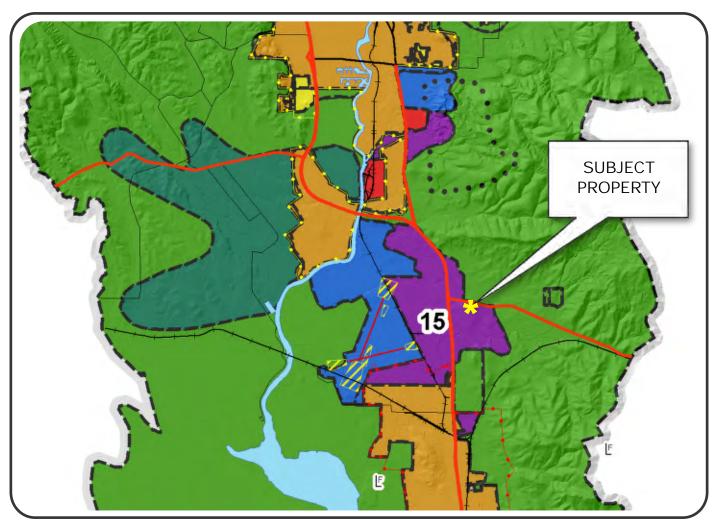


Graphics Eagle Vines – Sprint Facility

NAPA COUNTY LAND USE PLAN 2008 - 2030





LEGEND



URBANIZED OR NON-AGRICULTURAL

Study Area

Cities

Urban Residential*

Rural Residential*

Industrial

Public-Institutional

Napa Pipe Mixed Use

OPEN SPACE

Agriculture, Watershed & Open Space

Agricultural Resource

APN 057-060-007 03-10-2020 UP

TRANSPORTATION

Mineral Resource

—— Limited Access Highway

—— Major Road

· American Canyon ULL

City of Napa RUL

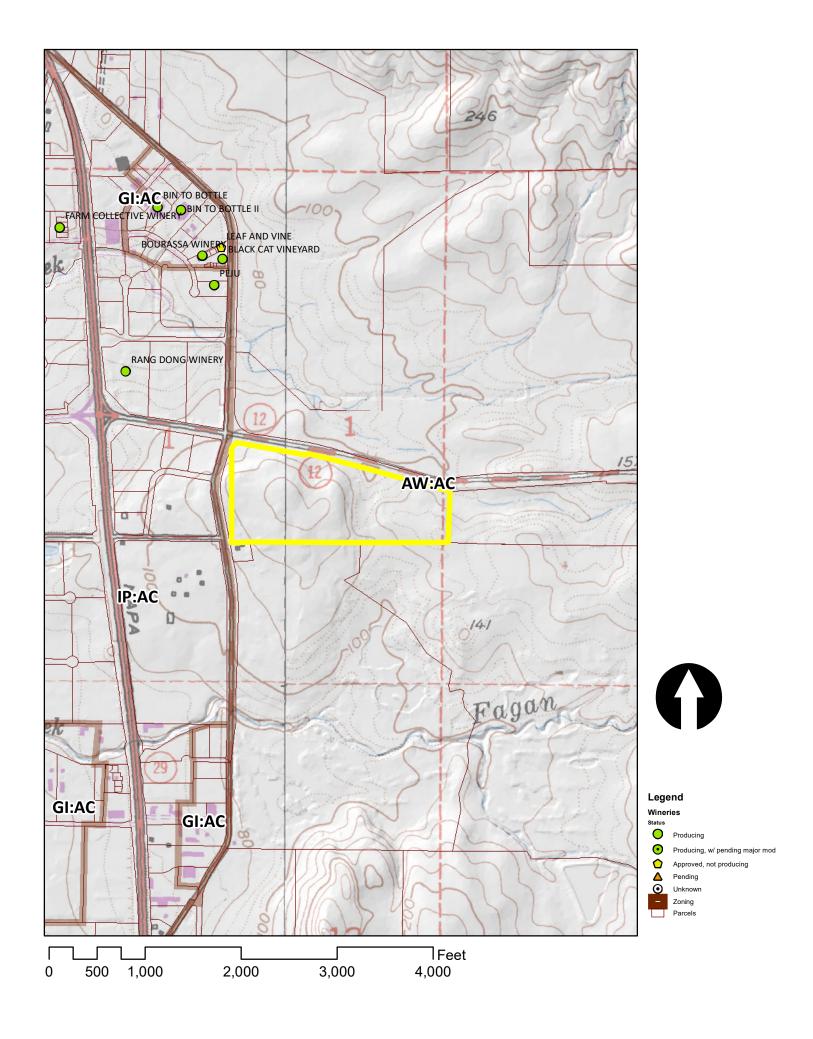
Landfill - General Plan

—— Secondary Road

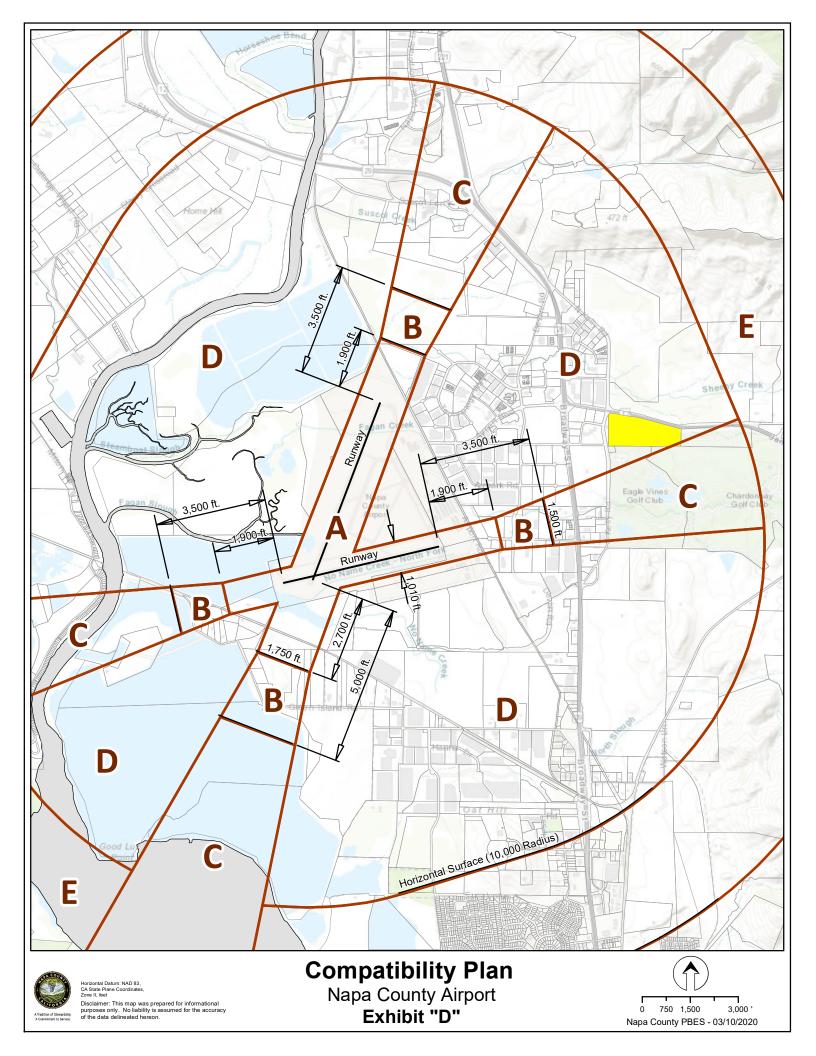
—— Airport

----- Railroad

Airport Clear Zone









Jurisdiction: County of Napa

Latitude: 38°13' 14.20"

Longitude: 122°15' 10.10"

Ground Elevation: ± 148.9'

SITE NAME:

NAPA AIRPORT HWY

12 & 29 RELO

CASCADE :

SF25XC335-A

SITE ADDRESS:

580 SOUTH KELLY ROAD

AMERICAN CANYON, CA 94503

MONOPOLE / EXTERIOR SITE TYPE:

CONSTRUCTION DETAILS

EQUIPMENT

PREPARED FOR Sprint 12657 Alcosta Blvd, Suite 300 San Ramon, California 94583



Roseville, CA 95747

Sprint Cascade:

SF25XC335-A

Borges

SPRINT CASCADE:	SF25XC335-A
PROJECT NO:	T-16503-1
DRAWN BY:	DAG
CHECKED BY:	JM

í			
	G	07/26/19	90% ZD REV 6
	F	05/31/19	90% ZD REV 5
	Ε	05/02/19	90% ZD REV 4
	D	03/13/19	90% ZD REV 3
	С	10/23/18	90% ZD REV 2
	В	09/14/18	90% ZD REV 1
	Α	02/27/18	90% ZD SUBMITTAL
	REV	DATE	DESCRIPTION

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Issued For:

Licensor:

07/26/19

90% ZD Rev 6

TITLE SHEET

SHEET NUMBER:

PROJECT INFORMATION PROJECT DESCRIPTION PROJECT TEAM SHEET INDEX REV Property Information: **Property Owner:** Architect: Applicant / Lessee: T-1 TITLE SHEET EAGLE VINES VINEYARD & GOLF CONSTRUCTION OF AN UNMANNED TELECOMMUNICATIONS FACILITY Site Name: NAPA AIRPORT HWY 12 & 29 RELO BORGES ARCHITECTURAL GROUP, INC. CLUB LLC 12567 ALCOSTA BLVD, SUITE 300 1478 STONE POINT DRIVE, SUITE 350 INSTALL TRENCHING FROM (P) POWER POINT OF CONNECTION TO 580 SOUTH KELLY ROAD C-1 **EXISTING SITE CONDITIONS** Cascade: SF25XC335-A (P) 200A SPRINT ELEC PANEL SAN RAMON, CA 94583 ROSEVILLE, CA 95661 AMERICAN CANYON, CA 94503 INSTALL (P) 18'-0" +/- 255 SQFT MONOPINE LEASE AREA contact: MOISES PALACIOS contact: JOHN MCDONNELL 3. INSTALL 15'□20' SPRINT LEASE AREA 255 SQFT MONOPINE LEASE A-1 OVERALL SITE PLAN Site Address: 580 South Kelly Road email: moises.palacios ☐ sprint.com email: telecomgroup ☐ □orgesarch.com **ENLARGED EQUIPMENT PLANS** A-2 ph: (925) 380-2223 ph: (916) 782-7200 American Canyon, CA 94503 INSTALL (P) 55' TALL MONOPINE A-3.1 **EXTERIOR SITE ELEVATIONS** INSTALL (2) ANTENNAS AT SECTORS A, B, C - (6) TOTAL Power Agency: A.P.N. Num er: 057-060-007 **EXTERIOR SITE ELEVATIONS** INSTALL (4) RRUs AT SECTORS A, B, C - (12) TOTAL A-3.3 **EXTERIOR SITE ELEVATIONS** 1 MARKET STREET, SPEAR Current Use: TELECOMMUNICATIONS FACILITY 10. INSTALL CHAIN LINK FENCE w/ ANTI-CLIMB BARRIERS A-4.1 MICROWAVE SPECIFICATIONS 11. INSTALL (2) HYBRID LINE PER SECTOR FOR 800 RRU, (1) (P) & (1) (F) SAN FRANCISCO, CA 94105 A-4.2 BATTERY SPECIFICATIONS Proposed Use: TELECOMMUNICATIONS FACILITY PER SECTOR, TOTAL OF (6) ph: (800) 743-5000 **GENERATOR SPECIFICATIONS**

