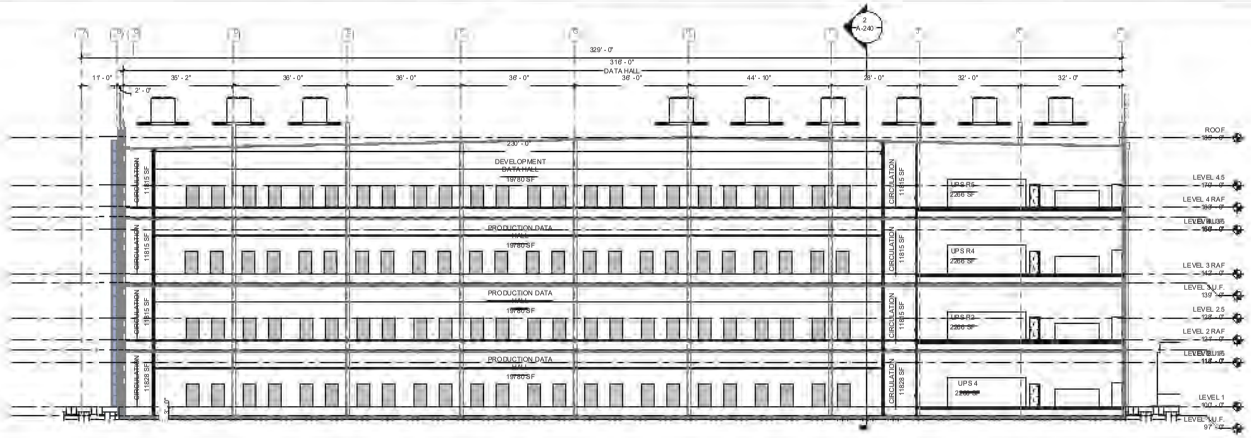


A-230

3 OFFICE SECTION - N-S MP
1/16" = 1'-0"



2 BUILDING SECTION E-W MP
1/16" = 1'-0"



1 BUILDING SECTION N-S MP
1/16" = 1'-0"

Project Number: 19110.0000

SKYBOX CORGAN RG CRITICAL kW

BUILDING SECTION - MP

1/16" = 1'-0"
04.09.2020

DATA HALL OFFICE UP

A-240

ONE LINE

CIRCUIT BREAKER 3 POLE OR AS NOTED

DRAW OUT CIRCUIT BREAKER 3 POLE OR AS NOTED

MEDIUM VOLTAGE LOAD INTERRUPTER

MEDIUM VOLTAGE FAULT INTERRUPTER

DISCONNECT SWITCH

FUSED DISCONNECT SWITCH 3 POLE OR AS NOTED

SURGE PROTECTIVE DEVICE

AC-DC INVERTER / RECTIFIER

DC-AC INVERTER

FEEDER TAG - REFER TO SCHEDULES

GROUND

FUSE - SIZE IN AMPERES

DIESEL GENERATOR

MOTOR OR OTHER EQUIPMENT ## INDICATES HORSEPOWER UON

3 PHASE TRANSFORMER DELTA PRIMARY Δ GROUNDED WYE SECONDARY

CURRENT TRANSFORMERS

POTENTIAL TRANSFORMER

POWER QUALITY METER

POWER METER

SURGE ARRESTER

TRANSFER SWITCH AUTOMATIC OR MANUAL AS INDICATED

PANEL BOARD - NAME, VOLTAGE, AND MCB CONFIGURATION AS NOTED

DISTRIBUTION PANEL, NAME AND RATINGS AS INDICATED

DC BATTERY

STATIC TRANSFER SWITCH

BREAKER ABLE TO CLOSE AND KEY WILL BE HELD CAPTIVE

BREAKER LOCKED OPEN AND KEY ABLE TO BE REMOVED

KEY TRANSFER BLOCK

TAP BOX

ADJUSTABLE SPEED DRIVE

CONTINUATION

KEYED NOTE CALLOUT

LIGHTING

SINGLE POLE SWITCH; WALL MTD. 48" AFF TO CL UON
LOWER CASE LETTER INDICATES SWITCHING ZONE

SWITCH-THREE WAY; WALL MTD. 48" AFF TO CL UON

SWITCH- FOUR WAY; WALL MTD. 48" AFF TO CL UON

DIMMING LIGHT SWITCH; WALL MTD. 48" AFF TO CL

SINGLE POLE SWITCH FOR CONTROL OF LIFE SAFETY LIGHTS; WALL MTD. 48" AFF TO CL

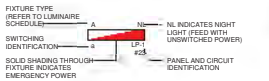
OCCUPANCY SENSOR WALL SWITCH; WALL MTD. 48" AFF TO CL "xs" INDICATES DUAL-SWITCH, DUAL-RELAY STYLE

OCCUPANCY SENSOR; CEILING MTD. UON

EMERGENCY SHUNT RELAY

NOTE: IN CORRIDORS, WHERE SWITCHES ARE INSTALLED ON DRYWALL WITH REVEALS, LOWER SWITCH MOUNTING HEIGHT TO 42" TO COORDINATE WITH REVEAL.