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- 1) 2016 CALIFORNIA ADMINISTRATIVE CODE, CHAPTER 10, PART 1, TITLE 24 CODE OF
- 2) 2016 CALIFORNIA BUILDING CODE (CBC) WITH CALIFORNIA AMENDMENTS, BASED ON THE 2015 IBC (PART 2, VOL 1-2)
- 3) 2016 CALIFORNIA RESIDENTIAL CODE (CRC) WITH APPENDIX H, PATIO COVERS, BASED ON THE 2015 IRC (PART 2.5)
- 4) 2016 CALIFORNIA GREEN BUILDINGS STANDARDS CODE (CALGREEN) (PART 11) (AFFECTED ENERGY PROVISIONS ONLY
- 5) 2016 CALIFORNIA FIRE CODE (CFC), BASED ON THE 2015 IFC, WITH CALIFORNIA AMENDMENTS (PART 9)
- 6) 2016 CALIFORNIA MECHANICAL CODE (CMC), BASED ON THE 2015 UMC (PART 4)
- 7) 2016 CALIFORNIA PLUMBING CODE (CPC), BASED ON THE 2015 UPC (PART 5)
- 8) 2016 CALIFORNIA ELECTRICAL CODE (CEC) WITH CALIFORNIA AMENDMENTS, BASED ON THE 2011 NEC (PART 3)
- 9) 2016 CALIFORNIA ENERGY CODE (CEC)
- 10) ANSI / EIA-TIA-222-G
- 11) 2015 NFPA 101, LIFE SAFETY CODE
- 12) 2016 NFPA 72, NATIONAL FIRE ALARM CODE
- 13) 2016 NFPA 13, FIRE SPRINKLER CODE

OCCUPANCY AND CONSTRUCTION TYPE

OCCUPANCY: U (UNMANNED)

CONSTRUCTION TYPE: V-B

DISABLED ACCESS REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, ACCESSIBILITY ACCESS AND REQUIREMENTS ARE NOT REQUIRED, IN ACCORDANCE WITH CALIFORNIA BUILDING CODE, CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 1, CHAPTER 11B, DIVISION 2, **SECTION 11B-203.5**

VICINITY MAP



SPECIAL INSPECTIONS

DIRECTIONS FROM SPRINT'S OFFICE AT 12567 ALCOSTA BLVD., SAN RAMON, CA 94583

DIRECTIONS FROM SPRINT

Head southeast on Alcosta Blvd toward Overloo □ Dr Turn right onto Bollinger Canyon Rd

Use the right 2 lanes to merge onto I-680 N via the ramp to Sacramento

Merge onto I-680 N

Keep left to stay on I-680 N

Keep left at the for to stay on I-680 N

Keep left at the for □to continue on I-680

Use the left lane to ta e it 71B to merge onto CA-12 W/I-80 W toward Napa/San Francisco Ta e e it 39B for CA-12 toward Napa/Sonoma

Continue onto CA-12 W

Turn left onto S Kelly Rd

Turn right onto Greenwood Rd

Turn left onto S Kelly Rd

Telephone Agency:

AT&T CALIFORNIA

ph: (800) 310-2355

525 MARKET STREET

SAN FRANCISCO, CA 94105

1. EXPANSION BOLTS INTO EXISTING CONCRETE

2. 3000 PSI CONCRETE

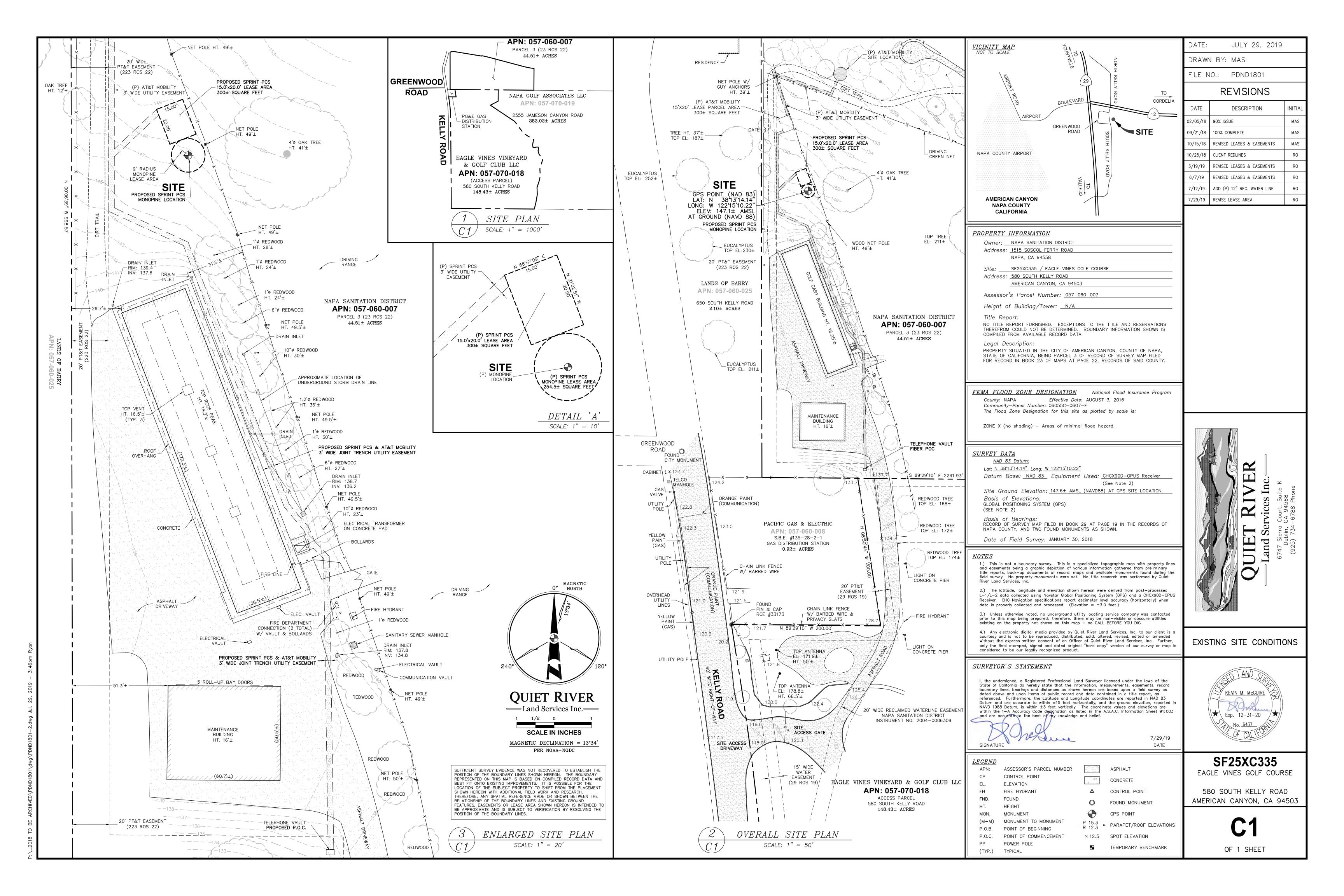
APPROVALS

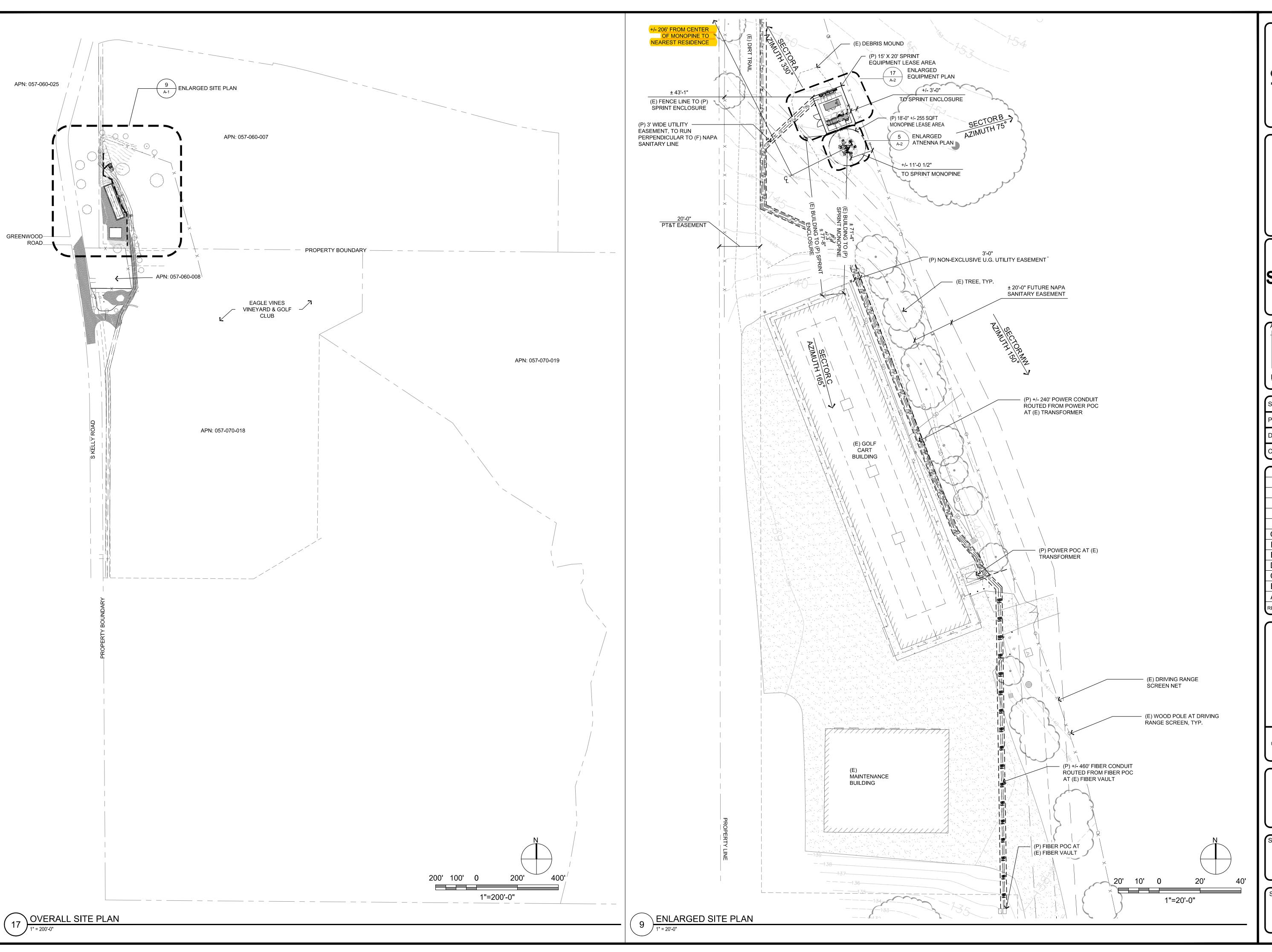
APPROVED BY: AT&T: VENDOR: LEASING / LANDLORD: ZONING: CONSTRUCTION: POWER / TELCO:

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS

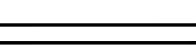
THESE DRAWINGS ARE FORMATTED TO BE FULL SIZE AT 24" 36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOBSITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME.





Sprint®

12657 Alcosta Blvd, Suite 300



San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

SF25XC335-A

Architect:

ARCHITECTURE
PLANNING
INTERIORS

ARCHITECTURAL GROUP

BOTSES

1478 STONE POINT DRIVE
SUITE 35.0
ROSEVILLE CA 955.0
T, 1916 773 3037
BORGESARCH.COM

SPRINT CASCADE: SF25XC335-A
PROJECT NO: T-16503-1
DRAWN BY: DAG
CHECKED BY: JM

G	07/26/19	90% ZD REV 6
H	05/31/19	90% ZD REV 5
Ш	05/02/19	90% ZD REV 4
D	03/13/19	90% ZD REV 3
O	10/23/18	90% ZD REV 2
В	09/14/18	90% ZD REV 1
Α	02/27/18	90% ZD SUBMITTAL
REV	DATE	DESCRIPTION

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Issued For:

07/26/19

90% ZD Rev 6

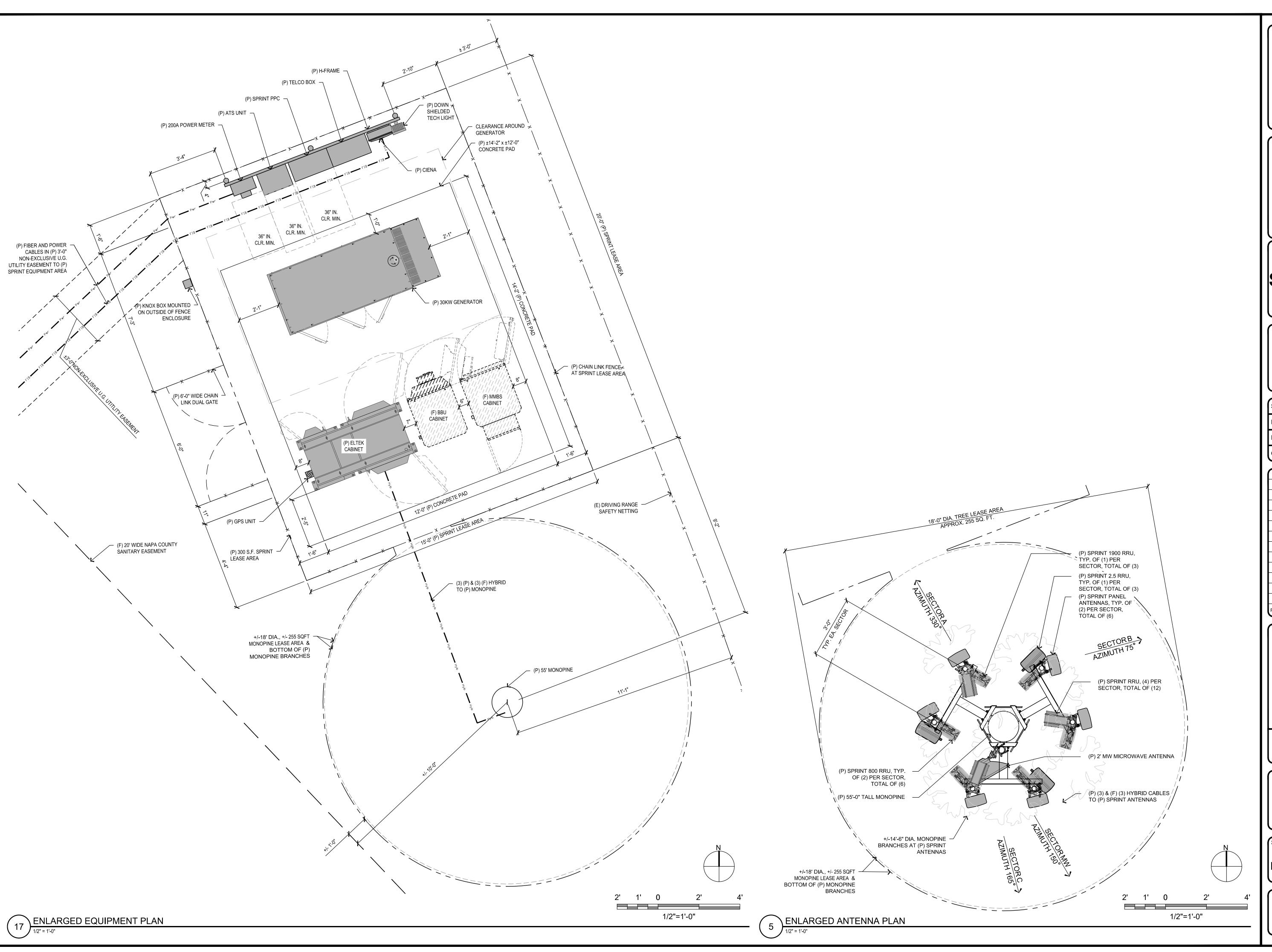
SHEET TITLE:

OVERALL SITE

PLAN

SHEET NUMBER:

A-1



PREPARED FOR



12657 Alcosta Blvd, Suite 300 San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

SF25XC335-A



SPRINT CASCADE: SF25XC335-A
PROJECT NO: T-16503-1
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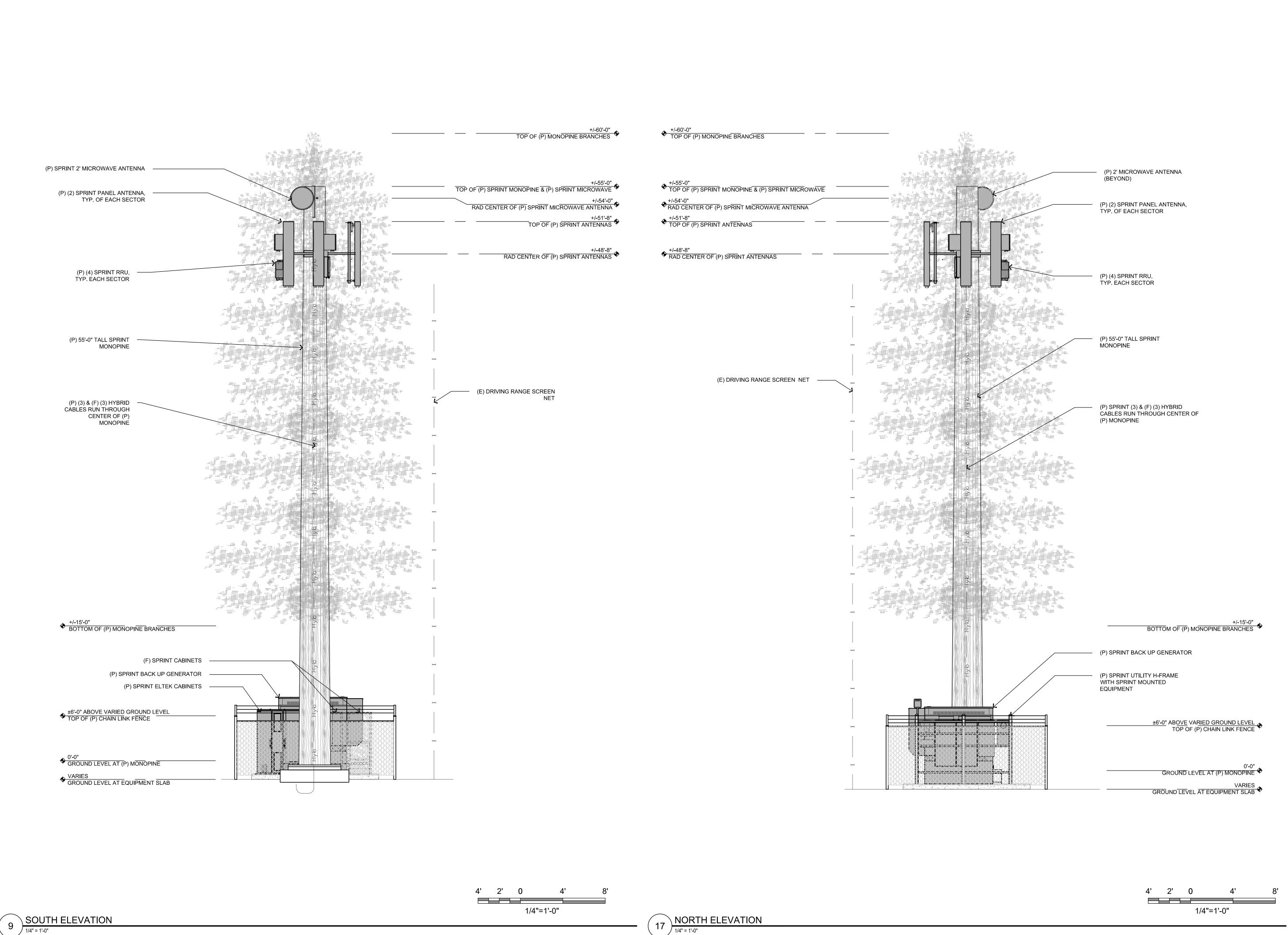
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ENLARGED EQUIPMENT PLANS

SHEET NUMBER:

A-2



PREPARED FOR Sprint 12657 Alcosta Blvd, Suite 300 San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

||SF25XC335-A

Borges ARCHITECTURE PLANNING INTERIORS

SPRINT CASCADE: SF25XC335-PROJECT NO: T-16503-1 DAG DRAWN BY: CHECKED BY:

G	07/26/19	90% ZD REV 6
F	05/31/19	90% ZD REV 5
Е	05/02/19	90% ZD REV 4
D	03/13/19	90% ZD REV 3
C	10/23/18	90% ZD REV 2
В	09/14/18	90% ZD REV 1
Α	02/27/18	90% ZD SUBMITTA
REV	DATE	DESCRIPTION
	F E D C B A	F 05/31/19 E 05/02/19 D 03/13/19 C 10/23/18 B 09/14/18 A 02/27/18

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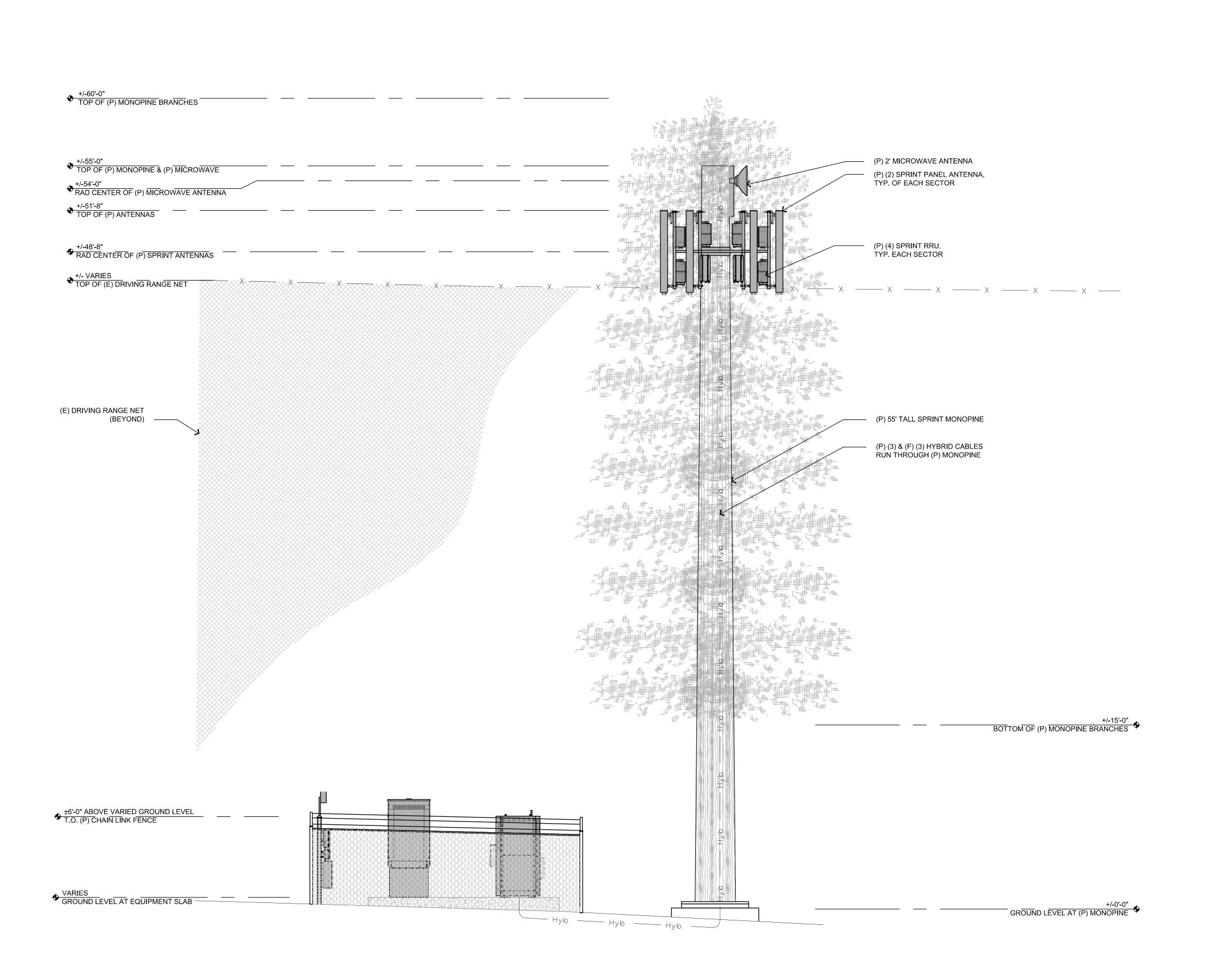
90% ZD Rev 6