TYPICAL FIXTURE TAGS



POWER

RECEPTACLE - SIMPLEX, 18" AFF TO CL UON

RECEPTACLE - DUPLEX, 18" AFF TO CL UON

RECEPTACLE - DUPLEX, 6" TO CL ABOVE COUNTER UON

RECEPTACLE - DUPLEX, GFI, 18" AFF TO CL UON

RECEPTACLE - DOUBLE DUPLEX, 18" AFF TO CL UON

RECEPTACLE - DOUBLE DUPLEX, 6" TO CL ABOVE COUNTER UON

RECEPTACLE - DOUBLE DUPLEX, GFI, 18" AFF TO CL UON

SPECIALTY RECEPTACLE - TYPE AS NOTED.

FLUSH FLOOR BOX, ADDITIONAL REQUIREMENTS AS INDICATED

EQUIPMENT CONNECTION, REFER TO ELEC. EQUIP. AND CONTROL SCHEDULE

JUNCTION BOX / MISC. EQUIPMENT CONNECTION

DISCONNECT SWITCH (SAFETY SWITCH); X/X/X = AMP RATING/PHASE/FUSE SIZE
NF = NOT FUSED

DRY TYPE TRANSFORMER
F = FLOOR MOUNTED
C = CEILING MOUNTED (OVERHEAD)

FIRE ALARM

FIRE ALARM MANUAL PULL STATION - MOUNTED AT 48" AFF TO CENTER OF BOX

FIRE ALARM HORN/STROBE UNIT*

CEILING MOUNTED FIRE ALARM HORN/STROBE UNIT*

FIRE ALARM STROBE UNIT - MOUNTED AT 80" AFF TO THE BOTTOM OF THE LENS, OR CEILING MOUNTED WHERE INDICATED

SMOKE DETECTOR - PHOTOELECTRIC UON. MOUNTED TO CEILING OR STRUCTURAL DECK UON.

HEAT DETECTOR, COMBINATION RATE-OF-RISE / 135 DEG F UON

DUCT TYPE SMOKE DETECTOR WITH HOUSING**

ADDRESSABLE MONITORING MODULE***

ADDRESSABLE CONTROL MODULE

ASSD SAMPLING POINT

SUBSCRIPT TYPE BF - BELOW RAISED FLOOR

SUBSCRIPT TYPE AC - ABOVE SUSPENDED CEILING, OR AT STRUCTURE WHERE NO CEILING PROVIDED

FIRE ALARM CONTROL PANEL; MOUNTED AT 60" AFF TO CENTER OF BOX

FIRE ALARM REMOTE ANNUNCIATOR CABINET; MOUNTED AT 60" AFF TO CENTER OF BOX

NOTIFICATION APPLIANCE CIRCUIT PANEL

AIR SAMPLING SMOKE DETECTOR CONTROL PANEL; MOUNTED AT 60" AFF TO CENTER OF BOX UNLESS OTHERWISE NOTED

REMOTE LED / TEST STATION FOR DUCT DETECTOR

* ALL AUDIBLE DEVICES SHALL BE MUTLI-TAP dB; LEVEL SHALL BE HIGHEST TAP UON.

** DUCT DETECTORS ARE FURNISHED BY MECHANICAL CONTRACTOR, MOUNTED BY MECHANICAL CONTRACTOR, AND WIRED BY ELECTRICAL CONTRACTOR

*** FLOW, TAMPER AND PRESSURE SWITCHES ARE PROVIDED BY SPRINKLER CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR

AIR SAMPLING SMOKE DETECTOR

BEAM TYPE SMOKE DETECTOR - RECEIVER

BEAM TYPE SMOKE DETECTOR - TRANSMITTER

AUDIBLE NOTIFICATION FOR FIRE ALARM

HEAT DETECTOR - RATE OF RISE

HEAT DETECTOR - LINE TYPE

HEAT DETECTOR - FIXED TEMPERATURE

GROUNDING

GROUND BAR

EQUIPMENT GROUND CONNECTION

FUTURE EQUIPMENT GROUND CONNECTION

GROUND ROD

GROUND TEST WELL

UNDERGROUND EXOTHERMIC WELD

PEDESTAL BOND

GROUND LOOP

EQUIPMENT GROUNDING OVERHEAD

EQUIPMENT GROUNDING UNDER SLAB

LIGHTNING PROTECTION

CLASS 1 AIR TERMINAL, 1/2" DIA. SOLID ALUMINUM WITH SAFETY TIP.
TYPE "A" UNLESS OTHERWISE NOTED:
- TYPE "A": 18"L, ADHERED TO INNER SIDE OF PARAPET
- TYPE "B": 24"L, ADHERED DIRECTLY TO ROOF