SHEET TITLE: **EXTERIOR SITE ELEVATIONS**

SHEET NUMBER:

NORTH ELEVATION

1/4" = 1'-0"



PREPARED FOR



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5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

||SF25XC335-A



SPRINT CASCADE: SF25XC335-PROJECT NO: T-16503-1 DAG DRAWN BY: CHECKED BY: JM

	G	07/26/19	90% ZD REV 6
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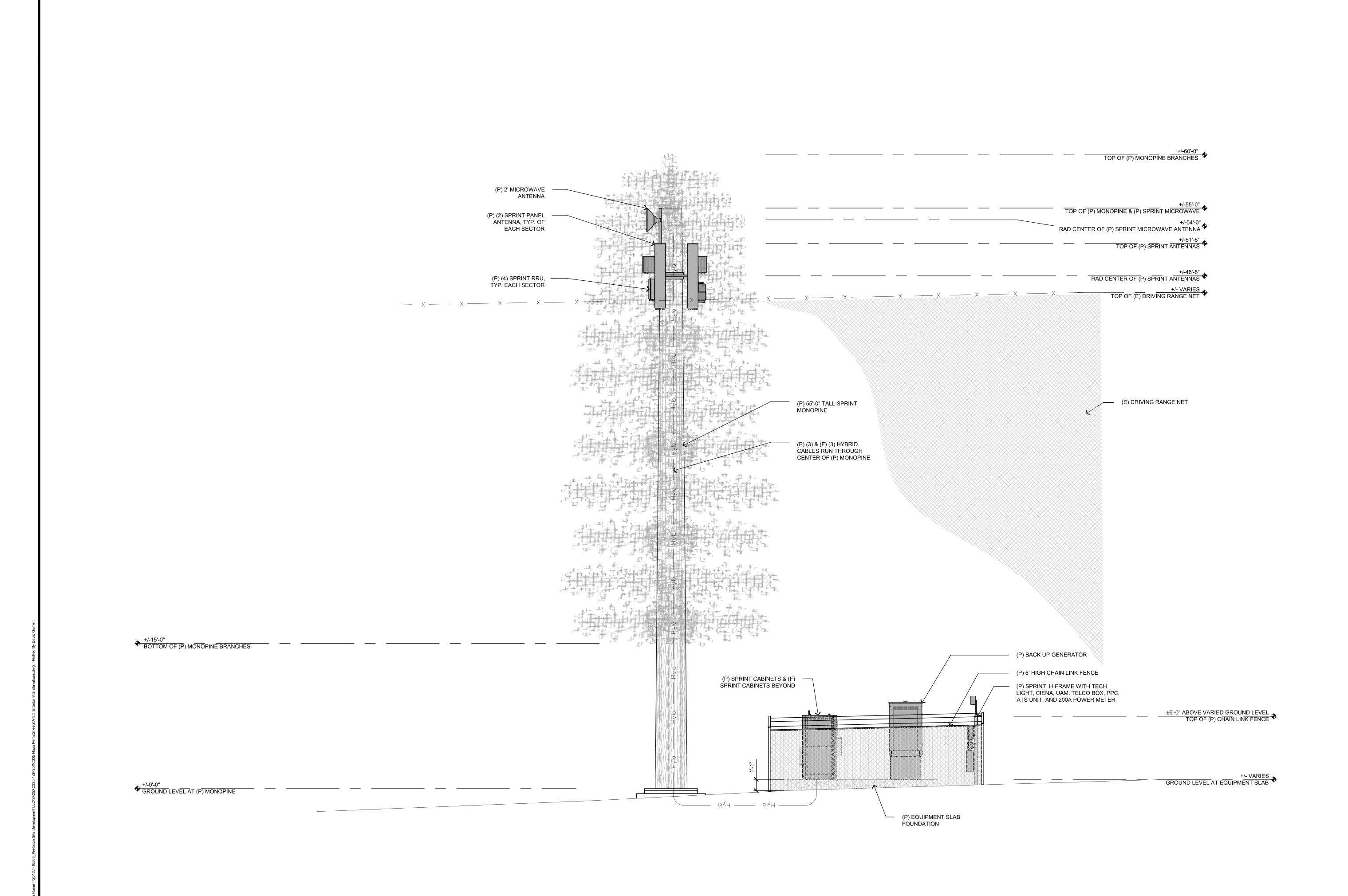
90% ZD Rev 6

SHEET TITLE: **EXTERIOR SITE ELEVATIONS**

4' 2' 0

1/4"=1'-0"

17 WEST ELEVATION
1/4" = 1'-0"



Sprint*

12657 Alcosta Blvd, Suite 300 San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

SF25XC335-A

Architect:

ARCHITECTURE
PLANNING
INTERIORS

BARCHITECTURAL GROUP
BOTGES

1478 STONE POINT DRIVE
SUITE 350
ROSEVILLE CA 95661
T1916 773 3037
BORGESARCH.COM

SPRINT CASCADE: SF25XC335-A
PROJECT NO: T-16503-1
DRAWN BY: DAG
CHECKED BY: JM

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C 10/23/18 90% ZD REV 2
B 09/14/18 90% ZD REV 1
A 02/27/18 90% ZD SUBMITTAL

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Issued For:

07/26/19

90% ZD Rev 6

ELEVATIONS

SHEET TITLE:

EXTERIOR SITE

SHEET NUMBER

1/4"=1'-0"

A-3 [3

17 EAST ELEVATION

1/4" = 1'-0"

Product Description

RFS CompactLine® and CompactLine® Easy Antennas are designed for short-haul microwave systems in all common frequency ranges from 6 GHz to 86 GHz. They are typically deployed in dense urban areas, metropolitan and suburban locations, aggregation points. They are especially optimized to ntegrated radios to reduce costs, installation complexity and time.

Features/Benefits Sizes ranging from 0.3 m (1 ft) to 1.8 m (6 ft)

- Frequencies ranging from 5.925 GHz to 86 GHz with support for four wideband frequency ranges (5.925-7.125, 7.125-8.5, 10.0-11.7, and 71.0-86.0 GHz) to reduce antenna requirements and simplify
- Single (SB and SC) and dual-polarized (SBX and SCX) models with the ability to upgrade from single to dual polarization and change frequencies in the field
- Low-profile design to reduce transportation requirements, wind load and antenna weight Simplified mounting design to accelerate installation
- CompactLine EASY models are extra light and easy to transport, deploy and upgrade Hardcover radomes
- . Tested and validated ultra-high (ETSI EN 302 217-4-2 Class 3, FCC Class A) electrical performance Support for winds up to 250 km/h (155 mph) and even 320 km/h (195 mph) for SB1/SBX1
- . An optional sway bar for antennas 1 m (3 ft) and larger is available

echnical Features		
Product Type	Point to point antennas	
Frequency, GHz	21.2 - 23.6	
Diameter, ft (m)	2 (0.6)	
Profile	CompactLineEasy	
Reflector	1-part	
Swaybar	0: (not applicable)	
optional Swaybar	0: (not applicable)	
Performance	Ultra High	
Polarization	Single	
Regulatory Compliance	ETSI EN 302217 Range 3 Class 3, FCC Category A, SRSP 321.8 Part A	
3dB beamwidth, (degrees)	1.5	
Antenna Input	Customized	
Low Band Gain, dBi	40.5	
Mid Band Gain, dBi	41	
High Band Gain, dBi	41.5	
F/B Ratio, dB	66	
XPD, dB	30	
Max VSWR / R L, dB	1.29 (18)	
Elevation Adjustment, degrees	± 20	
Azimuth Adjustment, degrees	± 15	
Polarization Adjustment, degrees	±5	
Radome	Rigid	
Antenna color	White RAL 9010	
Mounting Pipe Diameter minimum, mm (in)	48 (1.9)	
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)	
Approximate Weight, kg (lb)	9 (20)	
Survival Windspeed, kmih (mph)	252 (155)	
Operational Windspeed, km/h (mph)	180 (112)	



SC2-220BIPN

FibeAir® IP-20C

RFS The Clear Choice ®

Compact All-Outdoor Multi-Core Node

FibeAir IP-20C sets a new standard in microwave transmission combining multi-core radio technology and LoS 4X4 MIMO for ultra-high capacity along with a rich set of Carrier Ethernet advanced services. Compact, all-outdoor design allows deployment anywhere while remote upgradability protects investment.

FibeAir IP-20C breaks capacity barriers offering a virtual fiber solution in licensed 6-38 GHz frequencies - 1Gbps in a box. Its versatility makes it ideal for a wide variety of costeffective deployment scenarios including macrocell backhaul, small-cell aggregation and multi-carrier trunks. As a software-defined radio, it can be remotely configured to quadruple capacity, double link distance and reduce power consumption ensuring long-term, cost-efficient operation as needs change. It is easily and quickly deployable compared with fiber, allowing operators to achieve much faster time to new revenue streams, lower total cost of ownership and long-

FibeAir IP-20C is future-proof, ready for upgrade from 1+0 to 2+0, doubling the capacity, from day one. Activating the second transceiver is accomplished remotely without a site visit. A complete solution, it offers a rich set of Carrier Ethernet advanced services, providing a wide range of new capabilities that address the diverse needs of mobile operators, ISPs, utilities, large enterprises and private networks.

term peace of mind.

FibeAir IP-20C's unique multi-core architecture is based on an advanced parallel radio processing engine built around Ceragon's in-house baseband modem and RFIC chipsets. The result is superior radio performance with reduced power consumption and form-factor. It can be deployed either as an all-outdoor node or as a multi-core radio unit in a split-mount configuration with another IP-20 platform indoor node.

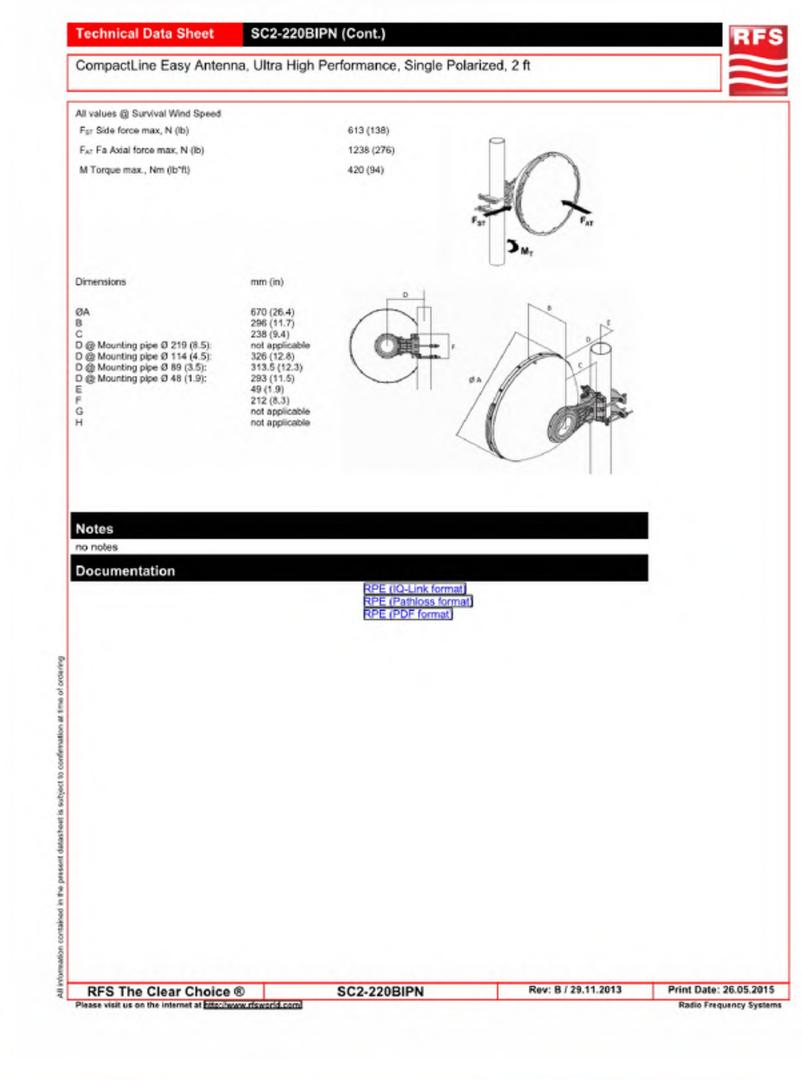
Compact All-Outdoor Multi-Core Node

Rev: B / 29.11.2013

Print Date: 26.05.2015

- Multi-core radio solution delivering multi-Gbps
- Remote activation of the 2nd TRX future upgrades without
- Multi-gigabits radio capacity with high spectral efficiency
- Virtual fiber in licensed frequencies 1Gbps in a box LoS 4X4 MIMO and up to 2048 QAM modulation High service granularity enables rollout of new
- business models Intelligent service-centric management utilizing Hierarchical QoS and advanced OAM capabilities
- Integrated Ethernet switch, MEF Carrier Ethernet 2.0-compliant and MPLS-TP-ready
- Common OS & software-defined engine simplify network modernization Unified CeraOS across entire IP-20 platform Powered by programmable network processor





· Header DeDuplication - Capacity boosting by eliminating inefficiency in all Supported Frequency Range layers (L2,MPLS, L3,L4, Tunneling - GTP

for LTE, GRE)

CFM (IEEE 802.1ag), ITU-T Y.1731*

Synchronization Distribution

smart pipe applications.

Carrier Ethernet 2.0 (CE 2.0)**

Supported Ethernet Standards

Ethernet VLANs (IEEE 802.3ac)

Virtual LAN (VLAN, IEEE 802.1Q)

Class of service (IEEE 802.1p)

Link aggregation (IEEE 802.3ad)

Auto MDI/MDIX for 1000baseT

RFC 2460: IPv6 Traffic Classes

RFC 1349: IPv4 TOS

RFC 2474: IPv4 DSCP

Standards Compliance

Provider bridges (QinQ – IEEE 802.1ad)

10/100/1000base-T/X (IEEE 802.3)

IEEE-1588

IEEE-1588 TC*

interface (GE/FE)

Sync Distribution over any traffic

grade (ITU-T G.811) performance for

Optimized Transport for reduced PDV

 6-38 GHz Configurations

 1+0 to 4+0, 1+1/2+2, E/W Radio Features

Multi-Carrier Adaptive Bandwidth

The OMT weighs 7.7 lbs..

(up to 2+0) Protection: 1+1/2+2 HSB

 SyncE (ITU-T G.8261, G.8262) SSM/ESMC Support for ring/mesh High spectral utilization: QPSK to 2048 applications (ITU-T G.8264) QAM w/ACM SyncE Regenerator mode, providing PRC

* XPIC 2x2 / 4x4 LoS MIMO

Ethernet Ethernet Interfaces Traffic Interfaces – 1 x 10/100/1000Base-T (RJ-45) and

2x1000base-X (Optical SFP) or 10/100/1000Base-T (Electrical SFP) Management Interface - 1 x 10/100

Base-T (RJ-45)

 SFP Types - Optical 1000Base-LX (1310 or SX (850 nm)

Note: SFP devices must be of industrial grade (-40°C to +85°C)

Ethernet Features MTU – 9600 Bytes

 Quality of Service Multiple Classification criteria (VLAN) ID, p-bits, IPv4 DSCP, IPv6 TC, MPLS

o 8 priority queues Deep buffering (configurable up to 64 Mbit per queue) o WRED

o Hierarchical QoS - high service granularity * P-bit marking/remarking

** Certification pending.

 4K VLANs VLAN add/remove/translate Frame Cut Through – controlled latency and PDV for delay sensitive applications

. Surge: EN61000-4-5, Class 4 (for PWR and ETH1/PoE ports) Safety: EN 60950-1, IEC 60950-1, UL 60950-1, CSA-C22.2 No.60950-1, EN 60950-22, UL 60950-22,

CSA C22.2.60950-22 Storage: ETSI EN 300 019-1-1 Class 1.2 Transportation: ETSI EN 300 019-1-2

EMC: EN 301 489-1, EN 301 489-4, Class

(US), ICES-003, Class B (Canada),

TEC/EMI/TEL-001/01, Class B (India)

B (Europe), FCC 47 CFR, part 15, class B

Technical Specifications

Mechanical Specifications Dimensions – 9.05"(H), 9.07"(W), Ethernet OAM – EFM (IEEE 802.3ah),

3.86"(D), 14.33 lbs. · Pole Diameter Range (for Remote Mount

Installation) - 3.5" - 4.5" Environmental Specifications -27°F to +131°F (-49°F to +140°F

Power Input Specifications

 Standard Input: -48 VDC . DC Input range: -40 to -60 VDC

Power Consumption Specifications Maximum Power Consumption (Multi-Core Operation) -6 GHz: 65W; 7-8 GHz: 75W; 11 GHz: 65W; 13-15 GHz: 55W; 18-24 GHz: 48W; 26-42 GHz: 55W

Maximum Power Consumption (1+0 Operation) -6 GHz: 40W; 7-8 GHz: 50W; 11 GHz: 53W; 13-15 GHz: 41W; 18-24 GHz: 39W; 26-42 GHz: 41W

PoE Injector Mechanical Specifications Dimensions – 5.28"(H), 7.48"(W), 2.44"(D), 2.2 lbs.

PoE Injector Environmental Specifications -27°F to +131°F (-49°F to +140°F extended) PoE Injector Power Input Specifications

 Standard Input: -48 or +24 VDC DC Input range: ±(18/40.5 to 60) VDC (+18VDC extended range is supported as part of the nominal +24VDC support)

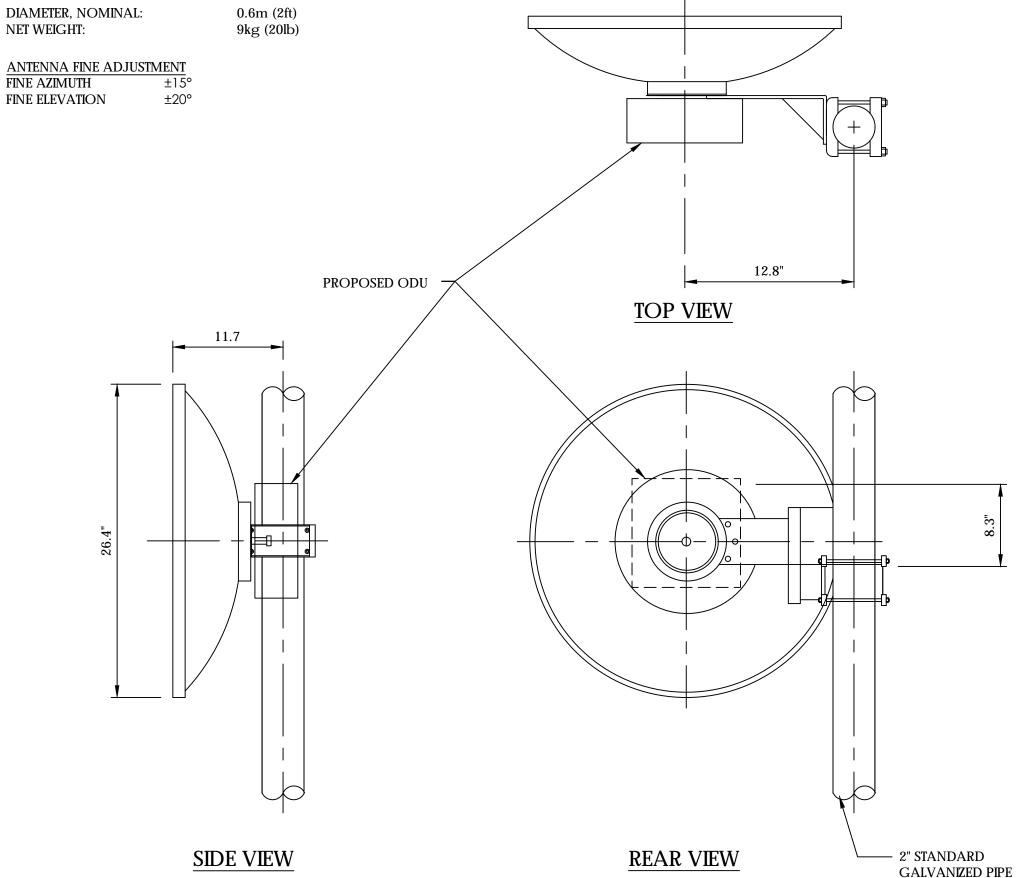
PoE Injector Interfaces GbE Data Port supporting 10/100/1000Base-T

· Power-Over-Ethernet (PoE) Port DC Power Port –40V to -60V (a PoE supporting two redundant DC feeds each supporting ±(18-60)V is available)

Planned for future release.

NET WEIGHT:

RFS SC2-220BIPN



ELECTRICAL SPECIFICATIONS									
FREQUENCY BAND, GHz	21.2-23.6								
BOTTOM BAND GAIN, dBi	40.5								
MID BAND GAIN, dBi	41								
TOP BAND GAIN, dBi	41.5								
BEAMWIDTH, DEGREES	1.5								
FRONT/BACK dB	66								
XPD, dB	30								
RETURN LOSS, dB	18								

PREPARED FOR 12657 Alcosta Blvd, Suite 300

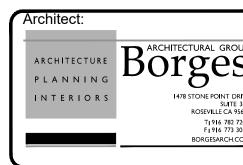
San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

SF25XC335-A



	\geq			
	SPRI	NT CASCA	∖DE:	SF25XC335-A
	PRO.	JECT NO:		T-16503-1
	DRA	WN BY:		DAG
ļ	CHE	CKED BY:		JM

G	07/26/19	90% ZD REV 6
F	05/31/19	90% ZD REV 5
Ε	05/02/19	90% ZD REV 4
D	03/13/19	90% ZD REV 3
С	10/23/18	90% ZD REV 2
В	09/14/18	90% ZD REV 1
Α	02/27/18	90% ZD SUBMITTAL
REV	DATE	DESCRIPTION
	•	

Licensor:

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THIS DOCUMENT.

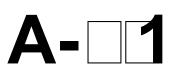
Issued For:

07/26/19

90% ZD Rev 6

SHEET TITLE: MICROWAVE **SPECIFICATIONS**

SHEET NUMBER:



MICROWAVE DETAIL

rename me to this view "dwg" name

The Acme T range of front access VRLA batteries has been specifically

designed for applications using 19" and 23" cabinets, especially telecoms .