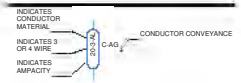
CLASS 1 ALUMINUM LIGHTNING CONDUCTOR, MAIN SIZE EXCEPT WHERE BONDING CONDUCTORS ARE EXPLICITLY ALLOWED BY CODE :
- MAIN CONDUCTOR: MINIMUM 102 LB PER 1000', 26 STRANDS #14 AWG
- BONDING CONDUCTOR: MINIMUM 40 LB PER 1000', 10 STRANDS #14 AWG

COPPER DOWN CONDUCTOR TO BURIED GROUND RING, CONCEALED IN SEAM OF PRE-CAST BUILDING PANELS

ABBREVIATIONS

A	AMPERES
A	ALTERNATE
AB	ABOVE
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AIC	AMPERE INTERRUPTING CAPACITY
ANN	ANNUNCIATOR
ASSD	AIR SAMPLING SMOKE DETECTION
AT	AMPERE TRIP
ASTS	AUTOMATIC STATIC TRANSFER SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BC/BF	DEVICES MOUNTED BELOW SUSPENDED CEILING AND BELOW RAISED FLOOR
BATT	BATTERY
BF	BELOW RAISED FLOOR
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
C-BUS	CABLE BUS
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CO	COMPANY
COL	COLUMN
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION, CONNECT
COORD	COORDINATE
CRAH	COMPUTER ROOM AIR HANDLER
CUH	CABINET UNIT HEATER
CT	CURRENT TRANSFORMER
CU	COPPER
Δ	DELTA CONNECTION
DB	DECIBEL
DC	DIRECT CURRENT
DET	DETECTOR
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL
DWG	DRAWING
EA	EACH
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EL	ELEVATION
ELEC	ELECTRICAL)
ELU	EMERGENCY LIGHT UNIT
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
E.O.	ELECTRONICALLY OPERATED
EPMS	ELECTRICAL POWER MONITORING SYSTEM
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER INSULATION
EQUIP	EQUIPMENT
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WALL HEATER
EXIST	EXISTING
EXT	EXTERIOR
F	FUSE(D)
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLA	FULL LOAD AMPERES
FLR	FLOOR
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FTR	FUTURE
FURN	FURNISH
G, GND	GROUND
GALV	GALVANIZE(D)
GEN	GENERATOR
GFEP	GROUND FAULT EQUIPMENT PROTECTION (30MA)
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GPS	GLOBAL POSITIONING SYSTEM
HD	HEAVY DUTY
HGT	HEIGHT
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HO	HIGH OUTPUT
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
IC	INTERCOMMUNICATION
ID	IDENTIFY, IDENTIFICATION
IMC	INTERMEDIATE METAL CONDUIT
INCAN	INCANDESCENT
INSUL	INSULATION
IPS	INTERRUPTIBLE POWER SUPPLY
IR	PASSIVE INFRARED
JB	JUNCTION BOX
JCT	JUNCTION
KILO	THOUSAND
KA	KILO AMPERES
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KVAR	KILOVARS
KV	KILOVOLTS
KW	KILOWATTS
LHD	LINEAR HEAT DETECTOR
LI	LONG TIME INSTANTANEOUS
LTG	LIGHTING
LT(S)	LIGHTS
MA	MILLIAMPERE
MAINT	MAINTAINED
MAN	MANUAL
MAX	MAXIMUM
MC	METAL CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCS	MOLDED CASE SWITCH
MCCB	MOLDED CASE CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MEGA	MILLION
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MO	MANUALLY OPERATED
MTD	MOUNT(IED)
MTR	MOTOR
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MW	MEGA WATTS
N	NORTH
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NTF	NEUTRAL TIME PROTOCOL
NTS	NOT TO SCALE
OCPD	OVERCURRENT PROTECTIVE DEVICE
OH	OVERHEAD
OHD	OVERHEAD DOOR
OL	OVERLOAD
OS	OCCUPANCY SENSOR
P	POLE(S)
P	PREFERRED
PC	PHOTOCELL
PB	PUSHBUTTON
PDU	POWER DISTRIBUTION UNIT
PF	POWER FACTOR
PFR	PREFERRED
PL	PILOT LIGHT
PNL	PANEL
PQM	POWER QUALITY METER
PM	POWER METER
PR	PAIR
PREP	PREPARED
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
PWR	POWER
ΔPH	PHASE
QTY	QUANTITY
RECEPT	RECEPTACLE
RECT	RECTIFIER
REFR	REFRIGERATOR
RGS	RIGID GALVANIZED STEEL CONDUIT
RHW	EPR INSULATED WIRE
RM	ROOM
RMC	RIGID METALLIC CONDUIT
RPP	REMOTE POWER PANEL
SCH	SCHEDULE
SEC	SECONDARY
SFL	SUB-FEED LUGS
SKRU	SOLENOID KEY RELEASE UNIT
SHT	SHEET
ST	SHUNT TRIP
SPC	SPACE
SPKR	SPEAKER
SPR	SPARE
SQ	SQUARE
SS	STAINLESS STEEL
STP	SHIELDED TWISTED PAIR
SUSP	SUSPEND(ED)
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T	TRAY
TYP	TYPICAL
U	ULTRASONIC
UC	UNDER COUNTER
UG	UNDERGROUND
UGC	UNDERGROUND COMMUNICATION
UGP	UNDERGROUND POWER
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTIL	UTILITY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT(S)
VA	VOLT-AMPERES
VAR	REACTIVE VOLT-AMPERES
VAV	VARIABLE AIR VOLUME
VRLA	VALVE REGULATED LEAD ACID
W	WIRE
W	WATTS
W/	WITH
WG	WIRE GUARD
WP	WEATHERPROOF
WT	WATERTIGHT
XP	EXPLOSION PROOF
XHHW	CROSS LINKED POLYETHYLENE INSULATED WIRE
XFMR	TRANSFORMER
Y	WYE CONNECTION