Reliability is assured with the patented post seal and a state-of-the-art

standards. A 12+ years design life and centralised venting system

add to the suitability and flexibility of this superior range.

design developed to comply with the latest IEC, British and Telcordia

Model: 12NDT190

Dimensions-mm[inch]

Acme

Constant Current Discharge Characteristics Units: Amperes ((25°C, 77°F)								
End-voltage percet	DMN			45MIN			3HR	4HR	SHR	GHR		10HR	12HR	20HR	24HR
1.60V	532	334	220	162	132	76.4	54.2	42.8	36.3	30.7	24.3	19.5	16.8	10.5	8.72
1.67V	498	328	216	161	131	75.7	53.9	42.7	36.1	30.4	24.1	19.4	16.7	10.4	8.64
1.70V	480	322	213	160	130	75.4	53.7	42.6	36.0	30.3	24.0	19.3	16.6	10.3	8.60
1.75V	456	308	205	157	129	74.7	53.4	42.4	35.8	30.0	23.8	19.1	16.5	10.2	8.53
1.80V	410	283	193	150	125	73.2	52.6	42.0	35.2	29.5	23.6	19.0	16.4	10.2	8.49
1.83V	374	265	184	144	122	71.3	51.6	41.5	34.4	28.7	23.3	18.9	16.3	10.1	8.44
1.85V	355	252	179	138	119	69.4	50.7	41.0	33.9	28.4	23.0	18.8	16.2	10.1	8.39
Disch	arge	Data w	ith Co	nstant	Powe	er Ur	nits: V	Vatts	per ce	ll (25°	°C, 77	°F)			

End rultage per cert	SMIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	SHR	EHR	SHR	10HR	12HR	20HR	24HR	i
1.60V	928	616	395	317	269	159	113	88.1	74.2	63.1	48.5	41.6	36.0	22.1	18.4	Ī
1.67V	877	600	392	315	268	159	113	87.8	73.9	62.9	48.3	41.5	35.9	21.9	18.3	
1.70V	846	588	389	314	267	158	112	87.6	73.6	62.8	48.2	41.5	35.8	21.7	18.3	
1.75V	781	566	382	309	263	157	112	87.1	73.1	62.5	47.9	41.4	35.7	21.5	18.2	
1.80V	718	535	370	300	256	154	110	86.0	72.1	62.0	47.6	41.2	35.5	21.2	18.2	
1.83V	697	507	359	291	249	150	108	85.0	71.0	61.3	47.4	40.9	35.3	21.0	18.1	
1.85V	683	483	351	285	244	147	105	83.9	69.8	60.6	47.1	40.7	35.0	20.7	18.0	

www. naradabatterv. com

Narada

_	
I	PRODUCTS
- 1	

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CONDITIONS TO AVOID Prohibit smoking, sparks, etc. from battery charging area. Avoid mixing acid with other chemicals.

SECTION 7: CONTROL MEASURES

1. Store lead/acid batteries with adequate ventilation. Room ventilation is required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space. 2. Do not remove vent caps. Follow shipping and handling instructions that are applicable to the

STEPS TO TAKE IN CASE OF LEAKS OR SPILLS If sulfuric acid is spilled from a battery, neutralize the acid with sodium bicarbonate (baking soda), sodium carbon (soda ash), or calcium oxide (lime).

Flush the area with water discard to the sewage systems. Do not allow unneutralized acid into the

battery type. To avoid damage to terminals and seals, do not double-stack industrial batteries.

sewage system. WASTE DISPOSAL METHOD:

Neutralized acid may be flushed down the sewer. Spent batteries must be treated as hazardous waste and disposed of according to local state, and federal regulations. A copy of this material safety data must be supplied to any scrap dealer or secondary smelter with battery.

ELECTRICAL SAFETY Due to the battery's low internal resistance and high power density. High levels of short circuit can be developed across the battery terminals. Do not rest tools or cables on the battery. Use insulated tools

Follow all installation instruction and diagrams when installing or maintaining battery systems.

SECTION 8: HEALTH HAZARD DATA

LEAD: The toxic effects of lead are accumulative and slow to appear. It affects the kidneys,

reproductive, and central nervous system. The symptoms of lead overexposure are anemia, vomiting, headache, stomach pain (lead colic), dizziness, loss of appetite, and muscle and joint pain. Exposure to lead from a battery most often occurs during lead reclaim operations through the breathing or ingestion of lead dusts and fumes.

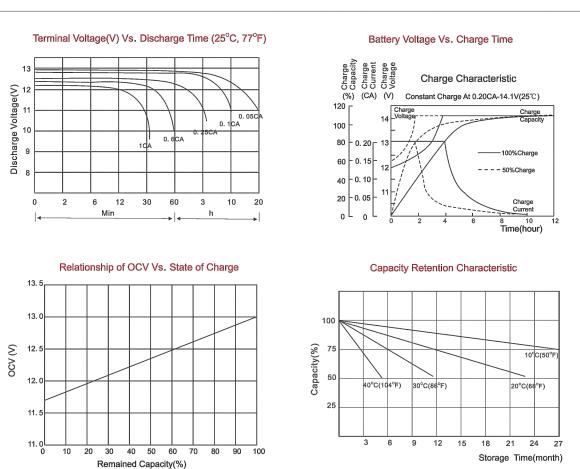
THIS DATA MUST BE PASSED TO ANY SCRAP OR SMELTER WHEN A BATTERY IS RESOLD. SULFURIC ACID: Sulfuric acid is a strong corrosive. Contact with acid can cause severe burns on the skin and in the eyes. Ingestion of sulfuric acid will cause GI tract burns. Acid can be release if the battery case is damaged or if the vents are tampered with.

FIBERGLASS SEPARATOR: Fibrous glass is an irritant of the upper respiratory tract, skin and eyes. For exposure up to 10F/CC use MSA Comfort with type H filter. Above 10F/CC up to 50F/CC use Ultra-Twin with type H filter.

NTP or OSHA does not consider this product carcinogenic.

NARADA POWER SOURCE CO., LTD. 72 Jingguan Road, Qingshan Town, Lin'an Economic Development Zone. Zhejiang, China 311305 Tel:(+86-571) 56975980 Fax:(+86-571) 56975955 Email: intl@narada.biz Website: www.naradabattery.com

stored energy solutions for a demanding world



Chargin	g Procedur	es			Discha	rge Curr	ent VS. Disc	harge Voltag	е
	Charge Vo	oltage (V	/Cell)						
Application	Temperature	Set Point	Allowable Range	Max. Charge Current	Final Discharge Voltage V/Cell	1.80	1.70	1.55	1.30
Cycle	25°C	2.40	2.35~2.40	0. 25C	Discharge	0.20 > (A)	0.20 (4) (0.50	0.50 (4) (4.00	(A)>1.00
Standby	25°C	2.25	2.23~2.27		Current (A)	0.2C ≈ (A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C

NARADA POWER SOURCE CO..LTD. NARADA ASIA PACIFIC PTE.LTD.
 NARADA POWER SOURCE CO.,LID.
 NARADA ASIA PACIFIC FIELD.

 9F, Building A, No. 50 Zijinghua Road, Hangzhou, China
 65 Ubi Crescent #07-05 Hola centre, Singapore

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 Tel: +65-6848 1191 Fax: +65-6749 3498
 abattery.com E-mail: intl@narada.biz E-mail: sales@narada.com.sg

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Narada

SECTION 9: SULFURIC ACID PRECAUTIONS

INHALATION: Acid mist form formation process may cause respiratory irritation, remove from exposure and apply oxygen if breathing is difficult.

SKIN CONTACT: Acid may cause irritation, burns or ulceration. Flush with plenty of soap and water, remove contaminated clothing, and see physician if contact area is large or if blisters form. EYE CONTACT: Acid may cause severe irritation, burns, cornea damage and blindness. Call physician immediately and flush with water until physician arrives.

INGESTION: Acid may cause irritation of mouth, throat, esophagus and stomach. Call physician. If patient is conscious, flush mouth with water, have the patient drink milk or sodium bicarbonate

DO NOT GIVE ANYTHING TO AN UNCONSCIOUS PERSON.

SECTION 10: TRANSPORTATION REGULATIONS

Acceptable modes of transportation: air, rail, road and water. Batteries must be protected so as to prevent short circuit and must be securely packed.

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Jan. 20, 2015

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCTS AND MANUFACTURE Product: Valve Regulated Lead Acid Battery (VRLA Battery)

Manufacturer:

NARADA POWER SOURCE CO., LTD. 72 Jingguan Road, Qingshan Town, Lin'an Economic Development Zone. Zhejiang, China 311305

Tel:(+86-571) 56975980 Fax:(+86-571) 56975955 Email: inti@narada.biz Website: www.naradabattery.com

Rroduct: COMMERCIAL NAME

BATTERIES WITH ABSORBED ELECTROLYTE WET, NON-SPILLABLE BATTERIES CONTAINING A SOLUTION OF SULPHURIC ACID AND DISTILLED WATER, ABSORBED IN SEPARATORS

SECTION 2: HAZARDOUS	S COMPONE!	NTS			
COMPONENTS	%WEIGHT	TLV	LD50	LC50	LC50
COMPONENTS	76VVLIGITI	1	ORAL	INHALATION	CONTACT
Lead (Pb, PbO ₂ , PbSO ₄)	About 70%		(500)		_
2000 (1 0, 1 002, 1 0004)	ADOUL 70 %	-	mg/Kg	-	-
Sulfuric Acid DILUTED	About 20%	1 mg/m ³	(2.140)		
SULPHURIC ACID - H₂SO4	About 20%	r mg/m²	mg/Kg	-	_
Fiberglass Separator	About 5%	-	-	-	-
ABS or PP	About 5%	-		-	-

SECTION 3: PHYSICAL DATA

COMPONENTS	DENSITY	MELTING POINT	SOLLUBILITY (H ₂ O)	ODOR	APPEARANCE
Lead	11.34	327.4°C (Boiling)	None	None	Sliver-Gray Metal
Lead Sulfate	6.2	1070°C (Boiling)	40 mg/l (15°C)	None	White Powder
Lead Dioxide	9.4	290°C (Boiling)	None	None	Brown Powder
Sulfuric Acid	About 1.3	About 114°C (Boiling)	100%	Acidic	Clear Colorless Liquid
Fiberglass Sep.	-	-	SLIGHT	TOXIC	WHITE FIBROUS GLASS
ABS or PP	200	æ	NONE	NO ODOR	SOLID

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SECTION 4: PROTECTION EXPOSURE PROTECTION COMMENTS Protective equipment must be worn if battery is cracked Safety shoes or otherwise damaged. RESPIRATORY Respirator (for lead) A respirator should be worn during reclaim operations if the TLV exceeded. Safety goggles, Face

SECTION 5: FLAMMABILITY DATA

COMPONENTS	FLASHPOINT	EXPLOSIVE LIMITS	COMMENTS
Lead	None	None	
Sulfuric Acid	None	None	
Hydrogen	259℃	4% - 74.2%	Sealed batteries can emit hydrogen only if over charged (float voltage> 2.4 VPC). The gas enters the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery. Extinguishing Media: Dry chemical, foam, CO ₂
Fiberglass Sep.	-	-	Toxic vapors may be released. In case of fire: wear self-contained breathing apparatus.
478 Polystyrene	None	1	Temperatures over 300 °C (572°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

SECTION 6: REACTIVITY DATA

COMPONENT	Lead/lead compounds
STABILITY	Stable
INCOMPATIBILITY	Potassium, carbides, sulfides, peroxides, phosphorus, sulfurs.
DECOMPOSITION	Oxides of lead and sulfur.
PRODUCTS	
CONDITIONS TO AVOID	High temperature, Sparks and other sources of ignition.
COMPONENT	Sulfuric Acid
STABILITY	Stable at all temperatures
POLYMERIZATION	Will not polymerize
INCOMPATIBILITY	Reactive metals, strong bases, most organic compounds
DECOMPOSITION	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen

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CFC CHAPTER 6 COMPLIANCE

TOTAL kWh = (190Ah X 12V)/1000 X 16 BATTERIES = 36.48 kWh

BATTERY INFORMATION

(BATTERY CAPACITY DATA - 12V MONOBLOCKS)

BATTERY MODEL	TOTAL # OF BATTERY UNITS INSTALLED	TOTAL NOMINAL VOLTAGE	RATED CAPACITY (10 HOUR RATE)	kWh OF SINGLE BATTERY	=	(RATED (NOMINAL CAPACITY) × VOLTAGE) 1000
12DT190	16	12 V	190 Ah	2.28kWh	=	190Ah x 12V 1000
		TOTAL kWh	kWh OF SINGLE = BATTERY x # OF BATTERIES			
		36.48kWh = 16 UNI ⁻	TS x 2.28kWh / UNIT			

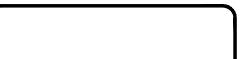
(SINCE <70 kWh OF CAPACITY, CFC CHAPTER 6, SECTION 608 NOT APPLICABLE)

BATTERY MODEL	TOTAL # OF BATTERY UNITS INSTALLED	TOTAL NOMINAL VOLTAGE	RATED CAPACITY (10 HOUR RATE)	kWh OF SINGLE = BATTERY	(RATED (NOMINAL CAPACITY) X VOLTAGE) 1000
12DT190	16	12 V	190 Ah	2.28kWh =	190Ah x 12V 1000
		TOTAL kWh =	kWh OF SINGLE BATTERY x # OF BATTERIES		
		36.48kWh = 16 UNIT	S x 2.28kWh / UNIT		

PREPARED FOR

12657 Alcosta Blvd, Suite 300

San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

PRECISION

Sprint Cascade:

SF25XC335-A





SPRINT CASCADE: SF25XC335-T-16503-1 PROJECT NO: DAG DRAWN BY: CHECKED BY:

G | 07/26/19 | 90% ZD REV 6 F | 05/31/19 | 90% ZD REV 5 E | 05/02/19 | 90% ZD REV 4 D | 03/13/19 | 90% ZD REV 3 C | 10/23/18 | 90% ZD REV 2 B | 09/14/18 | 90% ZD REV 1 A | 02/27/18 | 90% ZD SUBMITTA

Licensor:

DATE

DESCRIPTION

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Issued For:

07/26/19

90% ZD Rev 6

SHEET TITLE:

BATTERY **SPECIFICATIONS**

SHEET NUMBER:





GENERAC | INDUSTRIAL

STANDBY POWER RATING

EPA Certified Stationary Emergency

PRIME POWER RATING* 27 kW, 34 kVA, 60 Hz

30 kW, 38 kVA, 60 Hz



*EPA Certified Prime ratings are not available in the U.S. or its Territories. **Certain options or customization may not hold certification valid.

CODES AND STANDARDS Generac products are designed to the following standards:

UL2200, UL508, UL142, UL498

NFPA70, 99, 110, 37



NEC700, 701, 702, 708

Pluses #2b, 4

| **2.4L** | 30 kW

ALTERNATOR SYSTEM

12 leads (3-phase, non 600 V)

Auxiliary voltage regulator power winding

· Automated manufacturing (winding, insertion,

Rotor dynamically spin balanced (get tolerance)

Class H insulation material

UI2200 GENprotect ™

Vented rotor

Skewed stator

Amortisseur winding

lacing, varnishing)

GENERATOR SET

Silencer Heat Shield

Power Factor

 Oil Pressure · Coolant Temperature

Coolant Level

Engine Speed

Frequency

Battery Voltage

Wrapped Exhaust Piping

Standard Factory Testing

kW Hours, Total & Last Run

All Phase AC Voltage

All Phase Currents

Real/Reactive/Apparent Power

Date/Time Fault History (Event Log)

Isochronous Governor Control

Waterproof/sealed Connectors

Audible Alarms and Shutdowns

Not in Auto (Flashing Light)

E-Stop (Red Mushroom-Type)

Predictive Maintenance algorithm

Password parameter adjustment

NFPA110 Level I and II (Programmable)

· Customizable Alarms, Warnings, and

Auto/Off/Manual Switch

Modbus protocol

Sealed Boards

protection

Full load capacity alternator

Internal Genset Vibration Isolation

· Separation of circuits - high/low voltage

Separation of circuits - multiple breakers

· Silencer housed in discharge hood (enclosed only)

Silencer mounted in the discharge hood (enclosed only)

2 Year Limited Warranty (Standby rated Units)

1 Year Limited Warranty (Prime rated Units)

Protective thermal switch

Brushless Excitation

Sealed Bearings

2/3 pitch

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Stainless Steel flexible exhaust connection

Critical Exhaust Silencer (enclosed only)

Radiator Duct Adapter (open set only)

Closed Coolant Recovery System

50/50 Ethylene glycol antifreeze

Solenoid activated starter motor

Rubber-booted engine electrical

CONTROL SYSTEM

Control Panel

RS-232/485

All-Phase Sensing DVR

Low Fuel Pressure Indication

2-Wire Start Compatible

Full System Status

Utility Monitoring

Power Output (kW)

Digital H Control Panel - Dual 4x20 Display

Special Applications Programmable PLC

Programmable Crank Limiter

7-Day Programmable Exerciser

UV/Ozone resistant hoses

Factory-Installed Radiator

Radiator Drain Extension

120 VAC Coolant Heater

Engine Electrical System

Battery charging alternator

Battery cables

Battery tray

STANDARD FEATURES

ENGINE SYSTEM General

Oil Drain Extension

Factory Filled Oil

· Fuel lockoff solenoid

Primary fuel filter

Cooling System

Air Cleaner

Fan Guard

Fuel System

NEMA ICS10, MG1, 250, ICS6, AB1

ISO9001, 8528, 3046, 7637,

Image used for illustration purposes only

POWERING AHEAD

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

GENERAC | INDUSTRIAL

ENCLOSURE (IF SELECTED)

Gasketed doors

Double wall

Sloped top

Fuel level

Sloped bottom

· Rupture basin alarm

Stainless hardware

Single point ground

on the display

15 channel data logging

Pressure Shutdown)

High Temp Shutdown)

Low Fuel Pressure Alarm

Battery Voltage Warning

during alarms & warnings

speed Shutdown)

state conditions

0.2 msec high speed data logging

Oil Pressure (Pre-programmable Low

· Coolant Temperature (Pre-programmed

Engine Speed (Pre-programmed Over

Coolant Level (Pre-programmed Low Level

Alarms & warnings time and date stamped

Alarms & warnings for transient and steady

Alarms and warnings spelled out (no alarm

· Snap shots of key operation parameters

Alarm information automatically comes up

Vents

Stamped air-intake louvers

TANKS (IF SELECTED)

Factory pressure tested (2 psi)

Check valve in supply and return lines

Rhino Coat[™]- Textured polyester powder coat

Stainless steel lift off door hinges

Stainless steel lockable handles

Rust-proof fasteners with nylon washers to

High performance sound-absorbing material

Air discharge hoods for radiator-upward pointing

Rhino Coat[™] - Textured polyester powder coat

| **2.4L** | 30 kW INDUSTRIAL DIESEL GENERATOR SET EPA Certified Stationary Emergency

CONFIGURABLE OPTIONS

ENGINE SYSTEM CIRCUIT BREAKER OPTONS O Main Line Circuit Breaker General O 2nd Main Line Circuit Breaker O Oil Make-Up System O Shunt Trip and Auxiliary Contact

 O Oil Heater O Industrial Exhaust Silencer Fuel Electrical System O Flexible fuel lines O Primary fuel filter

Alternator Upsizing

ENGINEERED OPTIONS

ENGINE SYSTEM

O Block Heaters

O Coolant heater ball valves

O Fluid containment pans

O 3rd Breaker Systems

CONTROL SYSTEM

O Spare inputs (x4) / outputs (x4) - H Panel Only

ALTERNATOR SYSTEM

O Tropical coating

O Gen-Link Communications Software (English Only) O 8 Load Position Load Center **Engine Electrical System** O 2 Year Extended Warranty O 10A UL battery charger O 5 Year Warranty O 2.5A UL battery charger O 5 Year Extended Warranty O Battery Warmer

ENCLOSURE ALTERNATOR SYSTEM O Weather Protected O Level 1 Sound Attenuation O Anti-Condensation Heater O Level 2 Sound Attenuation O Steel Enclosure O Permanent Magnet Excitation O Aluminum Enclosure O 150 MPH Wind Kit

O Electronic Trip Breaker

GENERATOR SET

GENERATOR SET

O IBC Seismic Certification

O Special Testing

ENCLOSURE

O Motorized Dampers

O Door switched for intrusion alert

O Enclosure ambient heaters

O Remote E-Stop (Break Glass-Type, Surface Mount) O Remote E-Stop (Red Mushroom-Type, Surface Mount) O 12 VDC Enclosure Lighting Kit O 120 VAC Enclosure Lighting Kit O AC/DC Enclosure Lighting Kit O Door Alarm Switch

O Remote E-Stop (Red Mushroom-Type, Flush Mount) O Remote Communication - Modem O Remote Communication - Ethernet O 10A Run Relay O Ground Fault Indication and Protection Functions

GENERAC | INDUSTRIAL

TANKS (Size on Last page)

O 54 Gal (204.4 L) Usable Capacity

O 132 Gal (499.7 L) Usable Capacity

O 211 Gal (798.7 L) Usable Capacity

O 300 Gal (1135.6 L) Usable Capacity

O Electrical Fuel Level

O 8" Vent Extension

O 13" Vent Extension

O 19" Vent Extension

CONTROL SYSTEM

O 21-Light Remote Annunciator

O Remote Relay Panel (8 or 16)

O Oil Temperature Sender with Indication

O Mechanical Fuel Level

O Overfill Protection Valve O UL2085 Tank O ULC S-601 Tank Stainless Steel Tank O Special Fuel Tanks (MIDEQ and FL DEP/DERM, etc.) Vent Extensions

GENERAC | INDUSTRIAL

TANKS

RATING DEFINITIONS

O Battery Disconnect Switch

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition

| **2.4L** | 30 kW INDUSTRIAL DIESEL GENERATOR SET

APPLICATION AND ENGINEERING DATA

EPA Certified Stationary Emergency

ENGINE SPECIFICATIONS			
General		Cooling System	
Make	Generac	Cooling System Type	Closed Recovery
EPA Emissions Compliance	Stationary Emergency	Water Pump	Pre-Lubed, Self Sealing
EPA Emissions Reference	See Emissions Data Sheet	Fan Type	Pusher
Cylinder #	4	Fan Speed (rpm)	2698
Туре	In-Line	Fan Diameter mm (in)	560 (22)
Displacement - L (cu In)	2.4 (146.46)	Coolant Standard Wattage	1500
Bore - mm (in)	90 (3.54)	Coolant Heater Standard Voltage	120 VAC
Stroke - mm (in)	94 (3.70)		
Compression Ratio	21.3:1		
Intake Air Method	Turbocharged	Fuel System	

Displacement - L (cu In)	2.4 (146.46)	Coolant Standard Wattage	1500
Bore - mm (in)	90 (3.54)	Coolant Heater Standard Voltage	120 VAC
Stroke - mm (in)	94 (3.70)		
Compression Ratio	21.3:1		
Intake Air Method	Turbocharged	Fuel System	
Cylinder Head Type	Cast Iron	Fuel Type	Ultra Low Sulfur Diesel Fuel
Piston Type	Aluminium	Fuel Specifications	ASTM
		Fuel Filtering (microns)	5
Facina Carranina		Fuel Injection	Distribution Injection Pump
Engine Governing		Fuel Pump Type	Engine Driven Gear
Governor	Electronic Isochronous	Injector Type	Mechanical
Frequency Regulation (Steady State)	+/- 0.25%	Fuel Supply Line mm (in)	7.94 (0.31)
		Fuel Return Line mm (in)	7.94 (0.31)
Lubrication System			
Oil Pump Type	Gear	Farriage Floretriage Overhouse	
Oil Filter Type	Full Flow	Engine Electrical System	

ıbrication System		i dei rietuiri Eirie Tiiri (iri)	7.34 (0.31)
Pump Type	Gear	Funding Floorings Constant	
Filter Type	Full Flow	Engine Electrical System	
ankcase Capacity - L (qts)	6.2 (6.52)	System Voltage	12 VDC
		Battery Charging Alternator	Std
		Battery Size	See Battery Index 0161970SBY
		Battery Voltage	12 VDC
		Ground Polarity	Negative

ALTERNATOR	SPECIFICATIONS

Standard Model	390	Standard Excitation	Synchronous
Poles	4	Bearings	Single Sealed Cartridge
Field Type	Revolving	Coupling	Direct, Flexible Disc
Insulation Class - Rotor	Н	Load Capacity - Standby	100%
Insulation Class - Stator	Н	Prototype Short Circuit Test	Yes
Total Harmonic Distortion	<5%	Voltage Regulator Type	Digital
Telephone Interference Factor (TIF)	<50	Number of Sensed Phases	All
		Regulation Accuracy (Steady State)	±0.25%

| **2.4L** | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

OPERATING DATA

POWER RATINGS				
		ζ	Standby	
	Single-Phase 120/240 VAC @1.0pf	30 kW	Amps: 125	
	Three-Phase 120/208 VAC @0.8pf	30 kW	Amps: 104	
	Three-Phase 120/240 VAC @0.8pf	30 kW	Amps: 90	
	Three-Phase 277/480 VAC @0.8pf	30 kW	Amps: 46	
	Three-Phase 346/600 VAC @0.8pf	30 kW	Amps: 36	