FEEDER NAMING SCHEME



MATERIAL LEGEND:	
AL	ALUMINUM
CU	COPPER

CONVEYANCE LEGEND:	
C-AG	ABOVE GRADE CONDUIT
C-BG	BELOW GRADE CONDUIT
C-BUS	CABLEBUS
MC	METAL CLAD CABLE
T	CABLE TRAY

LINE TYPE LEGEND

NEW WORK

FUTURE WORK

EXISTING WORK

Project Number: 19.161

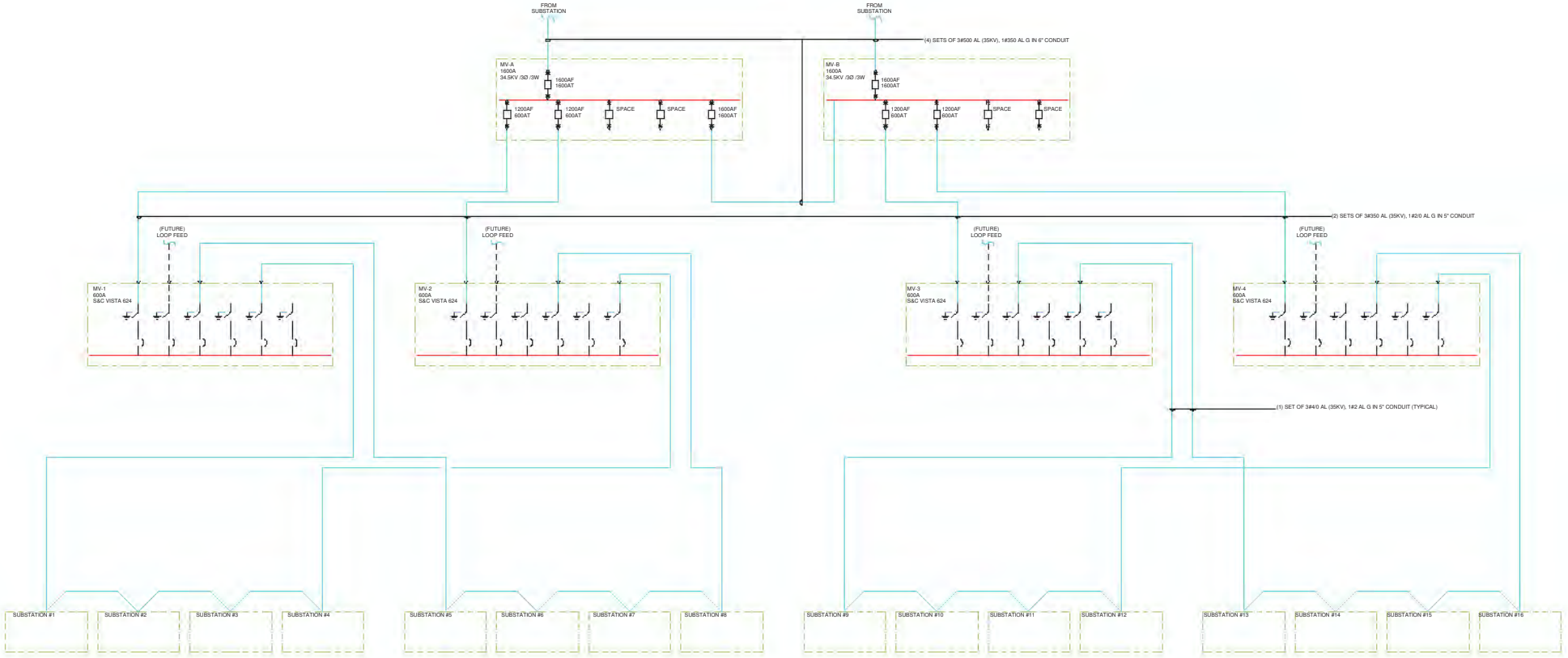
SKYBOX CORGAN CRITICAL kW

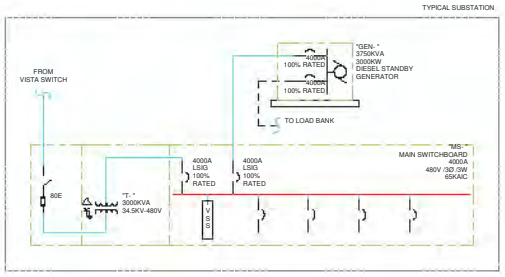
LEGEND AND ABBREVIATIONS

As indicated
04.09.2020

04/09/2020

E-100





Project Number: 19.161

SKYBOX
CORGAN
R G
CRITICAL
kW
REED ASSOCIATES

MV ONELINE

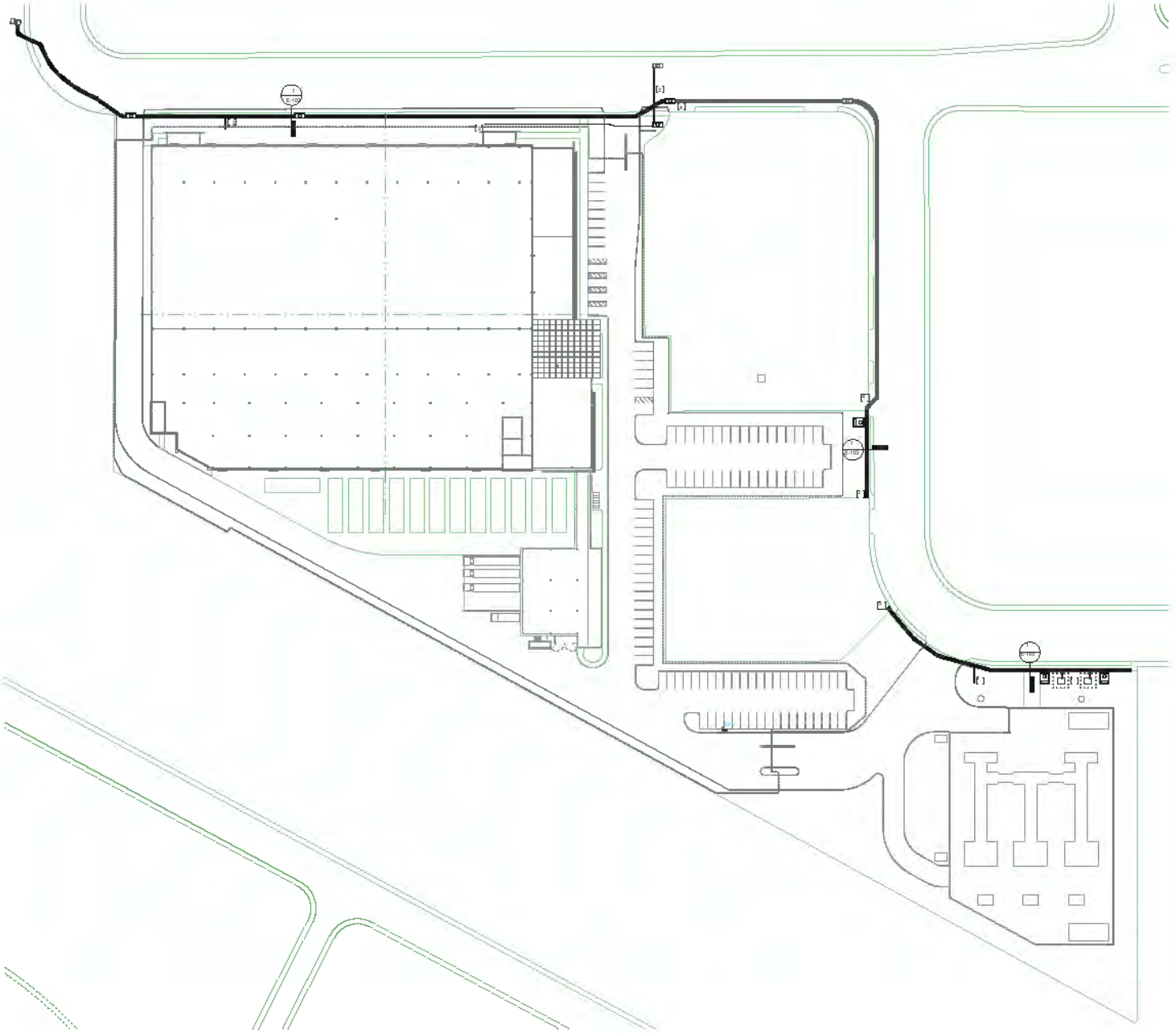
N.T.S.
03.17.2020

04/09/2020

E-101

KEYED NOTES

1. PROVIDE TWO (2) SVP PM TRANSFORMER PADS IN VICINITY FOR SVP CONTROL ROOM POWER. DIVERSE 12KV SOURCES REQUIRED. REFERENCE SVP 'UG1000' FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE (1) 4"C FOR SVP FIBER OPTIC CONNECTION.
3. TIE INTO EXISTING DUCTBANK AT INDICATED LOCATION.
4. SCOPE OF WORK BY OTHERS.



Project Number: 19.161

SKYBOX CORGAN RG CRITICAL kW REED ASSOCIATES

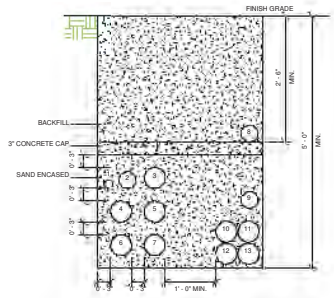
ELECTRICAL SITE ROUTING PLAN

1" = 40'-0"
03.17.2020

04/09/2020

DATA HALL

E-102



1 UTILITY DUCTBANK - SVP UG1000 - JOINT TRENCH
N.T.S.

Project Number: 19.161

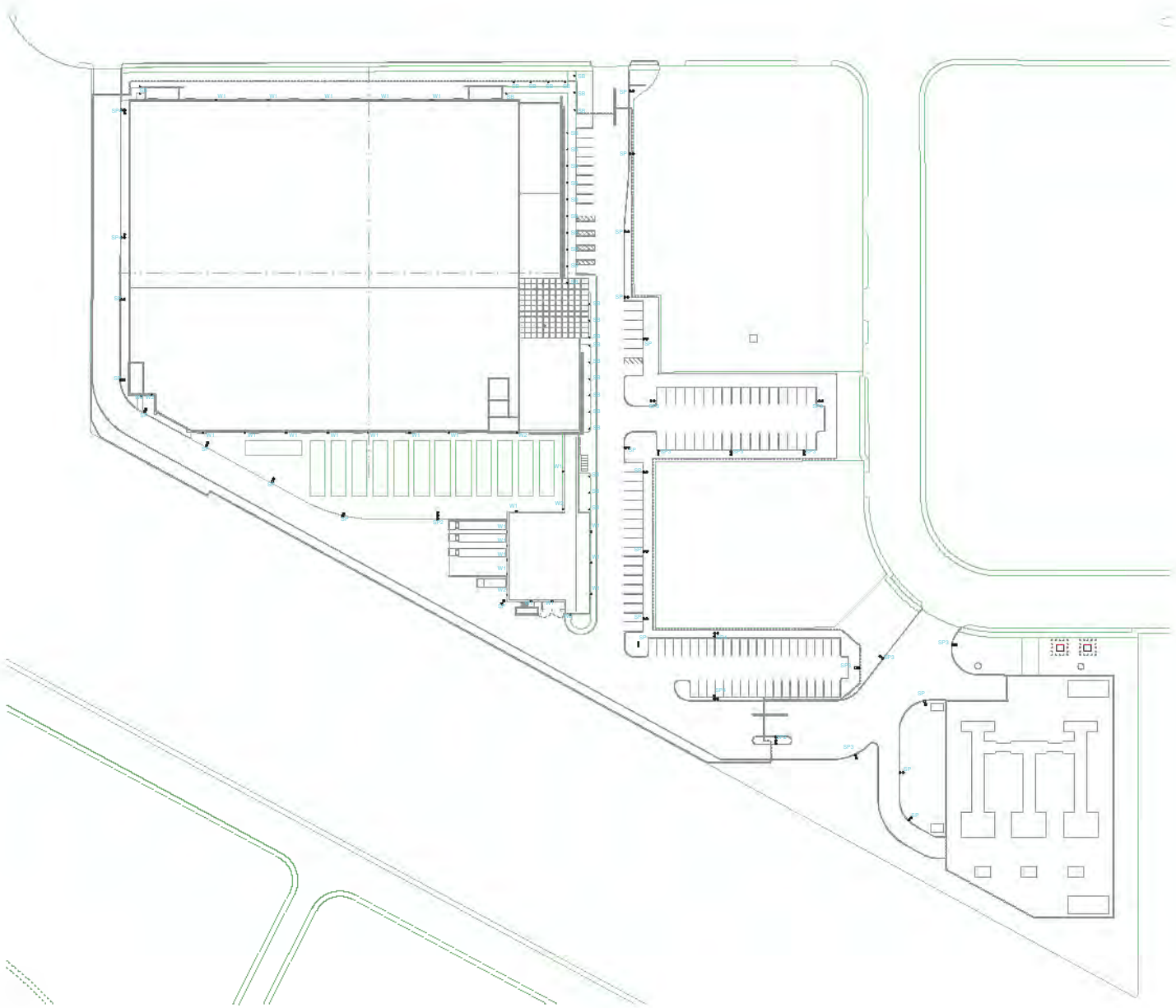
SKYBOX CORGAN RG CRITICAL kw

ELECTRICAL SITE DETAILS

N.T.S.
03.17.2020

04/09/2020

E-103



Project Number: 19.161

SKYBOX CORGAN RG REED ASSOCIATES

CRITICAL kW

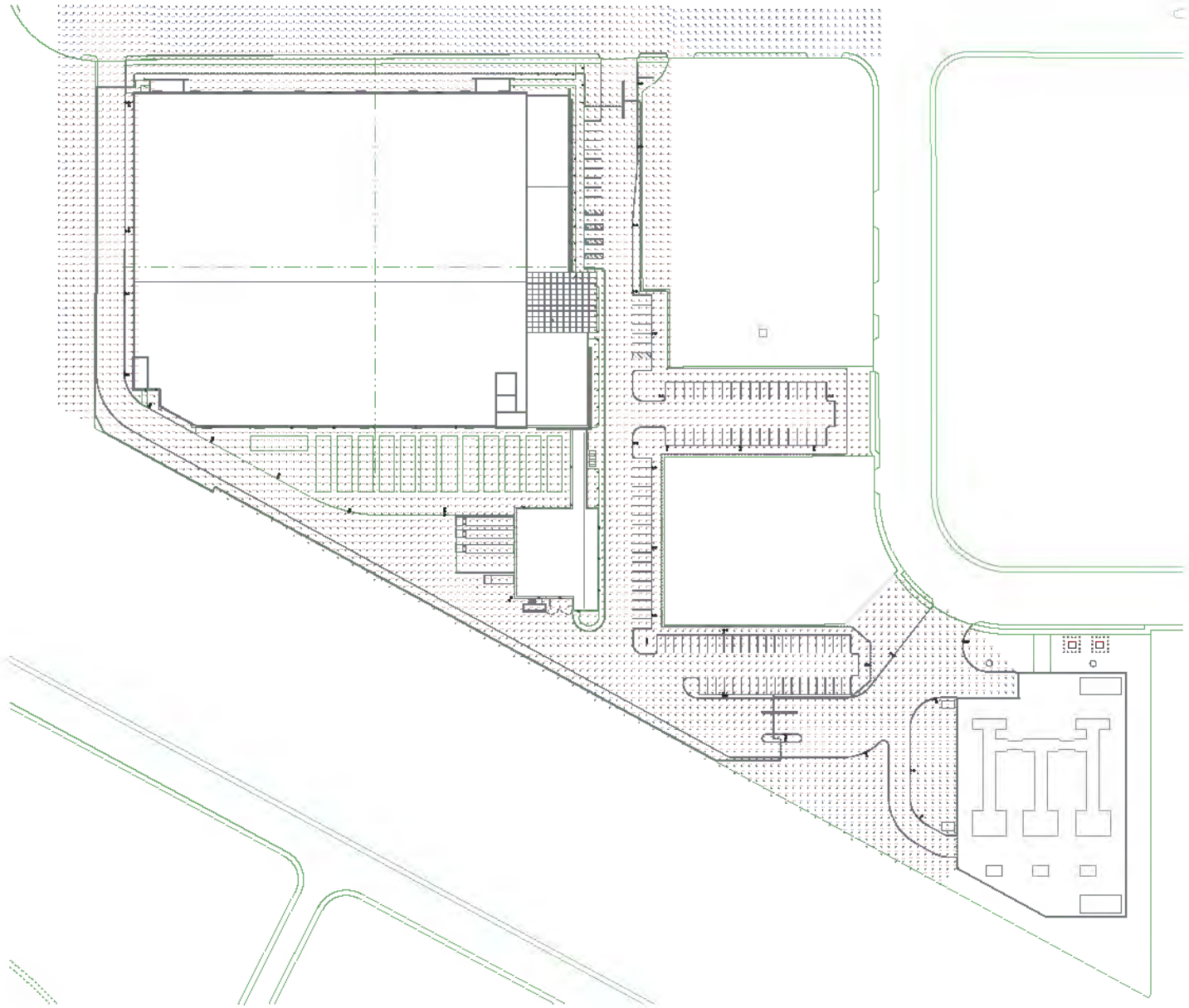
ELECTRICAL SITE LIGHTING PLAN

1" = 40'-0"
03.17.2020

E 87628
04/09/2020

DATA HALL

E-104



Project Number: 19.161

SKYBOX CORGAN RG REED ASSOCIATES

CRITICAL kW

SITE LIGHTING PHOTOMETRICS

1" = 40'-0"
03.17.2020

04/09/2020

DATA HALL

E-105

LUMINAIRE SCHEDULE								
FIXTURE TYPE	Manufacturer	Cat. No.	Description	Lamp Count	Lamp Type	Input Voltage	Wattage	Mounting
SB	LITHONIA	KBR8 LED 16C 530 40K SYM MVOLT	SPECIFICATION LED BOLLARD WITH SYMMETRIC DISTRIBUTION, 8" DIAMETER, 40" HEIGHT	1	4000K LED MODULE, 1598 LUMEN OUTPUT	MVOLT	28W	MOUNTED 3'-6" ABOVE FINISHED GRADE U.O.N.
SP	SIGNIFY GARDCO	HT4L-48L-700-NW-G2-2	FORM TEN SQUARE AREA LED, 48 LED's, 4000K CCT, TYPE II OPTIC, GLASS LENS	1	4000K LED MODULE, 8476 LUMEN OUTPUT	277V	110W	POLE MOUNTED 25'-0" ABOVE FINISHED GRADE U.O.N.
SP2	SIGNIFY GARDCO	HT4L-48L-700-NW-G2-2	FORM TEN SQUARE AREA LED, 48 LED's, 4000K CCT, TYPE II OPTIC, GLASS LENS TWO HEAD OPTION 180 DEGREE ORIENTATION	2	4000K LED MODULE, 8476 LUMEN OUTPUT	277V	110W	POLE MOUNTED 25'-0" ABOVE FINISHED GRADE U.O.N.
SP3	SIGNIFY GARDCO	HT4L-48L-700-NW-G2-3	FORM TEN SQUARE AREA LED, 48 LED's, 4000K CCT, TYPE III OPTIC, GLASS LENS	1	4000K LED MODULE, 11446 LUMEN OUTPUT	277V	110W	POLE MOUNTED 25'-0" ABOVE FINISHED GRADE U.O.N.
SP4	SIGNIFY GARDCO	HT4L-48L-700-NW-G2-2	FORM TEN SQUARE AREA LED, 48 LED's, 4000K CCT, TYPE II OPTIC, GLASS LENS TWO HEAD OPTION 90 DEGREE ORIENTATION	2	4000K LED MODULE, 8476 LUMEN OUTPUT	277V	110W	POLE MOUNTED 25'-0" ABOVE FINISHED GRADE U.O.N.
W1	LITHONIA	WST LED P1 40K VF MVOLT	EXTERIOR LED WALL MOUNT, VISUAL COMFORT, FORWARD THROW	1	4000K LED MODULE, 1500 LUMEN OUTPUT	MVOLT	12W	MOUNTED 16'-0" ABOVE FINISHED FLOOR U.O.N.
W2	LITHONIA	WST LED P1 40K VF MVOLT	EXTERIOR LED DOOR PACK, VISUAL COMFORT, FORWARD THROW	1	4000K LED MODULE, 1500 LUMEN OUTPUT	MVOLT	12W	MOUNTED 1'-0" OVER DOOR U.O.N.

Project Number: 19.161

SKYBOX CORGAN RG CRITICAL kW

LUMINAIRE SCHEDULE

03.17.2020

04/09/2020

E-106