STARTING CAPABILITIES (sKVA)

							sKVA vs. V	oltage Dip					
		480 VAC							208/24	40 VAC			
<u>Alternator</u>	<u>kW</u>	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	35	24	36	48	60	72	84	18	27	36	45	54	63
Upsize 1	40	27	41	54	68	81	95	20	31	41	51	61	71
Upsize 2	50	34	52	69	86	103	120	26	39	52	65	77	90

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WT lbs (kg) - Tank & Open Set

2060 (934)

2540 (1152)

2770 (1257)

2979 (1351)

3042 (1380)

WT lbs (kg) - Enclosure Only

Part No 0K5085 Rev. D 06/08/15

FUEL CONSUMPTION RATES*

	Diesel - g	ph (lph)
Fuel Pump Lift - ft (m)	Percent Load	gph (lph)
3 (1)	25%	0.92 (3.5)
	50%	1.45 (5.5)
Total Fuel Pump Flow (Combustion + Return)	75%	1.96 (7.4)
4.5 gph	100%	2.74 (10.4)
	* Fuel supply installation must accommod	date fuel consumption rates at 100% load

COOLING

		Standby
Coolant Flow per Minute	gpm (lpm)	10 (38)
Coolant System Capacity	gal (L)	2.8 (10.95)
Heat Rejection to Coolant	BTU/hr	111,000
Inlet Air	cfm (m3/hr)	4,500 (7647)
Max. Operating Radiator Air Temp	Fo (Co)	122 (50)
Max. Ambient Temperature (before derate)	Fo (Co)	104 (40)
Maximum Radiator Backpressure	in H ₂ 0	0.5
	_	

COMBUSTION AIR REQUIREMENTS

110				
			Standby	
	Flow at Rated Power	cfm (m3/min)	90 (2.55)	

ENGINE			EXHAUST	EXHAUST				
		Standby			Standby			
Rated Engine Speed	rpm	1800	Exhaust Flow (Rated Output)	cfm (m³/min)	230 (391)			
Horsepower at Rated kW**	hp	49	Max. Backpressure (Post Silencer)	inHg (Kpa)	1.5 (5.1)			
Piston Speed	ft/min (m/min)	1110 (338)	Exhaust Temp (Rated Output)	°F (°C)	850 (454)			
BMEP	psi	153	Exhaust Outlet Size (Open Set)	mm (in)	63.5 (2.5)	_		
** Refer to "Emissions Data Sheet" for	r maximum bHP for EPA and St	CAQMD permitting purposes.						

Deration - Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

| **2.4L** | 30 kW INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*

. i mai	and I	OPEN SE	Т	
	н	RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)
7. Frankling	Control of the contro	NO TANK	-	76 (1930.4) x 38 (914.4) x 46 (1168.4)
	0	20	54 (204.4)	76 (1930.4) x 38 (914.4) x 59 (1498.6)
		48	132 (499.7)	76 (1930.4) x 38 (914.4) x 71 (1803.4)
		77	211 (798.7)	76 (1930.4) x 38 (914.4) x 83 (2108.2)
L	W	109	300 (1135.6)	93 (2362.2) x 38 (914.4) x 87 (2209.8)
	FT T3	STANDAF	RD ENCLOSU	JRE
11 11 1		BLIN TIME	USABLE	

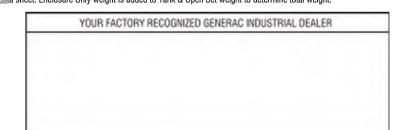
		STANDAL	KD ENGLOSU	JRE		
		RUN TIME	USABLE CAPACITY	L x W x H in (mm)	WT lbs (kg) -	Enclosure Only
		HOURS	GAL (L)	,	Steel	Aluminum
	Н	NO TANK	-	95 (2413) x 38 (965.2) x 50 (1270)		
	0	20	54 (204.4)	95 (2413) x 38 (965.2) x 63 (1600.2)	_	
	4.4	48	132 (499.7)	95 (2413) x 38 (965.2) x 75 (1905)	302 (137)	191 (87)
-11-11-11		77	211 (798.7)	95 (2413) x 38 (965.2) x 87 (2209.8)	_	
L	. w	109	300 (1135.6)	95 (2413) x 38 (965.2) x 91 (2311.4)	_	
	100	I EVEL 1	ACOUSTIC E	:NCI OGIIDE		

LEVEL 1 ACOUSTIC ENCLOSURI CAPACITY

	****			HOURS	GAL (L)	LAWAITHI (IIIII)	Steel	Aluminum
			н	NO TANK	-	113 (2870.2) x 38 (965.2) x 50 (1270)		
• • B o				20	54 (204.4)	113 (2870.2) x 38 (965.2) x 63 (1600.2)		
		0		48	132 (499.7)	113 (2870.2) x 38 (965.2) x 75 (1905)	455 (206)	288 (131)
				77	211 (798.7)	113 (2870.2) x 38 (965.2) x 87 (2209.8)		
				109	300 (1135.6)	113 (2870.2) x 38 (965.2) x 91 (2311.4)		
L	-	W						
				LEVEL 2	ACOUSTIC E	ENCLOSURE		

	-1	RUN TIME	USABLE	USABLE CAPACITY L x W x H in (mm)		Enclosure Only
		HOURS	GAL (L)		Steel	Aluminum
		NO TANK	-	95 (2413) x 38 (965.2) x 62 (1574.8)	_	
] [[н	20	54 (204.4)	95 (2413) x 38 (965.2) x 75 (1905)		
		48	132 (499.7)	95 (2413) x 38 (965.2) x 87 (2209.8)	460 (209)	291 (132)
0		77	211 (798.7)	95 (2413) x 38 (965.2) x 99 (2514.6)		
	- 1	109	300 (1135.6)	95 (2413) x 38 (965.2) x 103 (2616.2)		

*All measurements are approximate and for estimation purposes only. Sound dBA can be found on the sound data sheet. Enclosure Only weight is added to Tank & Open Set weight to determine total weight.



LxWxHin (mm)

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
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PREPARED FOR

12657 Alcosta Blvd, Suite 300 San Ramon, California 94583



5098 Foothills Blvd 3-119 Roseville, CA 95747

Sprint Cascade:

SF25XC335-A



SPRINT CASCADE:	SF25XC335-A
PROJECT NO:	T-16503-1
DRAWN BY:	DAG
CHECKED BY:	JM

	G	07/26/19	90% ZD REV 6
	F	05/31/19	90% ZD REV 5
	Е	05/02/19	90% ZD REV 4
	D	03/13/19	90% ZD REV 3
	C	10/23/18	90% ZD REV 2
	В	09/14/18	90% ZD REV 1
	Α	02/27/18	90% ZD SUBMITTA
,	REV	DATE	DESCRIPTION

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Issued For:

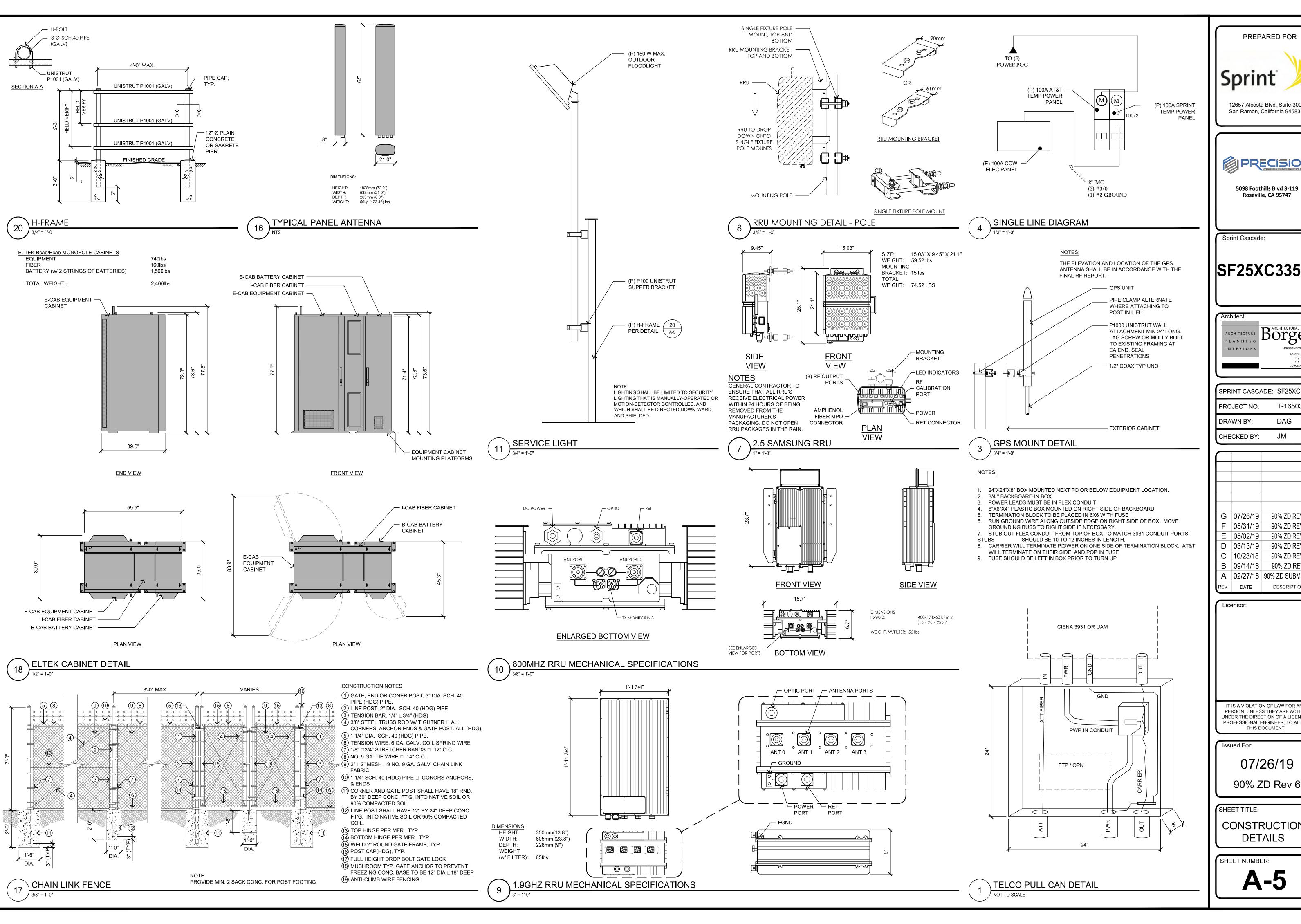
07/26/19 90% ZD Rev 6

SHEET TITLE: **GENERATOR**

SPECIFICATION SHEET NUMBER:







PREPARED FOR 12657 Alcosta Blvd, Suite 300 San Ramon, California 94583



Roseville, CA 95747

Sprint Cascade:

SF25XC335-A

ARCHITECTURAL GROU ARCHITECTURE PLANNING INTERIORS

SPRINT CASCADE: SF25XC335-T-16503-1 PROJECT NO: DAG DRAWN BY: CHECKED BY:

G | 07/26/19 | 90% ZD REV 6 F | 05/31/19 | 90% ZD REV 5 E | 05/02/19 | 90% ZD REV 4 **I** D │03/13/19│ 90% ZD REV 3 | C |10/23/18 | 90% ZD REV 2 B | 09/14/18 | 90% ZD REV 1 A | 02/27/18 | 90% ZD SUBMITTA DATE DESCRIPTION

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07/26/19

90% ZD Rev 6

CONSTRUCTION **DETAILS**

SHEET NUMBER: