



**CITY OF NEWPORT BEACH
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION ACTION REPORT**

TO: CITY COUNCIL, CITY MANAGER AND PLANNING COMMISSION

FROM: Kimberly Brandt, Community Development Director
Brenda Wisneski, Deputy Community Development Director

SUBJECT: Report of actions taken by the Zoning Administrator and/or Planning Division staff for the week ending January 4, 2013.

**COMMUNITY DEVELOPMENT DIRECTOR
OR PLANNING DIVISION STAFF ACTIONS** Item 1: Core Development Services, Inc. on behalf of Sprint PCS/Alcatel-Lucent – Telecommunications Permit No. TP2012-011 (PA2012-078)
1401 (CS) Dove Street (Dove Street Telecom Update)

Action: Approved

Council District 3

APPEAL PERIOD: An appeal may be filed with the Director of Community Development or City Clerk, as applicable, within fourteen (14) days following the date the action or decision was rendered unless a different period of time is specified by the Municipal Code (e.g., Title 19 allows ten (10) day appeal period for tentative parcel and tract maps, lot line adjustments, or lot mergers). For additional information on filing an appeal, contact the Planning Division at 949 644-3200.

Lt. Dennis Birch, NBPD (*Telecom Permit*)



COMMUNITY DEVELOPMENT DEPARTMENT

PLANNING DIVISION

3300 Newport Boulevard, Building C, Newport Beach, CA 92663

(949) 644-3200 Fax: (949) 644-3229

www.newportbeachca.gov

COMMUNITY DEVELOPMENT DIRECTOR ACTION LETTER

APPLICATION: Telecommunications Permit No. TP2012-011 (PA2012-078)

APPLICANT: Sonal Thakur, Core Development Services, Inc.

CARRIER: Sprint PCS/Alcatel-Lucent

LOCATION: 1401 (CS) Dove Street
Dove Street Telecom Update

LEGAL DESCRIPTION Parcel Map Book 40, Page 32, Parcel 1

On **January 2, 2013**, the Community Development Director approved Telecommunications Permit No. TP2012-011. This approval is based on the findings attached to this report (Attachment No. CD 1).

In approving this application, the Community Development Director analyzed issues regarding compliance with Chapter 15.70 of the Newport Beach Municipal Code and determined in this case that the proposed wireless telecommunications facility ("telecom facility") meets the provisions of Chapter 15.70.

PROJECT SUMMARY

Core Development Services, Inc. has submitted an application on behalf of Sprint PCS/Alcatel-Lucent requesting a telecommunications facility permit to modify an existing telecommunications facility. The proposed modifications include the following: (1) replacing three existing panel antennas; (2) replacing one GPS antenna; (3) replacing one existing battery backup cabinet; (4) upgrading one existing equipment cabinet; (5) addition of three new RRH units; and (6) addition of backhaul equipment and associated cables.

The top of the newly upgraded antennas measure 94 feet above ground level (AGL) and will be flush-mounted to the wall of the existing penthouse structure. All upgraded antennas and related equipment will be in the same location as the superseded equipment and will be painted to match the building.

Photographic visual simulations depicting the existing and proposed conditions at the site have been prepared by the applicant and are included as Attachment No. CD 3. The proposed changes to the existing exterior conditions of the site are minor and are conditioned such that blending is achieved. A copy of the project site plan and elevations depicting the proposed project are attached as Attachment No. CD 4.

ZONING DISTRICT/GENERAL PLAN

- **Zone:** PC-11 (Newport Place)
- **General Plan:** MU-H2 (Mixed-Use Horizontal)

BACKGROUND

Sprint PCS constructed the existing facility in 2000 prior to the current Telecommunications Facility Ordinance being enacted. In 2009, Royal Street Communications was granted approval to collocate on the site and constructed its facility subsequently in 2010 without additional screening requirements.

APPEAL PERIOD

Telecommunications Facility applications do not become effective until 14 days after the date of action, during which time the applicant or any interested party may appeal the decision of the Community Development Director and division staff to the City Council by submitting a written appeal application to the City Clerk. For additional information on filing an appeal, contact the City Clerk at 949 644-3005.

On behalf of Kimberly Brandt, Community Development Director

By:



Benjamin M. Zdeba
Assistant Planner

GR/bmz

Attachments: CD 1 Findings and Conditions of Approval
CD 2 Vicinity Map
CD 3 Photographic Simulations
CD 4 Site Plan & Elevations

Attachment No. CD 1

Findings and Conditions of Approval

**FINDINGS AND
CONDITIONS OF APPROVAL
TELECOMMUNICATIONS PERMIT NO. TP2012-011
(PA2012-078)**

FINDINGS

1. The telecommunications facility as proposed meets the intent of Chapter 15.70 of the Newport Beach Municipal Code (NBMC), while ensuring public safety, reducing the visual effects of telecom equipment on public streetscapes, protecting scenic ocean and coastal views, and otherwise mitigating the impacts of such facilities for the following reasons:
 - The proposed upgrades to the existing facility will not be detrimental to public health or safety because it is required to comply with the applicable rules, regulations and standards of the Federal Communications Commission and the California Public Utilities Commission.
 - The existing telecom facility is located on the roof of an existing building, and any future proposed facility to be located within 1,000 feet of the existing facility shall be required to co-locate on the same site to limit the adverse visual effects of proliferation of facilities in the City.
 - Due to the location or design of the facility, there is no impact to public views.

2. The telecommunications facility as proposed conforms to the technology, height, location and design standards for the following reasons:
 - The telecom facility approved under this permit utilizes the most efficient available technology in order to minimize the number of facility components and reduce the visual impact.
 - The telecom facility approved by the permit does not exceed the maximum building height limit of six stories above ground level with exceptions for mechanical equipment, as specified in the Planned Community Text.
 - The antennas and cabinets for the telecom facility approved by this permit will be roof-mounted and will be painted such that they are blended in a manner consistent with the architectural style, color and materials of the building to avoid adverse impacts to views from land or buildings at higher elevations.
 - The support equipment for the telecom facility will be roof-mounted and will be blended in a manner consistent with the architectural style, color and materials of the building. The roof-mounted equipment will comply with the height limit applicable to the building in PC-11 Zoning District.

3. This project has been reviewed, and it has been determined that it is categorically exempt from the requirements of the California Environmental Quality Act under Section 15302 Class 2 (Replacement or Reconstruction) since the project consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced.

CONDITIONS

1. The development shall be in substantial conformance with the approved plot plan, antenna and equipment plans, and elevations, except as noted in the following conditions.
2. The antennas and all related equipment shall be painted to match the exterior color of the building or structure upon which they are located.
3. Anything not specifically approved by this Telecom Permit is not permitted and must be addressed in a separate and subsequent Telecom Permit review.
4. The telecom facility approved by this permit shall comply with all applicable rules, regulations and standards of the Federal Communications Commission (FCC) and the California Public Utilities Commission (CPUC).
5. The telecom facility shall comply with all regulations and requirements of the Uniform Building Code, Uniform Fire Code, Uniform Mechanical Code and National Electrical Code. All required permits shall be obtained prior to commencement of the construction.
6. The telecom facility approved by the permit shall comply with any easements, covenants, conditions or restrictions on the underlying real property upon which the facility is located.
7. Any future facilities proposed by other carriers to be located within 1,000 feet from the subject property shall be approved to co-locate at the same site by the property owner or authorized agent, unless otherwise approved by the Planning Division.
8. Prior to issuance of building permits, a deposit of \$5,000 shall be paid to the City of Newport Beach. This deposit is required by the Planning Division to ensure preparation and submittal of the RF Compliance and Radiation Report, referenced in the above Condition. The deposit will be used to defray any and all fees associated with review of the report by an independent technical consultant, pursuant to Section 15.70.070 B-10 of the Telecom Ordinance. Any unused deposit fees will be refunded to the applicant upon determination of compliance with the approved frequency and FCC standards.
9. Prior to the issuance of any building, mechanical and/or electrical permits, architectural drawings and structural design plans shall be submitted to the City

of Newport Beach for review and approval by the applicable departments. A copy of this approval letter shall be incorporated into the drawings approved for the issuance of permits.

10. The applicant shall not prevent the City of Newport Beach from having adequate spectrum capacity on the City's 800 MHz radio frequencies at any time.
11. Should interference with the City's Public Safety radio equipment occur, use of the telecom facility authorized by this permit shall be suspended until the radio frequency interference is corrected and verification of the compliance is reported.
12. The applicant recognizes that the frequencies used by the cellular facility located at **1401 (CS) Dove Street** are extremely close to the frequencies used by the City of Newport Beach for public safety. This proximity will require extraordinary "comprehensive advanced planning and frequency coordination" engineering measures to prevent interference, especially in the choice of frequencies and radio ancillary hardware. This is encouraged in the "Best Practices Guide" published by the Association of Public-safety Communications Officials-International, Inc. (APCO), and as endorsed by the Federal Communications Commission (FCC).
13. Within 30 days after installation of the telecom facility, during which time the telecom facility may be allowed operate under a 30-day temporary certificate of occupancy, a radio frequency (RF) compliance and radiation report prepared by a qualified RF engineer acceptable to the City shall be submitted in order to demonstrate that the facility is operating at the approved frequency and complies with FCC standards for radiation. If the report shows that the facility does not so comply, the use of the facility shall be suspended until the facility is modified to comply and a new report has been submitted confirming such compliance.
14. The applicant shall provide a "single point of contact" in its Engineering and Maintenance Departments that is monitored 24 hours per day to insure continuity on all interference issues, and to which interference problems may be reported. The name, telephone number, fax number and e-mail address of that person shall be provided to the Planning Division and Newport Beach Police Department's Support Services Commander prior to activation of the facility.
15. Appropriate information warning signs or plates shall be posted at the access locations and each transmitting antenna. In addition, contact information (e.g. a telephone number) shall be provided on the warning signs or plates to arrange for access to the roof top area. The location of the information warning signs or plates shall be depicted on the plans submitted for construction permits.
16. No advertising signage or identifying logos shall be displayed on the telecom facility except for small identification, address, warning and similar information plates. A detail of the information plates depicting the language on the plate shall be included in the plans submitted for issuance of building permits.

17. The telecom facility shall not be lighted except as deemed necessary by the Newport Beach Police Department for security lighting. The night lighting shall be at the lowest intensity necessary for that purpose and such lighting shall be shielded so that direct rays do not shine on nearby properties. Prior to the final of building permits, the applicant shall schedule an evening inspection by the Code Enforcement Division to confirm compliance with this condition.
18. The operator of the telecom facility shall maintain the facility in a manner consistent with the original approval of the facility.
19. Should the property be sold or otherwise come under different ownership, any future owners or assignees shall be notified of the conditions of this approval by either the applicant, current property owner or leasing agent.
20. The applicant shall insure that lessee or other user(s) shall comply with the terms and conditions of this permit, and shall be responsible for the failure of any lessee or other users under the control of the applicant to comply.
21. Any operator who intends to abandon or discontinue use of a telecom facility must notify the Planning Division by certified mail no less than 30 days prior to such action. The operator or property owner shall have 90 days from the date of abandonment or discontinuance to reactivate use of the facility, transfer the rights to use the facility to another operator, or remove the telecom facility and restore the site.
22. The City reserves the right and jurisdiction to review and modify any telecom permit approved pursuant to Chapter 15.70 of the Newport Beach Municipal Code, including the conditions of approval, based on changed circumstances. The operator shall notify the Planning Division of any proposal to change the height or size of the facility; increase the size, shape or number of antennas; change the facility's color or materials or location on the site; or increase the signal output above the maximum permissible exposure (MPE) limits imposed by the radio frequency emissions guidelines of the FCC. Any changed circumstance shall require the operator to apply for a modification of the original telecom permit and obtain the modified telecom permit prior to implementing any change.
23. This telecom permit may be modified or revoked by the City Council should they determine that the facility or operator has violated any law regulating the telecom facility or has failed to comply with the requirements of Chapter 15.70 of the NBMC, or this telecom permit.
24. This approval shall expire unless exercised within 24 months from the date of approval.
25. To the fullest extent permitted by law, applicant shall indemnify, defend and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any and all claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines,

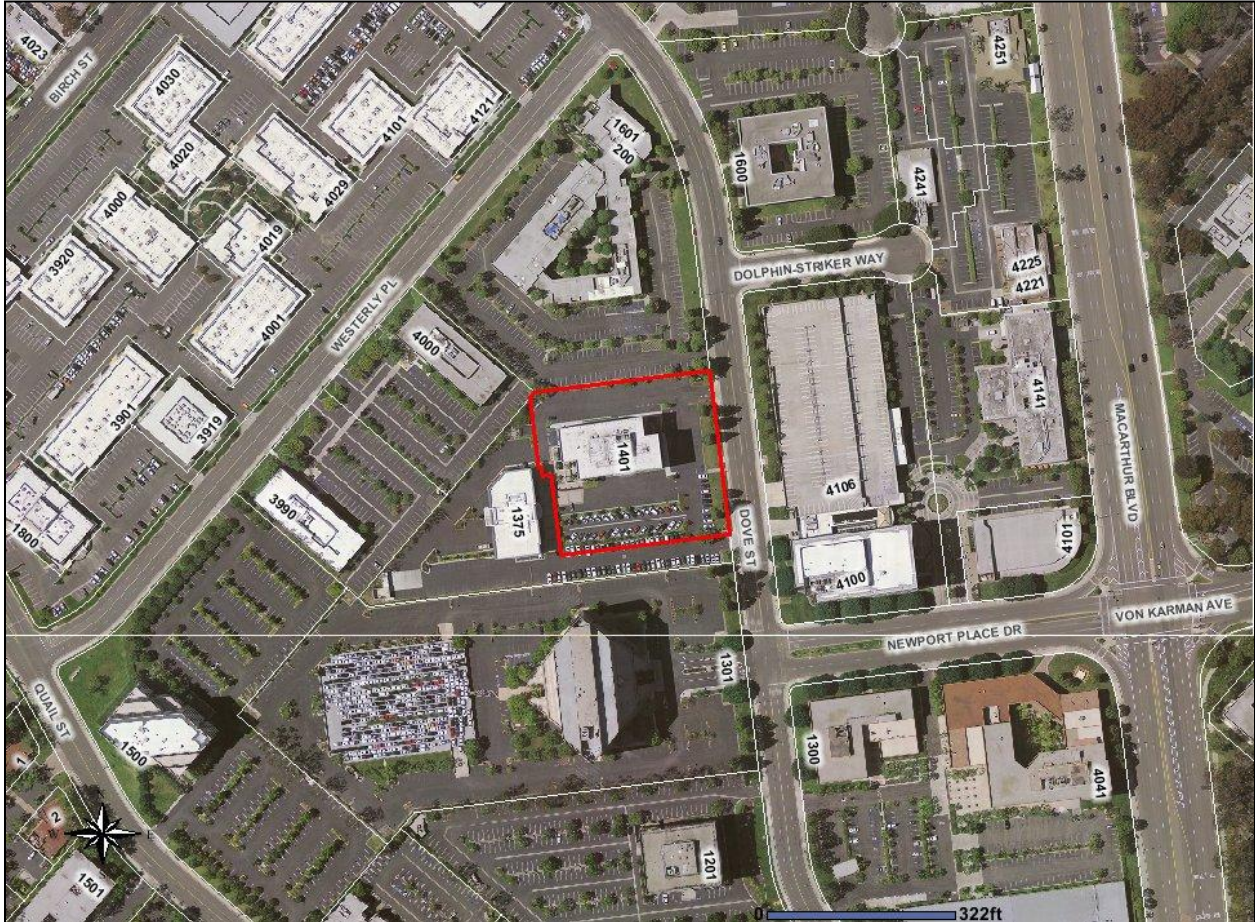
penalties, liabilities, costs and expenses (including without limitation, attorney's fees, disbursements and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to City's approval of the Dove Street Telecom Upgrades including, but not limited to, the TP(2012-011) PA2012-078. This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorneys' fees, and other expenses incurred in connection with such claim, action, causes of action, suit or proceeding whether incurred by applicant, City, and/or the parties initiating or bringing such proceeding. The applicant shall indemnify the City for all of City's costs, attorneys' fees, and damages which City incurs in enforcing the indemnification provisions set forth in this condition. The applicant shall pay to the City upon demand any amount owed to the City pursuant to the indemnification requirements prescribed in this condition.

Attachment No. CD 2

Vicinity Map

VICINITY MAP

1401 (CS) Dove Street



Telecommunications Permit No. TP2012-011
(PA2012-078)

Attachment No. CD 3

Photographic Simulations

OG03XC095

DOVE
1401 DOVE STREET
NEWPORT BEACH, CA 92660

RECEIVED BY
COMMUNITY

SEP 28 2012

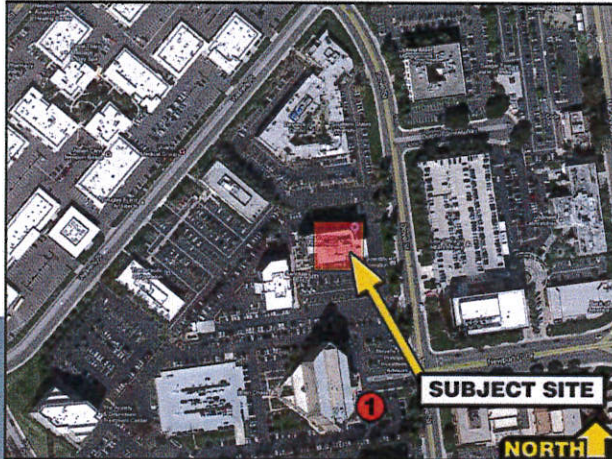


July 17, 2012

View #: 1

DEVELOPMENT
CITY OF NEWPORT BEACH

Location



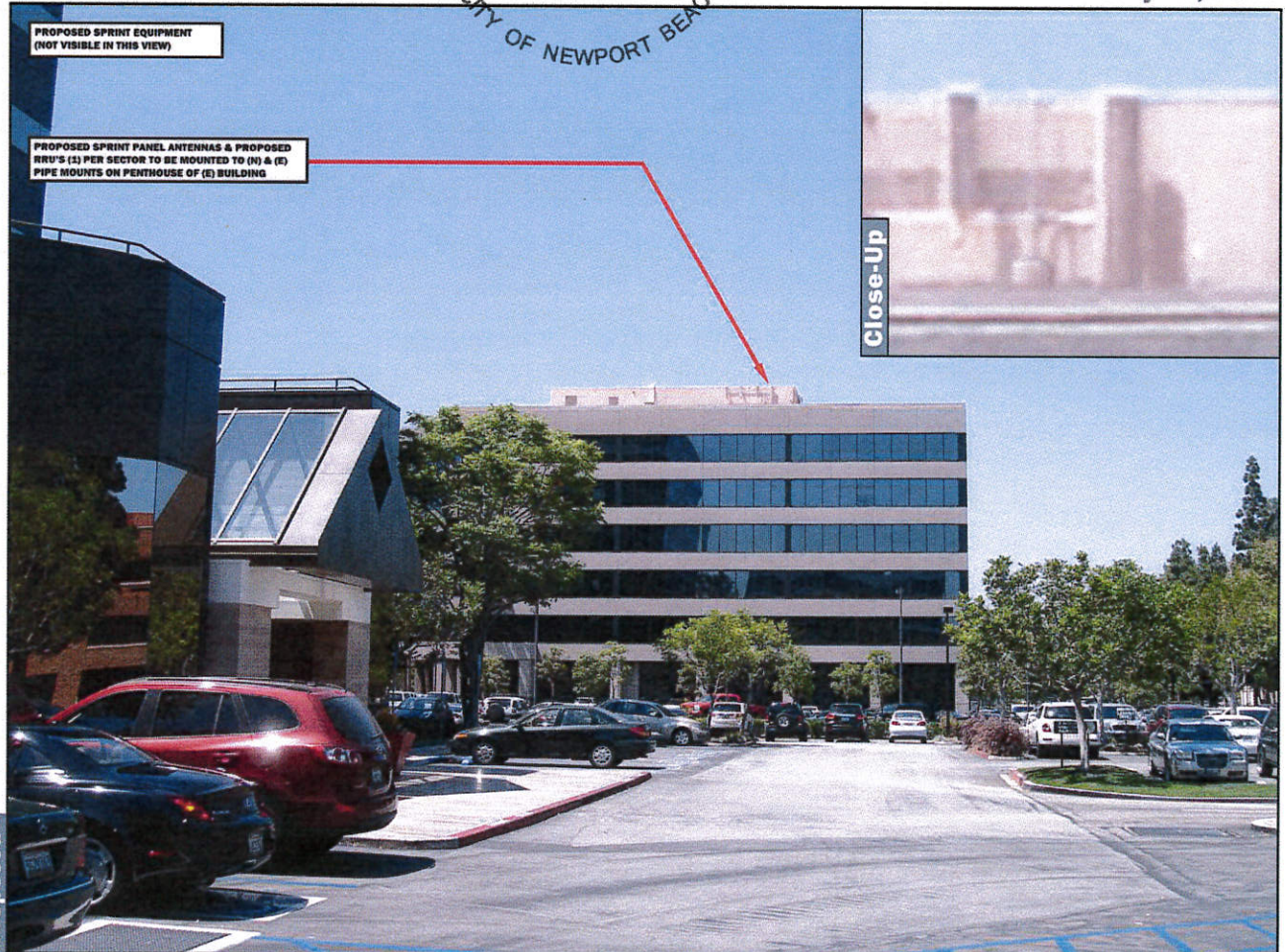
SUBJECT SITE

NORTH

Existing



Proposed



PROPOSED SPRINT EQUIPMENT
(NOT VISIBLE IN THIS VIEW)

PROPOSED SPRINT PANEL ANTENNAS & PROPOSED
RRU'S (2) PER SECTOR TO BE MOUNTED TO (H) & (E)
PIPE MOUNTS ON PENTHOUSE OF (E) BUILDING

Close-Up

The illustration above is a representation of the proposed project based on information provided by the client. Actual construction may vary dependent on approved construction plans and therefore the A&E firm will not be held responsible for any post production design changes.

Sprint PCS
310 Commerce
Irvine, CA 92602
Julia Malisos - Phone: (714) 512-4770

RTGRAPHICS
PHOTOGRAPHY & VISUALIZATION
Contact: Ryan Thigpen - (949) 307-3120
web - <http://rtgraphics.net>

Prepared by: RLT
Approved by: RLT

core
DEVELOPMENT SERVICES
CORE DEVELOPMENT SERVICES
2903 Saturn Street, Suite H, Brea, CA 92821
Office: (714) 729-8404 | Fax: (714) 333-4441

REV:
A

OG03XC095

DOVE
1401 DOVE STREET
NEWPORT BEACH, CA 92660

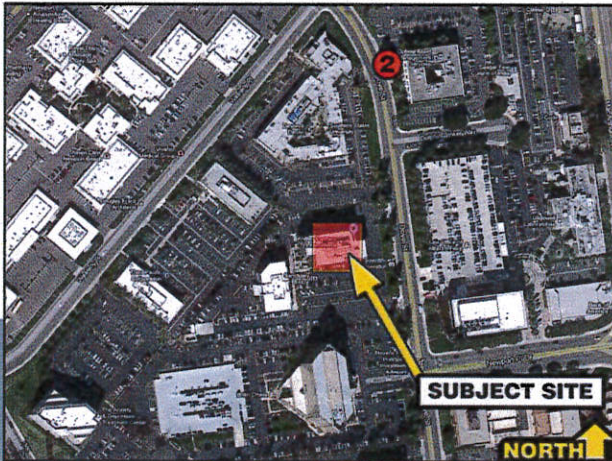
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SEP 28 2012



July 17, 2012

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Location



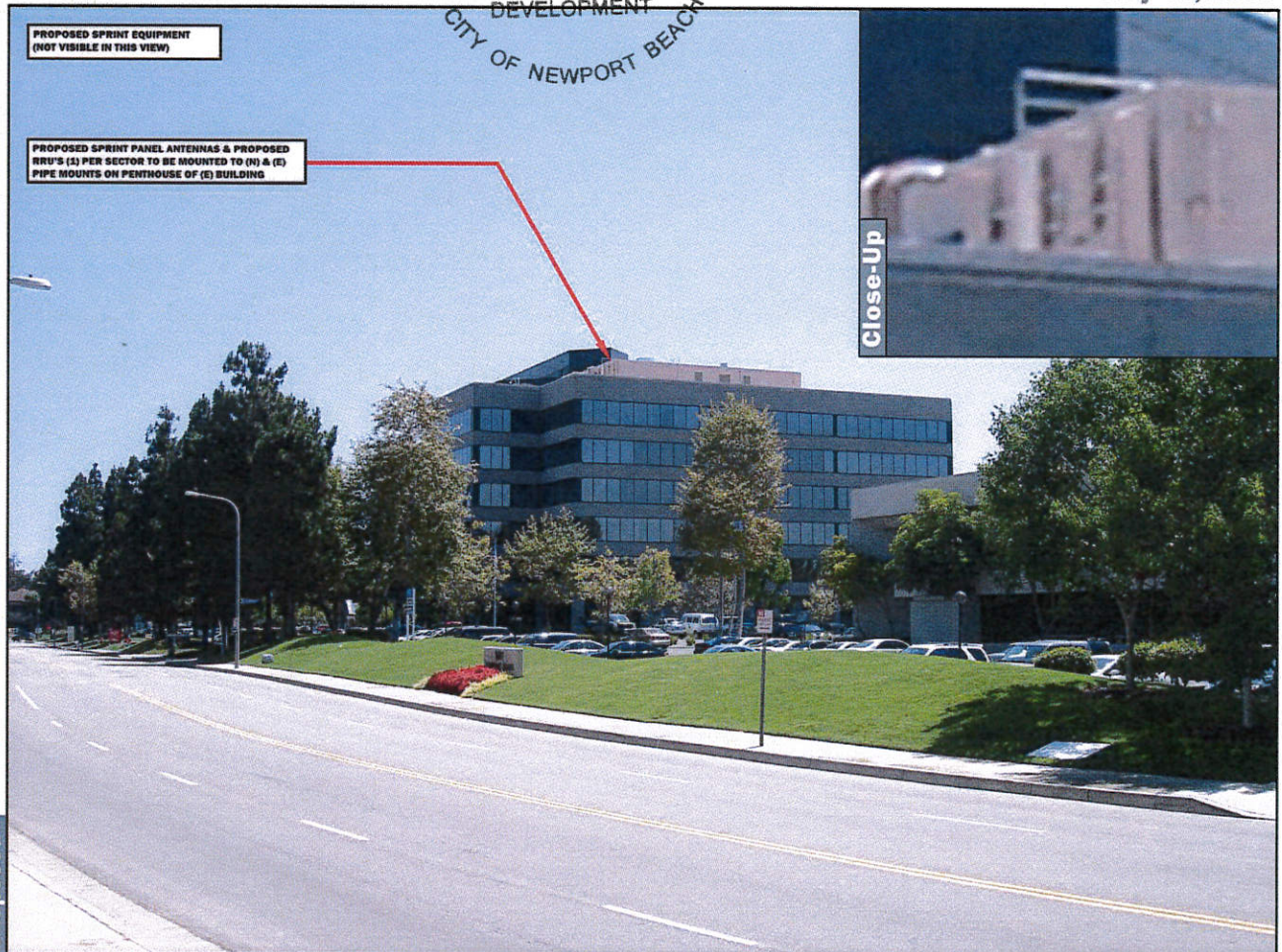
SUBJECT SITE

NORTH

Existing



Proposed



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PROPOSED SPRINT PANEL ANTENNAS & PROPOSED
RRU'S (2) PER SECTOR TO BE MOUNTED TO (H) & (E)
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RTGRAPHICS
PROFESSIONAL MEDIA DESIGN
Contact: Ryan Thigpen - (949) 307-3120
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Prepared by: RLT
Approved by: RLT

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REV:
A

OG03XC095

DOVE
1401 DOVE STREET
NEWPORT BEACH, CA 92660

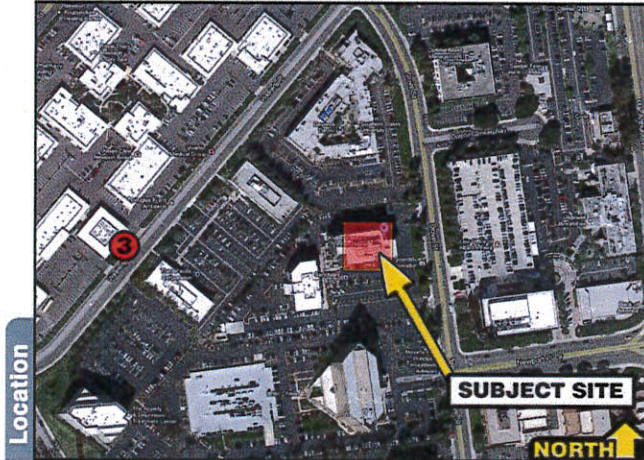
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COMMUNITY
SEP 28 2012



July 17, 2012

View #: 3

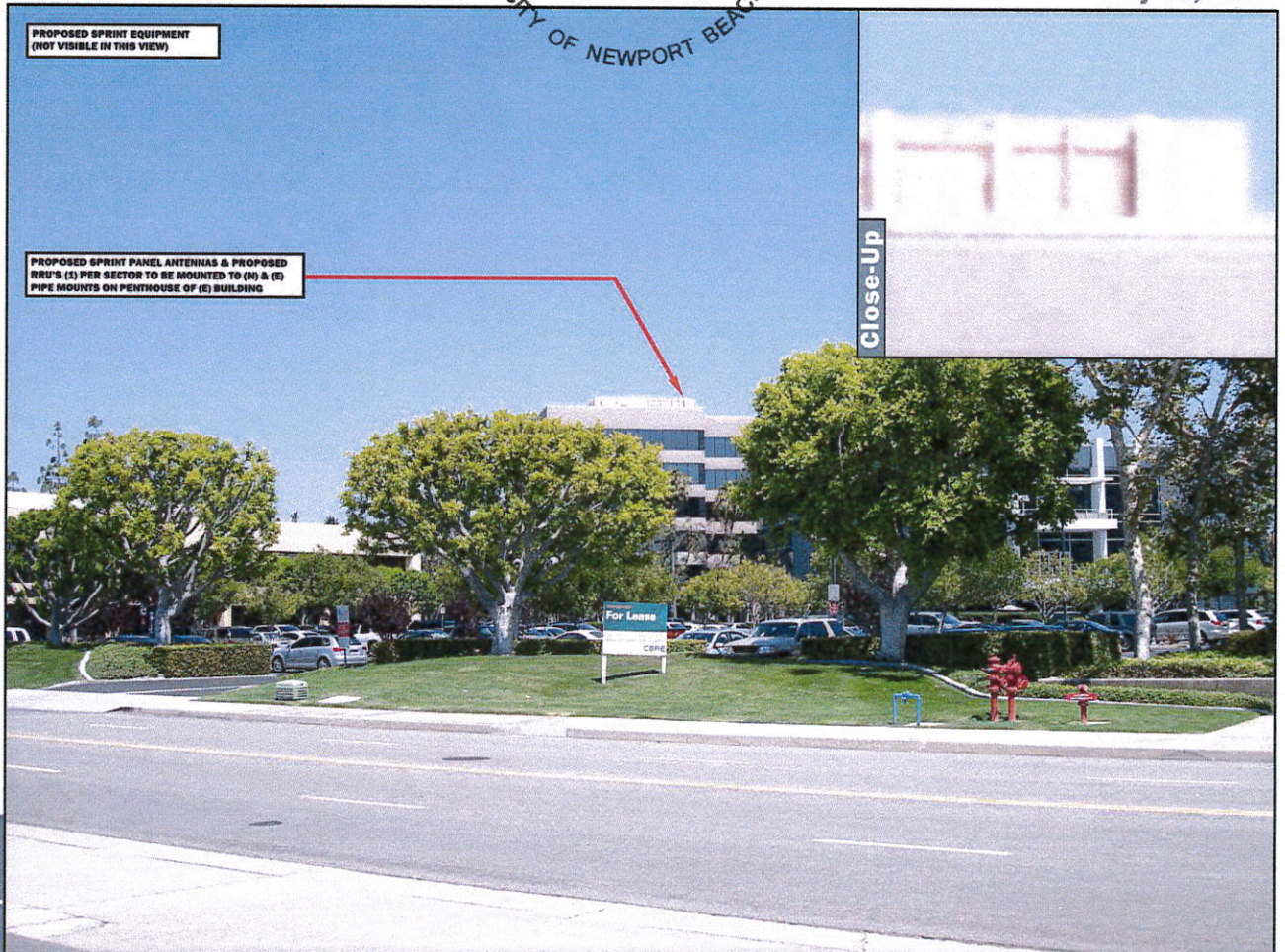
DEVELOPMENT
CITY OF NEWPORT BEACH



Location

SUBJECT SITE

NORTH



PROPOSED SPRINT EQUIPMENT
(NOT VISIBLE IN THIS VIEW)

PROPOSED SPRINT PANEL ANTENNAS & PROPOSED
RRU'S (1 PER SECTOR TO BE MOUNTED TO (N) & (E)
PIPE MOUNTS ON PENTHOUSE OF (E) BUILDING

Close-Up

Proposed

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Existing

Sprint PCS
310 Commerce
Irvine, CA 92602
Julia Malisos - Phone: (714) 512-4770

RTGRAPHICS
PRODUCTION & GRAPHIC DESIGN
Contact: Ryan Thigpen - (949) 307-3120
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Approved by: RLT

core
DEVELOPMENT SERVICES
CORE DEVELOPMENT SERVICES
2903 Saturn Street, Suite H, Brea, CA 92821
Office: (714) 729-8404 | Fax: (714) 333-4441

REV:
A

Attachment No. CD 4

Site Plan & Elevations

Sprint



SITE NAME: DOVE
SITE NUMBER: OG03XC095
SITE ADDRESS: 1401 DOVE ST.
 NEWPORT BEACH, CA 92660
SITE TYPE: ROOFTOP
PROJECT: NETWORK VISIONS MMBTS LAUNCH
MARKET: ORANGE COUNTY

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 COMMUNITY
 SEP 28 2012
 DEVELOPMENT
 CITY OF NEWPORT BEACH

REV	DATE/BY	DESCRIPTION
0	05.02.2012 SR	PRELIMINARY CONSTRUCTION
1	06.04.2012 JMB	PRELIMINARY FINAL CONSTRUCTION
2	07.11.2012 JMB	REVISED PER RF

ENGINEER / CONSULTANT

Alcatel-Lucent

SITE BUILDER

Sprint
 Together with NEXTEL

A&E DEVELOPMENT

core
 DEVELOPMENT SERVICES
 A&E SERVICES
 2749 Saturn Street
 Brea, California 92821
 (714)729-8404 (714)333-4441 fax
 www.core.us.com

SEAL

SITE INFORMATION
SITE NAME:
DOVE
OG03XC095
SITE ADDRESS:
 1401 DOVE ST.
 NEWPORT BEACH, CA 92660
 ORANGE COUNTY

SHEET TITLE

TITLE SHEET

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

T-1

SITE INFORMATION

ARCHITECT:
 CORE DEVELOPMENT SERVICES
 2749 SATURN STREET
 BREA, CALIFORNIA, 92821
 CONTACT: ANDREW PEREZ (PM)
 PHONE: 714.729.8404

EQUIPMENT SUPPLIER:
 CEVA LOGISTICS
 ATTN: ALCATEL-LUCENT
 5555 JURUPA AVE
 ONTARIO, CA 91761
 CONTACT: TROY PLOTKIN
 PHONE: 951.733.9478

STRUCTURAL ENGINEER:
 PNP ENGINEERING
 35 SPARROWHAWK
 IRVINE, CA 92604
 CONTACT: Y.J. KANG PhD, PE
 PHONE: 949.351.5020

ALU CONSTRUCTION MANAGER:
 ALCATEL-LUCENT
 1250 CORONA POINTE CT, SUITE 406
 CORONA, CA. 92879
 CONTACT: SCOTT MCMILLIAN
 PHONE: 310.569.4645

ALU SITE ACO MANAGER:
 ALCATEL-LUCENT
 1250 CORONA POINTE CT, SUITE 406
 CORONA, CA. 92879
 CONTACT: KAREN SIPP
 PHONE: 949.584.8201

PLANNING CONSULTANT:
 CORE DEVELOPMENT SERVICES
 2749 SATURN STREET
 BREA, CALIFORNIA, 92821
 CONTACT: JULIA MALISOS
 PHONE: 714.512.4770

POWER COMPANY:
 SOUTHERN CALIFORNIA EDISON (SCE)
 P.O. BOX 800
 ROSEMEAD, CA 91770
 PHONE: 800.655.4555

FIBER VENDOR:
 AT&T
 CONTACT: MARK RUSH
 PHONE: (909) 996-2014

ENGINEERING/MAINTENANCE/INTERFERENCE 24HR CONTACT:
 JAMES CROWTHER OF LANDLORD
 SOLUTION TEAM
 PHONE: 800.357.7641
 FAX: 913.523.9735
 EMAIL: LANDLORDSOLUTIONS@SPRINT.COM

AREA MAP



DRIVING DIRECTIONS

- FROM JOHN WAYNE AIRPORT IN IRVINE:
1. START OUT GOING NORTHEAST ON AIRPORT WAY TOWARD MACARTHUR BLVD.
 2. TURN RIGHT ONTO MACARTHUR BLVD.
 3. TURN RIGHT ONTO NEWPORT PLACE DR.
 4. TURN RIGHT ONTO DOVE ST.
 5. 1401 DOVE ST IS ON THE LEFT

SIGNATURE BLOCK

APPROVAL	NAME	COMPANY / TITLE	SIGNATURE	DATE
SITE OWNER				
IN-MARKET CONSTRUCTION LEAD				
ALU RF ENGINEER				
ALU SITE ACQUISITION				
PLANING CONSULTANT				
SPRINT REPRESENTATIVE				

APPLICABLE CODES

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:

- 2010 CALIF. ADMINISTRATIVE CODE (INCL. TITLES 24 & 25)
- 2010 CALIFORNIA BUILDING CODES
- 2010 CALIFORNIA ELECTRICAL CODES
- 2010 CALIFORNIA MECHANICAL CODES
- 2010 CALIFORNIA PLUMBING CODES
- 2010 CALIFORNIA FIRE CODES
- 2008 CALIFORNIA ENERGY CODES
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- LOCAL BUILDING CODES
- CITY/COUNTY ORDINANCES

PROJECT

PERFORM SITE MODIFICATIONS TO AN EXISTING WIRELESS COMMUNICATIONS FACILITY, INCLUDING:

- REPLACEMENT OF (1) GPS ANTENNAS
- REPLACEMENT OF (3) PANEL ANTENNAS
- REPLACEMENT OF (1) BATTERY BACK-UP CABINET
- UPGRADE OF (1) EQUIPMENT CABINET
- ADDITION OF (3) RRH UNITS
- ADDITION OF BACKHAUL EQUIPMENT AND ASSOCIATED CABLES

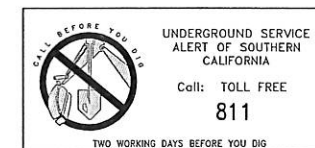
ANTENNA COUNT PRE UPGRADE: (12)
 ANTENNA COUNT POST UPGRADE: (12)
 EQUIPMENT CABINET COUNT PER UPGRADE: (4)
 EQUIPMENT CABINET COUNT POST UPGRADE: (4)

PROJECT SUMMARY

APPLICANT:
 SPRINT PCS
 310 COMMERCE
 IRVINE, CA 92602
 CONTACT: TBD

PROPERTY OWNER:
 THE REALTY ASSOCIATES V, LP
 C/O DAVIS PORTERS INCORPORATED,
 4100 NEWPORT PLACE, SUITE 830,
 NEWPORT BEACH, CA 92660

SITE DATA:
 ZONING CLASSIFICATION: PC-11
 CALIFORNIA A BUILDING CODE: 2010 EDITION
 JURISDICTION: CITY OF NEWPORT BEACH
 EXISTING USE: TELECOMMUNICATIONS
 NEW USE: TELECOMMUNICATIONS
 LATITUDE: 33° 39' 47.990" N
 LONGITUDE: -117° 51' 56.019" W
 LEASE AREA: (UNCHANGED)
 PARCEL NUMBER: 427-221-004

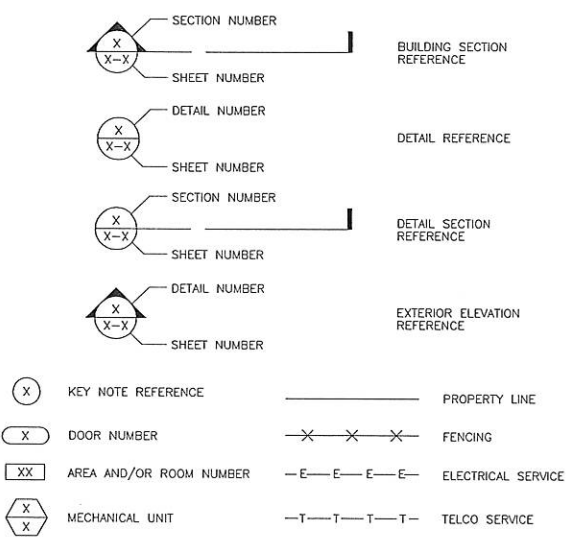


DRAWING INDEX

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A-3	EXISTING AND FINAL ANTENNA PLANS
A-4	SOUTH ELEVATIONS
A-5	WEST ELEVATIONS
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A-6	EQUIPMENT DETAILS
A-7	EQUIPMENT DETAILS
A-8	EQUIPMENT DETAILS
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FIBER	FIBER ROUTING PLAN
E-1	ELECTRICAL NOTES
E-2	GROUNDING, LINE DIAGRAM AND DETAILS

ABBREVIATIONS			
AB	ANCHOR BOLT	LAM	LAMINATED
AC	ASPHALTIC CONCRETE	LBS	POUNDS
A/C	AIR CONDITIONING	LT	LIGHT
ADJ	ADJUSTABLE	LA	LIGHTNING ARRESTOR
A.F.F.	ABOVE FINISH FLOOR	LNA	LOW NOISE AMPLIFIER
ARCH	ARCHITECTURAL	MFR	MANUFACTURER
APPROX	APPROXIMATELY	MAT	MATERIAL
A.G.L.	ABOVE GRADE LEVEL	MAX	MAXIMUM
A.M.S.L.	ABOVE MEAN SEA LEVEL	MECH	MECHANICAL
BD	BOARD	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BLK	BLOCKING	ML	METAL LATH
BOT	BOTTOM	MO	MASONRY OPENING
BSMT	BASEMENT	MS	MACHINE SCREW
BTS	BASE TRANSCIVER STATION	MTD	MOUNTED
		MTL	METAL
C	COURSE(S)	(N)	NEW
CEM	CEMENT	NO	NOT IN CONTRACT
CL	CHAIN LINK	NO	NUMBER
CLG	CEILING	NTS	NOT TO SCALE
CLR	CLEAR		
COL	COLUMN	OA	OVERALL
CONC	CONCRETE	OC	ON CENTER
CONST	CONSTRUCTION	OPNG	OPENING
CONT	CONTINUOUS	OPP	OPPOSITE
CORR	CORRIDOR		
CO	CONDUIT ONLY	PARTN	PARTITION
		PL	PLATE
		PLAS	PLASTER
		PLYWD	PLYWOOD
DIA	DIAMETER	POC	POINT OF CONNECTION
DBL	DOUBLE	PROP	PROPERTY
DEPT	DEPARTMENT	PT	PRESSURE TREATED
DEMO	DEMOLITION		
DIM	DIMENSION	R	RISER
DN	DOWN	REQD	REQUIRED
DR	DOOR	RD	ROOF DRAIN
DTL	DETAIL	RM	ROOM
DWG	DRAWING	RMS	ROOMS
		RO	ROUGH OPENING
(E)	EXISTING		
EA	EACH	SC	SOLID CORE
ELEC	ELECTRIC	SCHED	SCHEDULE
ELEV	ELEVATION	SECT	SECTION
EQUIP	EQUIPMENT	SHT	SHEET
EXP	EXPANSION	SIM	SIMILAR
EXT	EXTERIOR	SPECS	SPECIFICATIONS
		SS	STAINLESS STEEL
FA	FIRE ALARM	STL	STEEL
FB	FLAT BAR	STOR	STORAGE
FF	FINISH FLOOR	STRUCT	STRUCTURAL
FH	FLAT HEAD	SUSP	SUSPENDED
FIN	FINISH	SW	SWITCH
FLR	FLOOR	SWBO	SWITCHBOARD
FOS	FACE OF STUDS		
FS	FINISH SURFACE	THK	THICK
FT	FOOT, FEET	TI	TENANT IMPROVEMENT
FTG	FOOTING	TMA	TOWER MOUNTED AMPLIFIER
FW	FINISH WALL	TOS	TOP OF SURFACE
F.G.	FINISH GRADE	TS	TUBE STEEL
FLT	FUTURE	TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
GA	GAUGE	VCT	VINYL COMPOSITION
GALV	GALVANIZED		
GL	GLASS		
GR	GRADE		
GYP	GYPSONUM		
GFCI	GROUND FAULT CIRCUIT INTERRUPT	VERT	VERTICAL
GND	GROUND	V.I.F.	VERIFY IN FIELD
		VG	VERTICAL GRAIN
HC	HOLLOW CORE	W/	WITH
HDW	HARDWARE	WD	WOOD
HTR	HEATER	WR	WATER RESISTANT
HM	HOLLOW METAL	WT	WEIGHT
HORIZ	HORIZONTAL		
HR	HOUR	XFMR	TRANSFORMER
HT	HEIGHT		
HV	HIGH VOLTAGE	@	AT
ID	INSIDE DIMENSION	[CHANNEL
INS	INSULATION	∅	CENTERLINE
INT	INTERIOR	∠	ANGLE
JT	JOINT	ℙ	PROPERTY LINE

SYMBOLS:



GENERAL CONSTRUCTION NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
- CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND CONSTRUCTION SPECIFICATIONS 80-T1196-1 REV. H. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION
- CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS
- PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:
A) TRANSMITTER
B) RF FILTER
C) MFTS RACK
D) AUXILIARY EQUIPMENT IN MFTS RACK
E) PUMP ASSEMBLY
F) HEAT EXCHANGER
G) HOSE AND HOSE MANIFOLDS (ANY COPPER OR STEEL SECTIONS PROVIDE BY CONTRACTOR)
H) UHF ANTENNA AND MOUNTING BRACKETS, GPS ANTENNAS AND KU ANTENNAS
I) UHF COAX AND HANGERS
K) 480-208 AND 208-400 ELECTRICAL TRANSFORMERS (RE: E-2 FOR SPECIALIZED TRANSFORMERS PROVIDED BY CONTRACTOR)
L) AUTOMATIC TRANSFER SWITCH AND GENERATOR
M) EQUIPMENT SHELTER (SHELTERS FURNISHED IN FACTORY W/ HVAC EQUIPMENT AND ELECTRICAL DISTRIBUTION PANEL)
N) INTEGRATED LOAD CENTER
- DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A THE WORK.
- DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE HIS WORK WITH THE SUPERINTENDENT OF BUILDINGS & GROUNDS AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATELY REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
- IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS

ANTENNA & COAX NOTES

- NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT.
- ALL FIBER CABLE WILL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE AT DISTANCES NOT TO EXCEED 3' OR THE CABLE MANUFACTURERS SPECIFICATIONS WHICHEVER IS LESS, WITH HARDWARE SPECIFIED IN THE FIBER CABLE ROUTING DETAILS OF THE SUPPLIED STRUCTURAL REPORT.
 - PROVIDE AT LEAST 6" OF SLACK IN THE MAIN FIBER CABLES AT THE ANTENNA MOUNTING ELEVATION TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.
 - REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.
 - SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
 - KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
 - MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.
 - ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJEC
 - CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES.
 - LIGHT SHADED LINES AND NOTES REPRESENT WORK PREVIOUSLY DONE. DARK SHADED LINES AND NOTES REPRESENT THE SCOPE OF WORK FOR THIS PROJECT. CONTRACTOR SHALL VERIFY IF EXISTING CONSTRUCTION IS COMPLETE. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND/OR WIRING CERTIFICATES REQUIRED FOR THE ELECTRICAL SERVICE UPGRADE. IN ADDITION, CONTRACTOR SHALL PROVIDE ALL NECESSARY COORDINATION AND SCHEDULING WITH THE SERVING ELECTRICAL UTILITY AND LOCAL INSPECTION AUTHORITIES.

ANTENNA & HYBRIFLEX NOTES

- VERIFY EACH CABLE LENGTH, DIAMETER, ROUTING, COLOR CODING AND ALL APPURTENANCES WITH SPRINT.
- THE MAXIMUM FIBER CABLE LENGTH AND CORRESPONDING FIBER CABLE DIAMETER HAS BEEN ESTIMATED ON SHEET A-2.1. THIS CABLE LENGTH IS APPROXIMATE, AND IS NOT TO BE USED FOR FABRICATION OR CONSTRUCTION. ACTUAL ANTENNA CABLE LENGTH(S) MAY VARY FROM ESTIMATED MAXIMUM LENGTH AND MUST BE VERIFIED. FIBER CABLE SHALL BE PROVIDED BY SPRINT.
- ALL MAIN CABLES SHALL UTILIZE GROUND KITS, GROUNDED AS FOLLOWS:
A. NEAR ANTENNA RAD CENTER ELEVATION,
B. MIDDLE OF TOWER (MID-HEIGHT OF ANTENNA), IF CABLE RUN IS OVER 200',
C. BOTTOM OF TOWER,
D. AT MASTER GROUND BAR 3'-0" FROM RBS CABINET.
- ALL TOP JUMPERS SHALL BE LENGTHS AS SHOWN, SUPPLIED BY SPRINT, AND INSTALLED BY CONTRACTOR.
- ALL MAIN CABLES SHALL BE COLOR CODED AT FOUR (4) LOCATIONS AS FOLLOWS:
A. AT ANTENNA PRIOR TO JUMPER
B. AT THE BOTTOM OF TOWER
C. AT THE MASTER GROUND BAR, AND
D. INTERIOR OF THE RBS CABINET.
- BANDING SHALL BE AS FOLLOWS:
A. MAIN LINE COLOR BANDS SHALL BE 2" WIDE. MAINTAIN 1" SPACING BETWEEN COLORS.
B. JUMPER COLOR BANDS SHALL BE 1" WIDE. WITH 1" SPACE.
C. START COLOR BANDS 2" BEYOND WEATHERPROOFING.
D. START SELECTOR COLOR NEXT TO END CONNECTORS.
- FINAL FIBER ANTENNA CABLE SIZES SHALL BE DETERMINED BY SPRINT RF ENGINEER. SEE ANTENNA SCHEDULE SHEET A-2.1.

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ENGINEER / CONSULTANT

Alcatel-Lucent

SITE BUILDER

Sprint
Together with NEXTEL

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A&E SERVICES
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Brea, California 92821
(714)729-8404 (714)333-4441 fax
www.core.us.com

SEAL

SITE INFORMATION

SITE NAME:
**DOVE
OG03XC095**

SITE ADDRESS:
1401 DOVE ST.
NEWPORT BEACH, CA 92660
ORANGE COUNTY

SHEET TITLE

**GENERAL NOTES,
SPECIFICATIONS &
ABBREVIATIONS**

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

T-2

BATTERY INFORMATION AND NOTES:

BATTERY MFG: EAST PENN MANUFACTURING
 MODEL NUMBER: 12AVR-145L
 ELECTROLYTE CONTENT PER BATTERY: 2.17 GALLONS
 ELECTROLYTE HAZARD CLASSIFICATION PER '07 C.F.C. (8.7% SULFURIC ACID): CORROSIVE
 NUMBER OF BATTERIES TO BE INSTALLED: 20 MAX (20 PER CABINET)
 TOTAL ELECTROLYTE CONTAINED ON SITE (2.17 X 20): 43.4 GALLONS MAX

- A. QUANTITIES OF 500 GALLONS OR LESS ARE EXEMPT PER TABLE 3-E OF THE 2010 U.B.C.
- B. SINGLE VESSEL CAPACITIES OF 10 GALLONS OR LESS, AND AGGREGATE QUANTITIES NOT IN EXCESS OF 100 GALLONS ARE EXEMPT PER ARTICLE 64 OF THE 2010 C.F.C.
- C. QUANTITIES LESS THAN 50 GALLONS ARE EXEMPT FROM C.F.C. ARTICLE 80, AND SHALL NOT REQUIRE REMIT.
- D. ANY CHANGES OR ADDITIONS TO BACK-UP BATTERIES MUST COMPLY WITH 2010 C.F.C. ARTICLE 64, AND SHALL NOT CONTAIN ELECTROLYTE QUANTITIES IN EXCESS OF 50.

FIRE DEPARTMENT NOTES:

1. FIRE DEPARTMENT FINAL INSPECTION REQUIRED. SCHEDULE INSPECTION 2 DAYS IN ADVANCE.
2. A. CFC PERMIT TO OPERATE BATTERY SYSTEMS WITH STATIONARY LEAD-ACID BATTERIES IS NOT REQUIRED FOR THE QUANTITIES ON SITE.
3. A. CFC PERMIT MAY BE REQUIRED FOR THE HAZARDOUS MATERIALS ON SITE.
4. A HAZARDOUS MATERIALS IDENTIFICATION SIGN IS REQUIRED FOR ALL ENTRANCES INTO BATTERY STORAGE AREAS. LETTERS MUST BE AT LEAST 1" IN HEIGHT AND IN A COLOR WHICH CONTRASTS TO THE BACKGROUND OF THE SIGN AND USE THE FOLLOWING:

CLASS 1 WATER REACTIVE
 LIQUID TOXIC LIQUID
 CORROSIVE LIQUID OTHER
 HEALTH HAZARD LIQUID

5. AN APPROVED METHOD TO NEUTRALIZED SUPPLIED ELECTROLYTE SHALL BE PROVIDED IN THE BATTERY ROOM.
6. BATTERIES SHALL BE PROVIDED WITH SAFETY VENTING CAPS.
7. LOCATIONS AND CLASSIFICATIONS OF EXTINGUISHERS SHALL BE IN ACCORDANCE WITH THE UNIFORM FIRE CODE STANDARD 10-1 AND PLACEMENT IS SUBJECT TO APPROVAL OF THE INSPECTOR.
8. STORAGE, DISPENSING OR USE OF ANY FLAMMABLE AND COMBUSTIBLE LIQUIDS, FLAMMABLE AND COMPRESSED GASES, AND OTHER HAZARDOUS MATERIALS SHALL COMPLY WITH UNIFORM FIRE CODE REGULATIONS.
9. EXIST DOORS SHALL BE ABLE TO OPEN FROM THE INSIDE WITHOUT THE USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
10. ADDRESS NUMBERS SHALL BE A MINIMUM 6 INCHES HIGH AND PLAINLY VISIBLE FROM ROADWAY BUILDING ADDRESS IS FROM.
11. REQUIRED SIGNAGE SHALL INCLUDE LETTERING HEIGHT OF AT LEAST ONE INCH, IN A COLOR THAT CONTRAST TO THE SIGN BACKGROUNDS, AND SHALL BE PROMINENTLY DISPLAYED.
12. REQUIRED SIGNAGE SHALL INCLUDE BUT MAY NOT BE LIMITED TO APPLICABLE TYPES FROM EXAMPLES SHOWN HEREIN; SEE DETAILS 1, 2, AND 3.

BATTERY INFORMATION AND NOTES

4

RF SIGNAGE

3

**IN CASE OF
 EMERGENCY**
CALL
1-866-400-6040
SITE NUMBER: OG03XC095
SITE NAME: DOVE

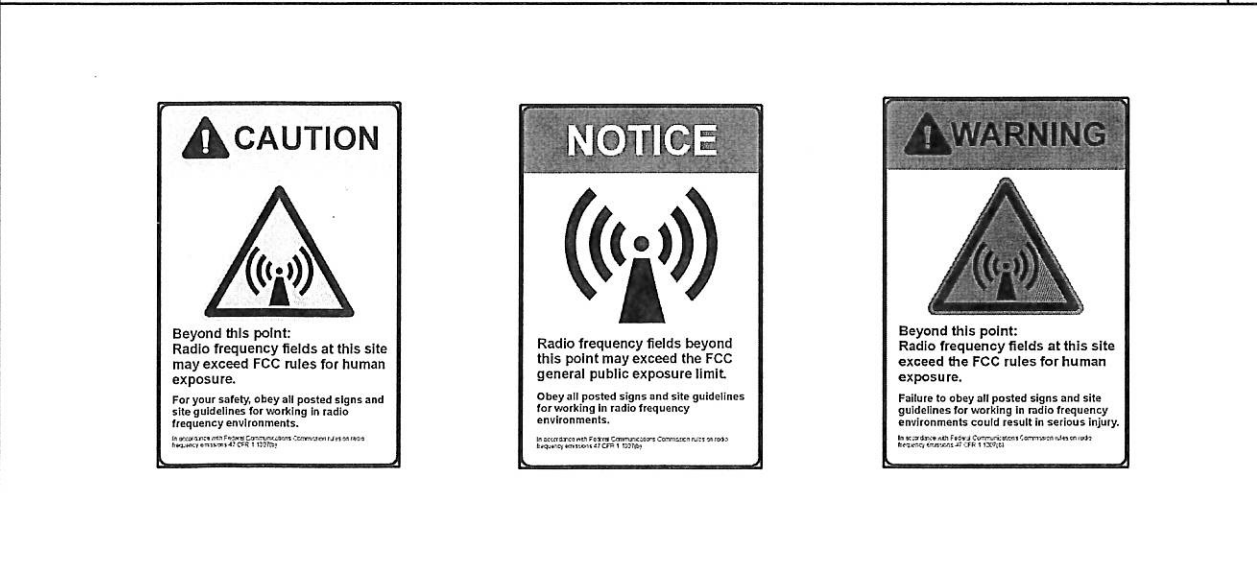
SITE IDENTIFICATION SIGNAGE

1



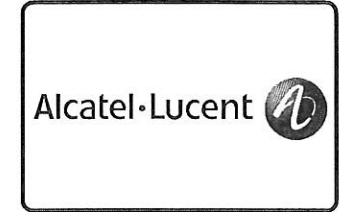
HAZARDOUS MATERIAL SIGNAGE (AS REQUIRED)

2



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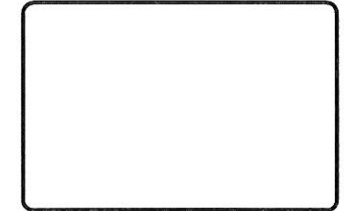
SITE BUILDER



A&E DEVELOPMENT



SEAL



SITE INFORMATION

SITE NAME:
**DOVE
 OG03XC095**

SITE ADDRESS:
 1401 DOVE ST.
 NEWPORT BEACH, CA 92660
 ORANGE COUNTY

SHEET TITLE

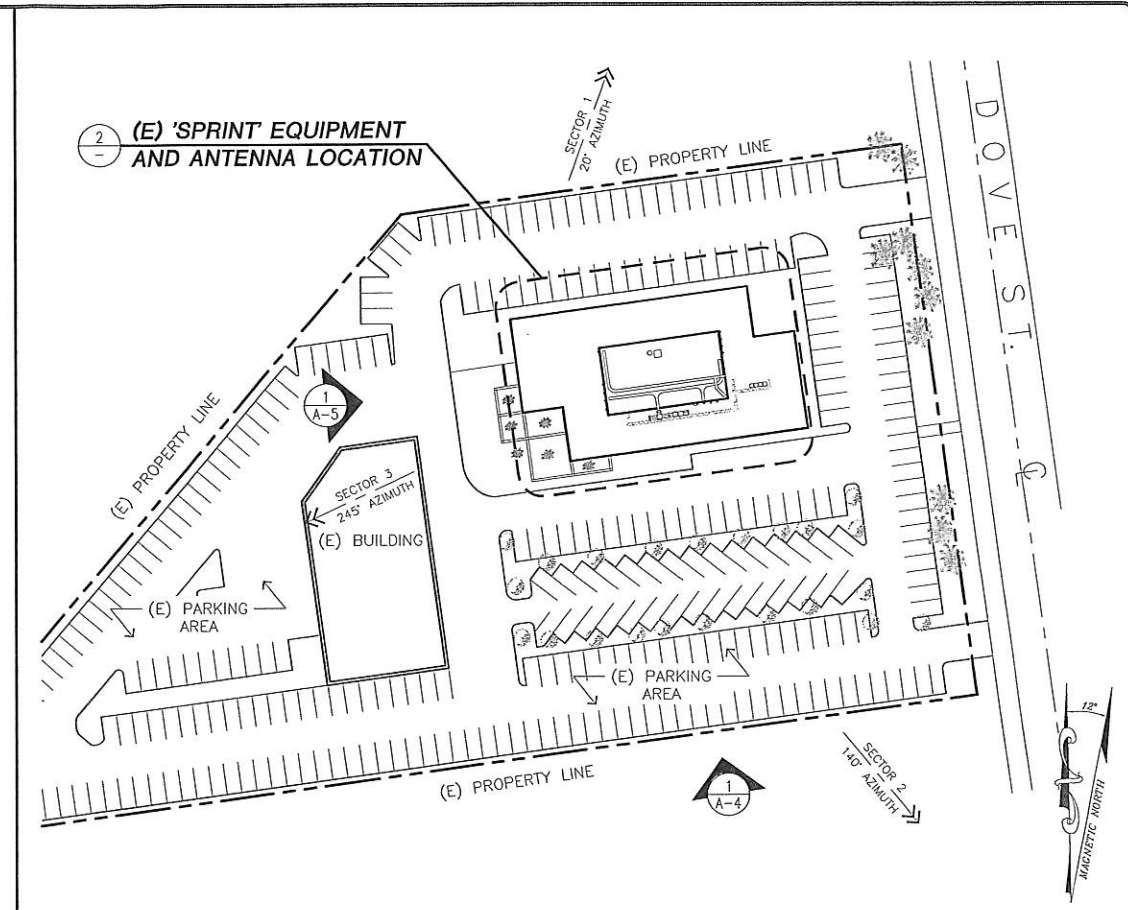
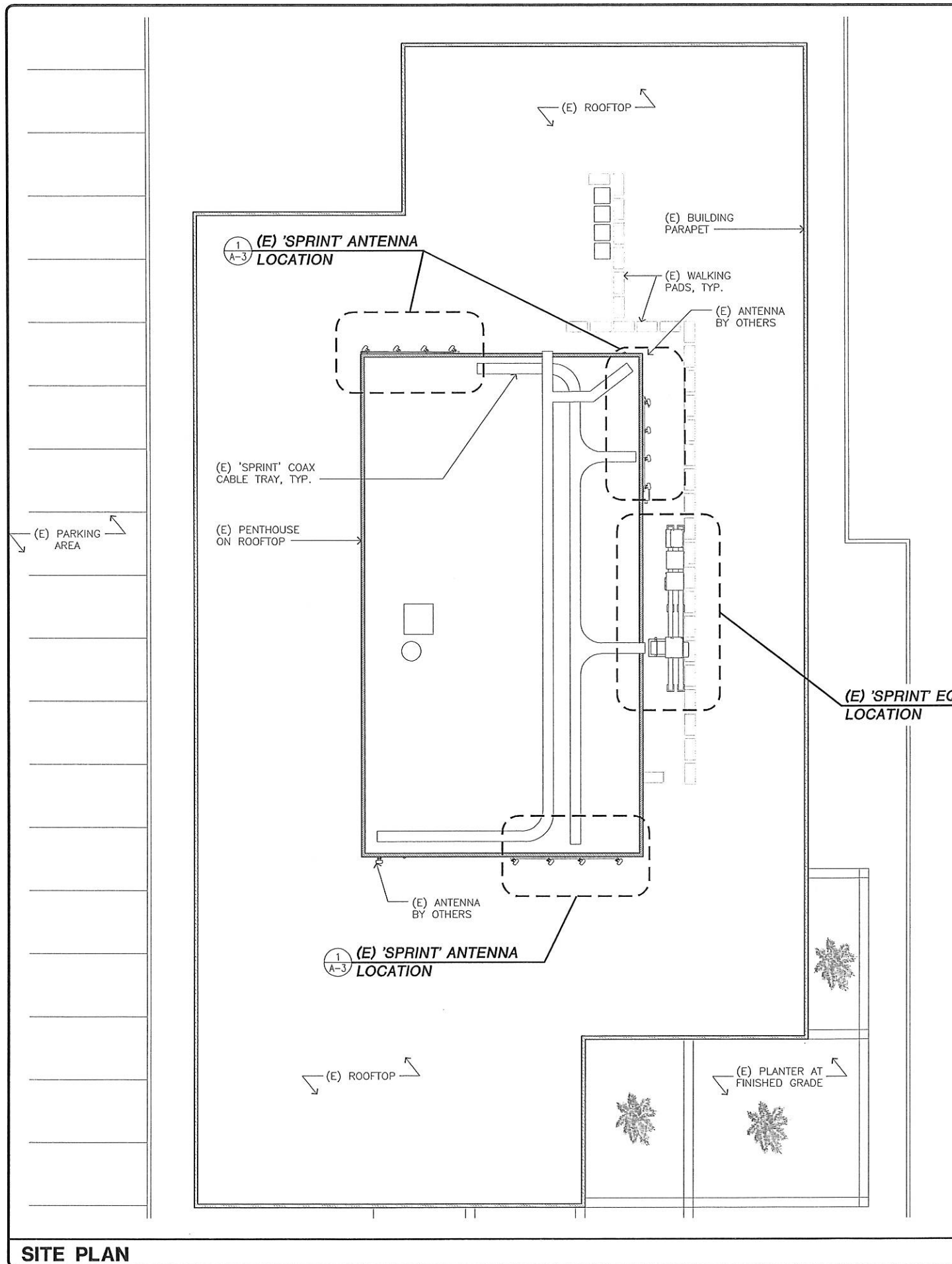
**SIGNAGE AND
 NOTES**

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

T-3



SITE PLAN

SCALE	1"=50'-0"	0	25'	50'	100'	1
-------	-----------	---	-----	-----	------	----------

NOTE:
 1. ALL NEW FIBER/CABLE RUNS TO UTILIZE EXISTING CONDUIT PATHS PREVIOUSLY ESTABLISHED WITHIN A PRE-APPROVED ACCESS/UTILITY EASEMENT
 2. (E) CONDUIT PATH SHOWN IS ESTIMATED. VERIFY ACTUAL PATH IN FIELD.

SITE PLAN

SCALE	1/8"=1'-0"	0	2'	4'	8'	16'	2
-------	------------	---	----	----	----	-----	----------

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ENGINEER / CONSULTANT

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SITE BUILDER

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A&E SERVICES

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(714)729-8404 (714)333-4441 fax
www.core.us.com

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SITE PLAN

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A-1

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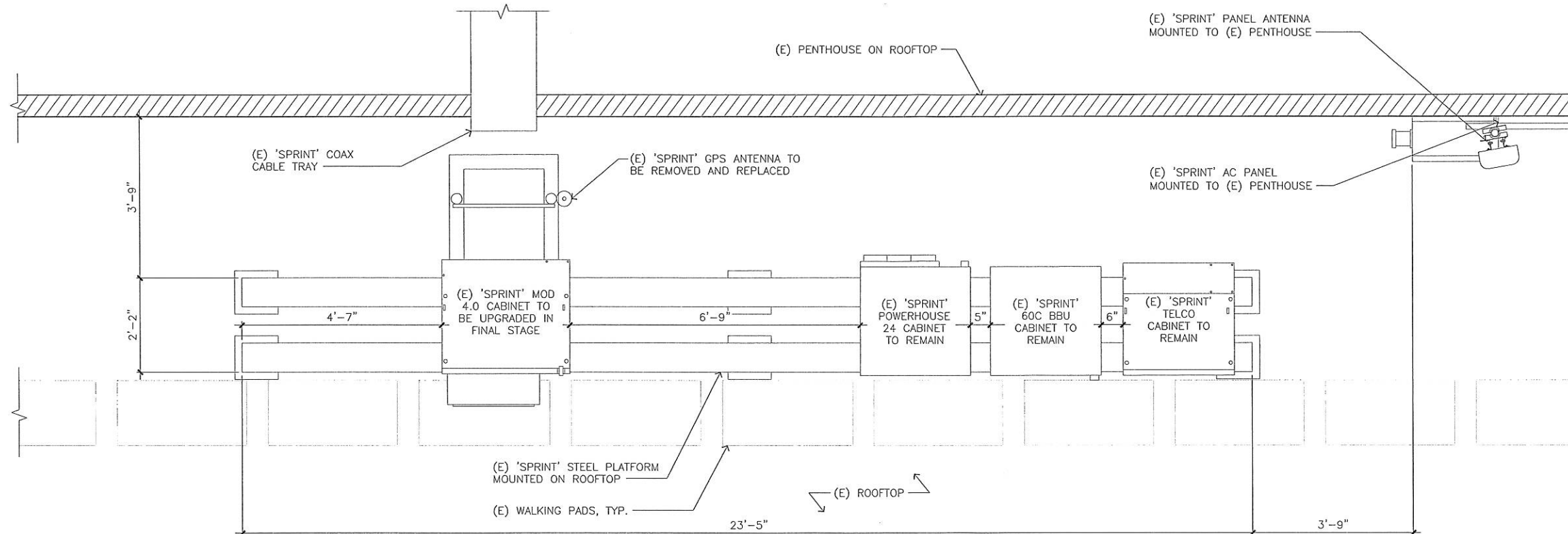
**EXISTING AND
FINAL EQUIPMENT
PLANS**

DRAWING INFORMATION

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SR	AP	07.11.2012

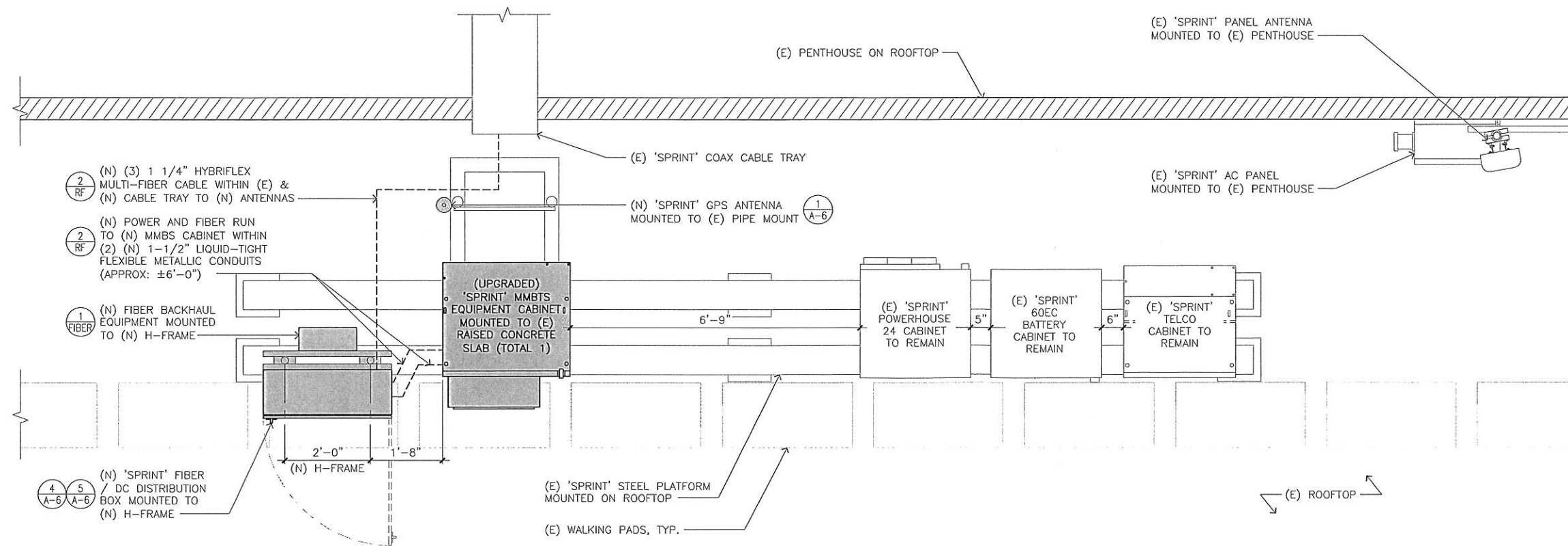
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A-2



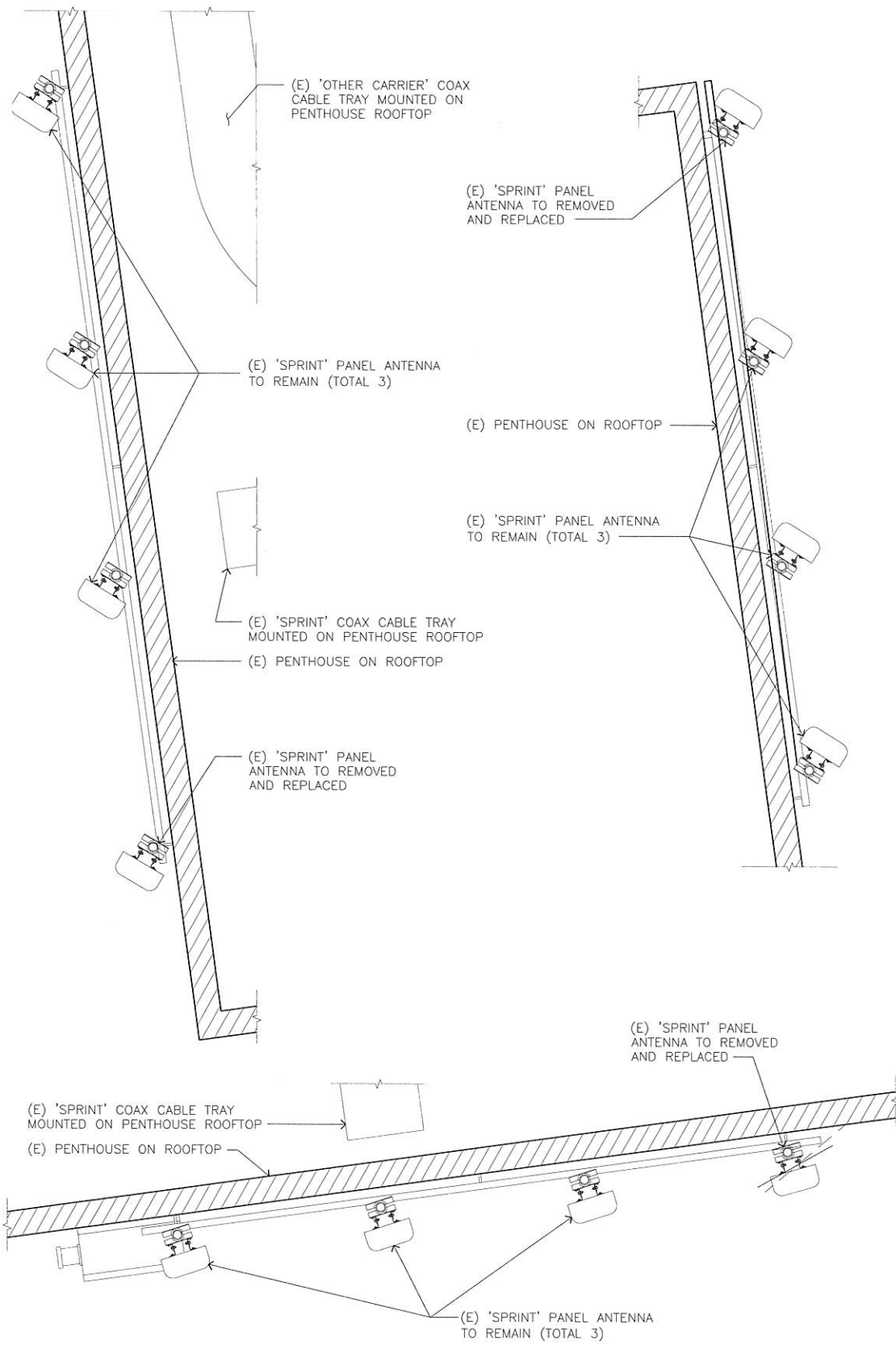
EXISTING EQUIPMENT PLAN

SCALE 3/4"=1'-0" 0 6" 1' 2' **1**



FINAL EQUIPMENT PLAN

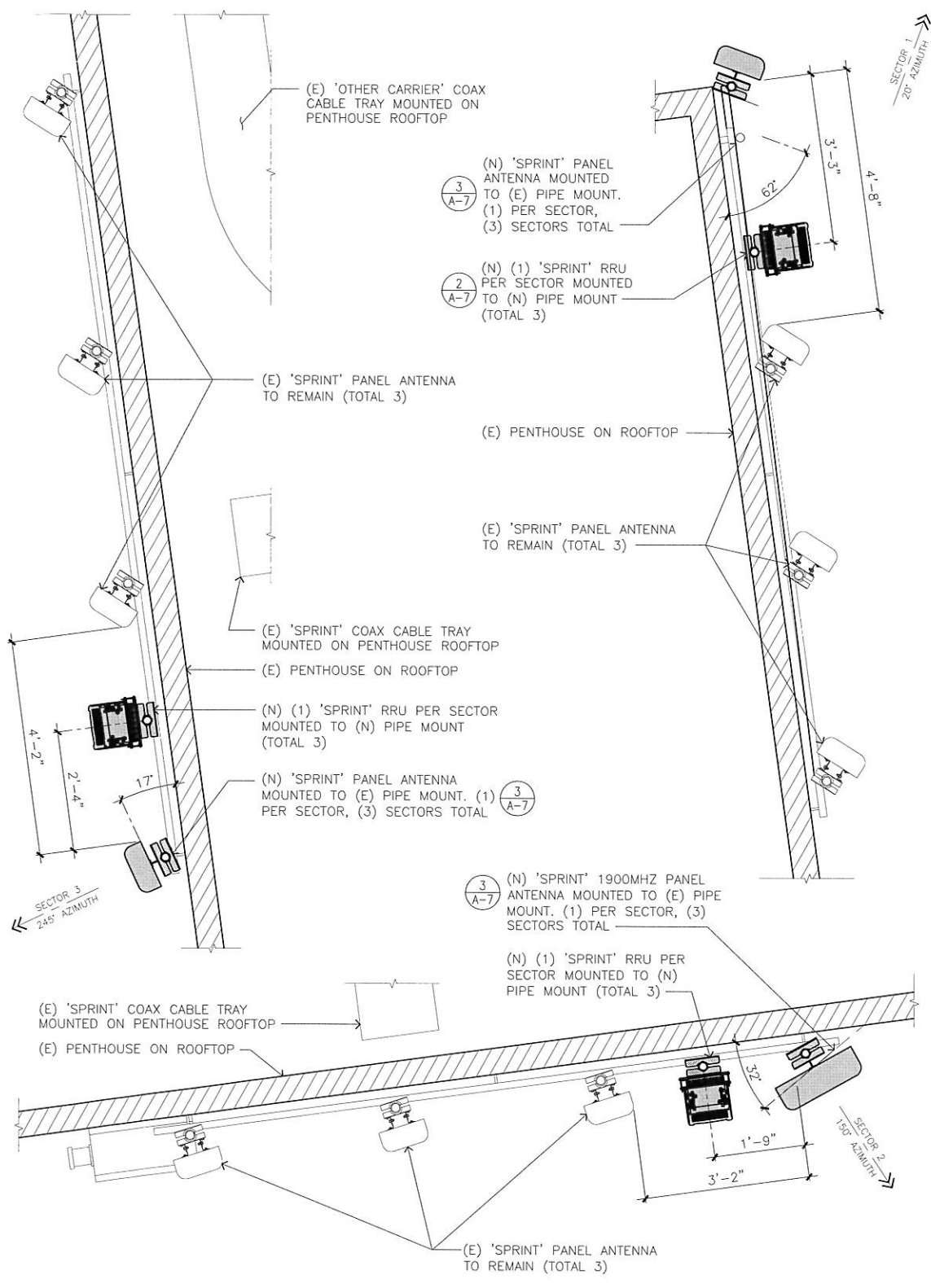
SCALE 3/4"=1'-0" 0 6" 1' 2' **2**



EXISTING EQUIPMENT PLAN

SCALE
3/4"=1'-0"
0 6" 1' 2'

2



SECTOR	ANTENNA	AZIMUTH	RAD CENTER	NUMBER OF ANTENNAS	ANTENNA MODEL	ELECTRICAL TILT	MECHANICAL TILT	ANTENNA GAIN	RRH	FIBER OPTIC MODEL	FIBER OPTIC LENGTH (±10')
1	1900	20°	92'-0"	1	POWERWAVE 7762.00-A	-5	0	14.9	1	HYBRIFLEX 1-1/4"φ HB114-1-0813U4-M5J	100'-0"±
2	1900	150°	92'-0"	1	POWERWAVE P40-16-XLPP-RR-A	-6	0	15.9	1	HYBRIFLEX 1-1/4"φ HB114-1-0813U4-M5J	60'-0"±
3	1900	245°	92'-0"	1	POWERWAVE 7762.00-A	-2	0	14.9	1	HYBRIFLEX 1-1/4"φ HB114-1-0813U4-M5J	60'-0"±

VERIFY CURRENT EBTS PRIOR TO BUILD

SCALE
3/4"=1'-0"
0 6" 1' 2'

1

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SITE BUILDER



A&E DEVELOPMENT



SEAL

SITE INFORMATION

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**DOVE
OG03XC095**

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1401 DOVE ST.
NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

**EXISTING AND
FINAL ANTENNA
PLANS**

DRAWING INFORMATION

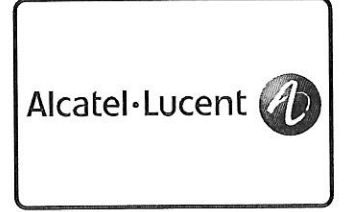
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ISSUE DATE: 07.11.2012

SHEET NUMBER

A-3

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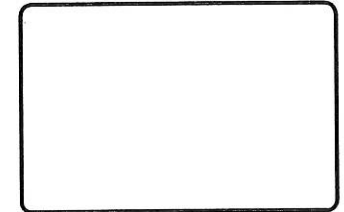
SITE BUILDER



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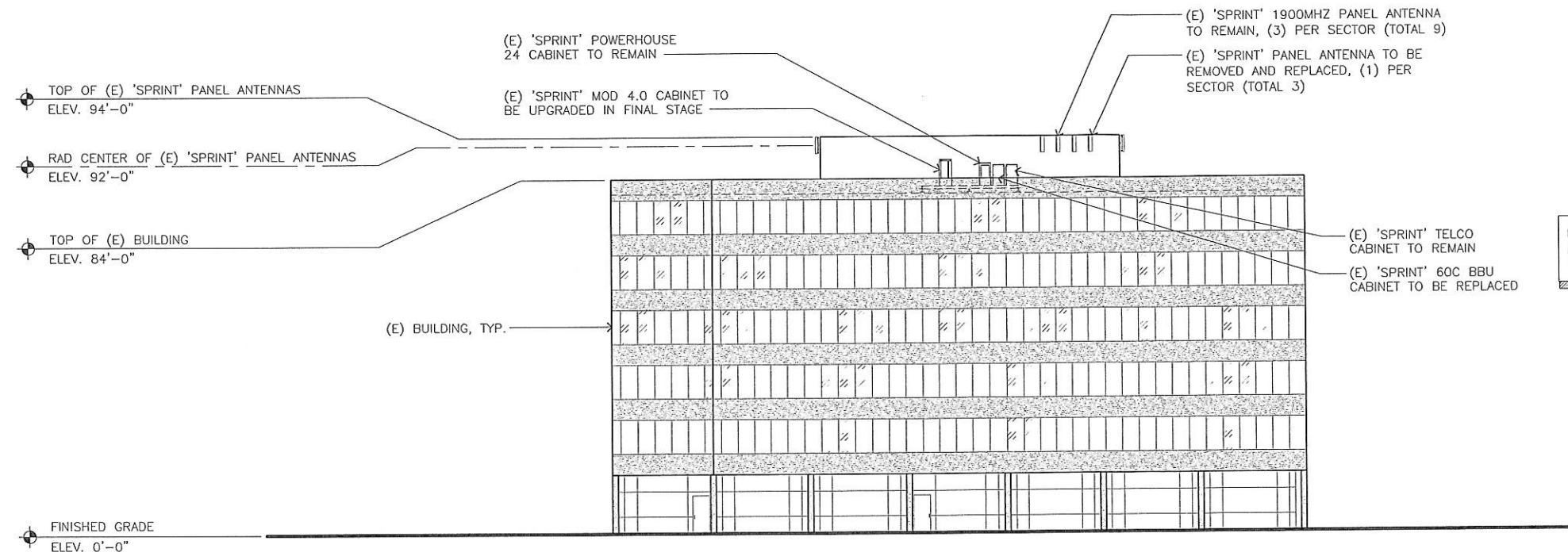
**SOUTH
ELEVATION**

DRAWING INFORMATION

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SHEET NUMBER

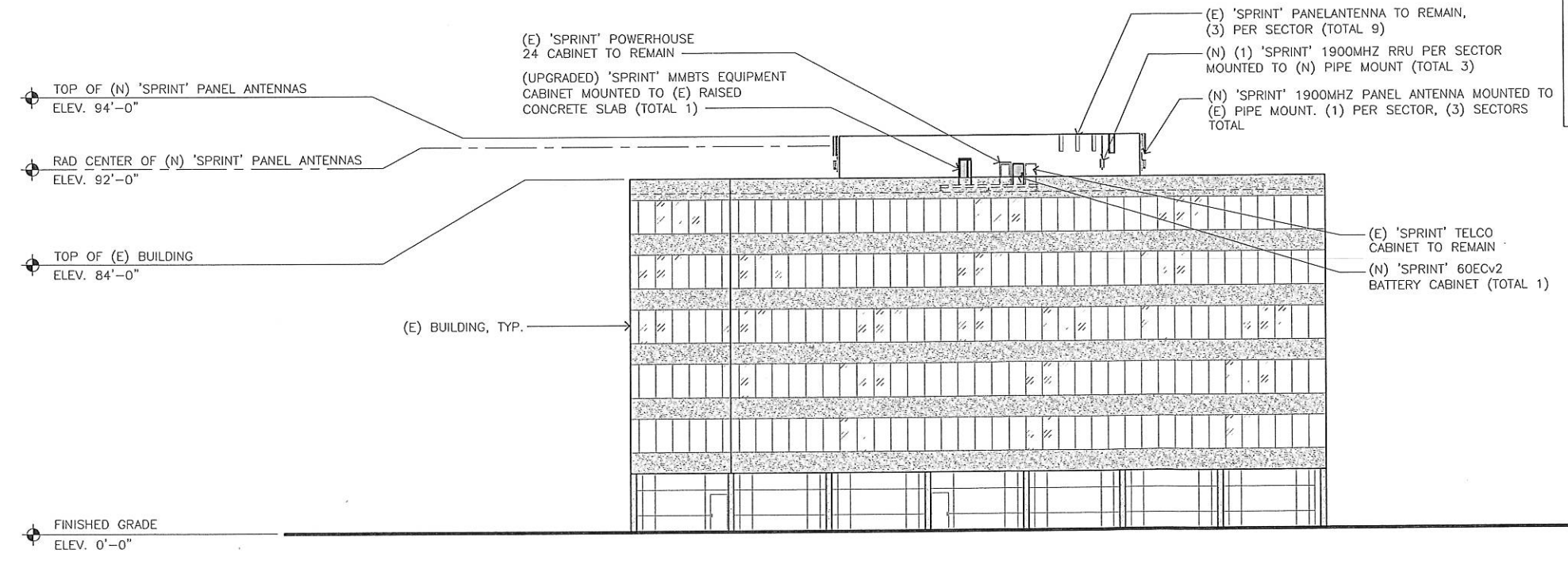
A-4



EXISTING EQUIPMENT DIMENSIONS:
MOD. 4.0 CABINET: = 2'-8"W x 2'-11"D x 6'-6" H
BATTERY CABINET: = 2'-6"W x 2'-7"D x 5'-8"H

EXISTING SOUTH ELEVATION

SCALE	1/16"=1'-0"
0	4' 8' 16' 32'



EXISTING ANTENNA DIMENSIONS:
9"W x 7"D x 54" H

NEW 1900MHZ ANTENNA DIMENSIONS:
(PAINTED TO MATCH EXISTING BUILDING)
52" X 13" X 3" AND 54" X 20" X 6.5"

NEW 1900MHZ RRU SIZE:
10.7"D x 11.1"W x 25.07"H

FINAL SOUTH ELEVATION

SCALE	1/16"=1'-0"
0	4' 8' 16' 32'

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SEAL

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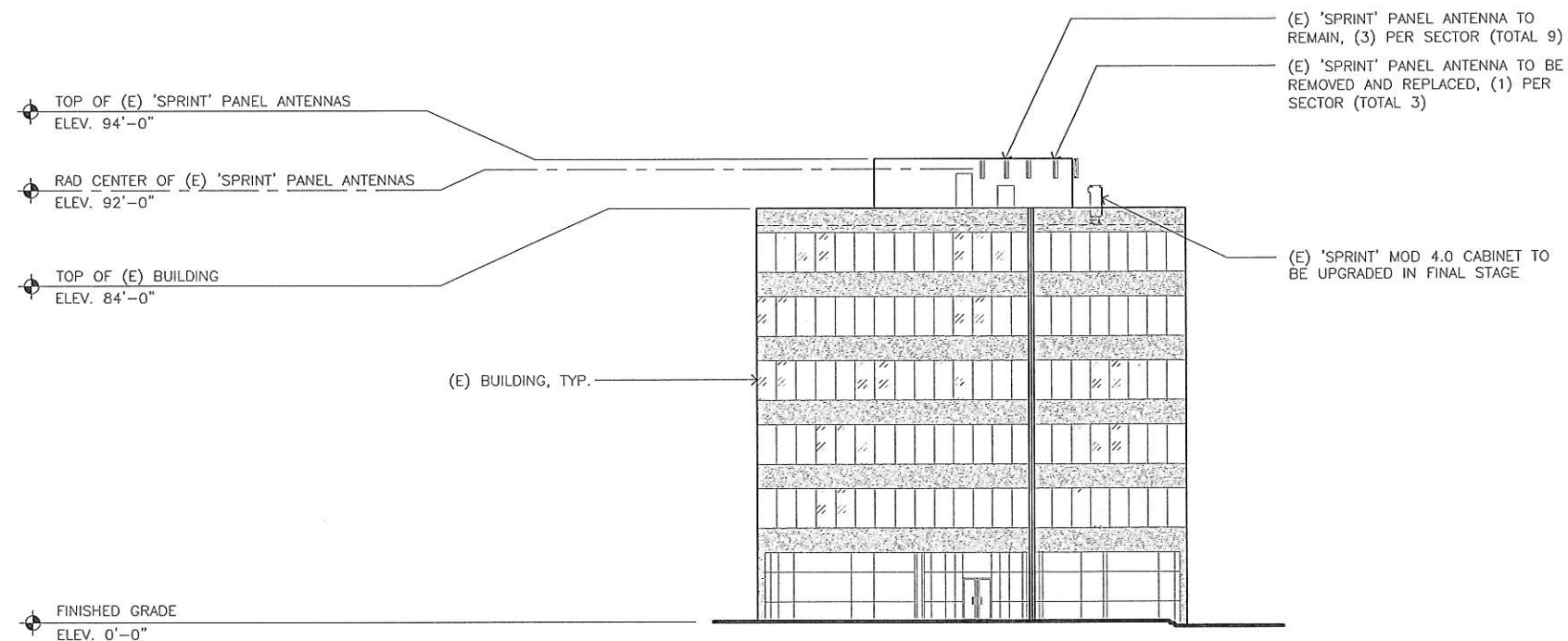
**WEST
ELEVATION**

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

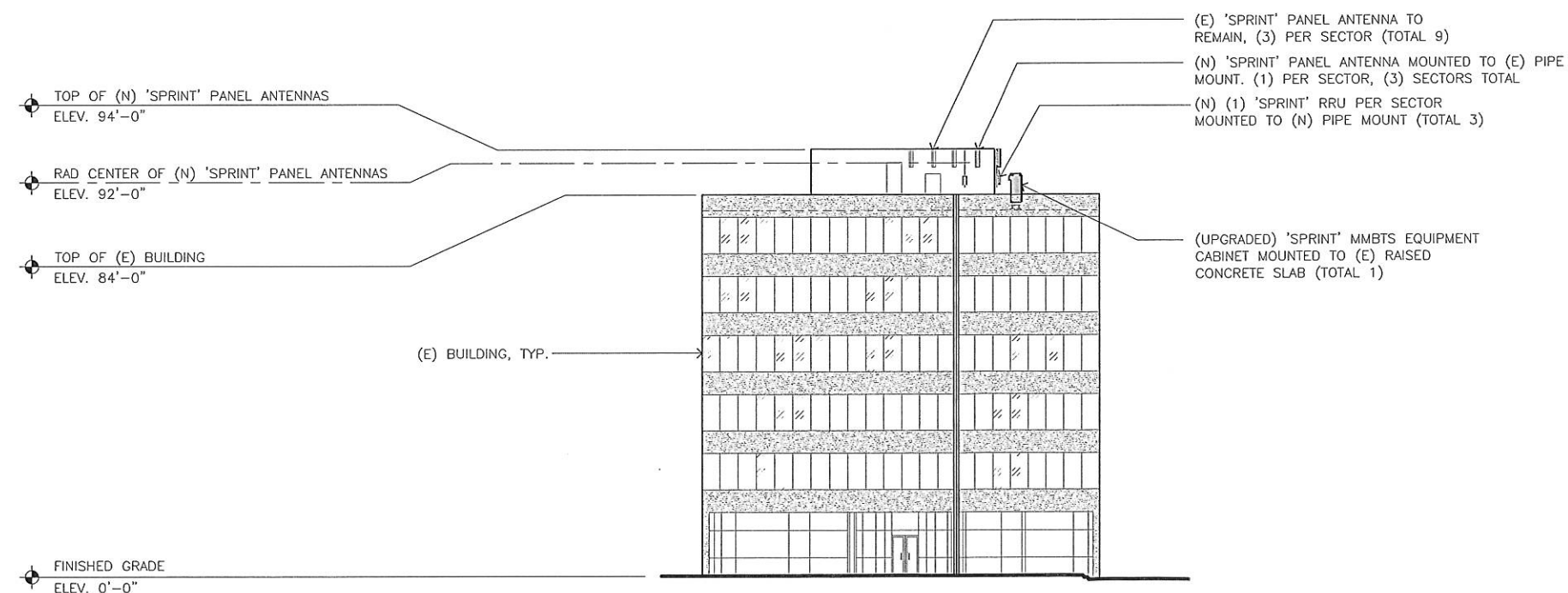
SHEET NUMBER

A-5



EXISTING WEST ELEVATION

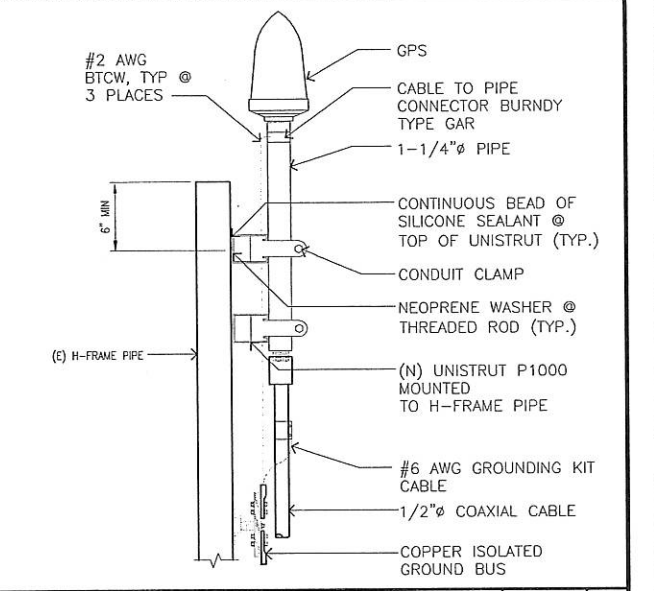
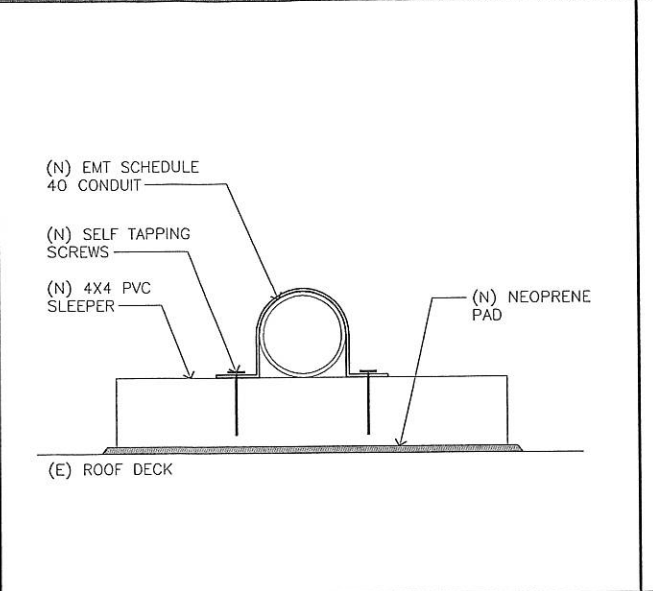
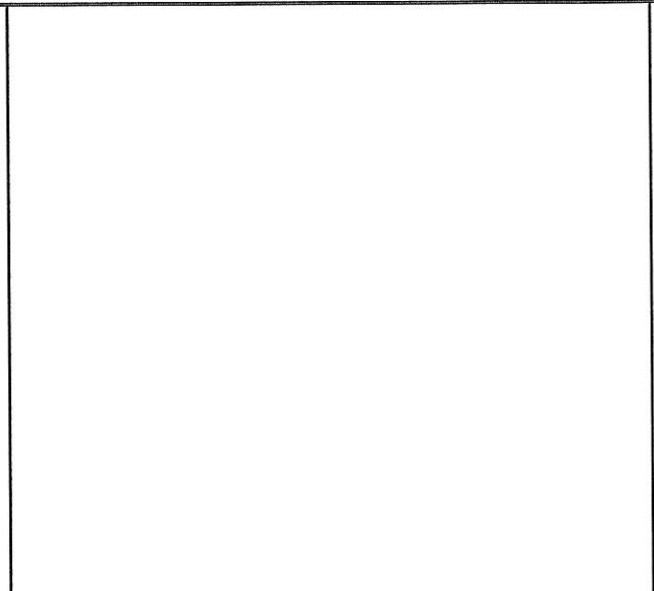
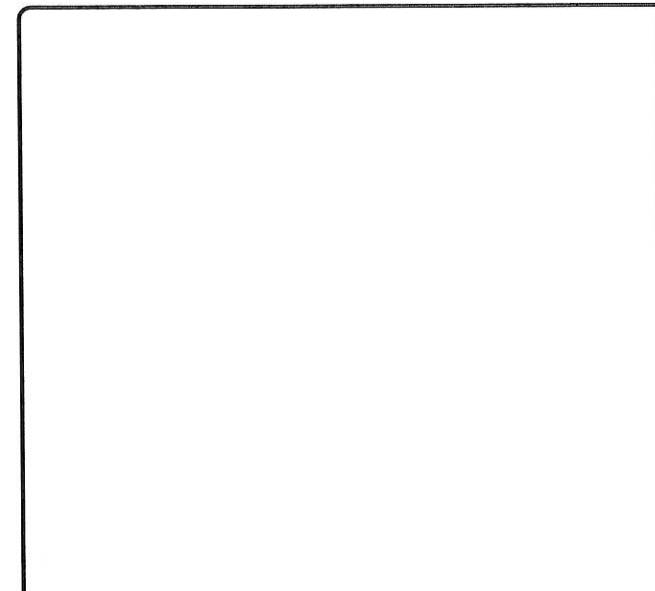
SCALE	1
1/16"=1'-0"	0 4' 8' 16' 32'



EXISTING ANTENNA DIMENSIONS:
9"W x 7"D x 54" H
NEW 1900MHZ ANTENNA DIMENSIONS:
(PAINTED TO MATCH EXISTING BUILDING)
52" X 13" X 3" AND 54" X 20" X 6.5"
NEW 1900MHZ RRU SIZE:
10.7"D x 11.1"W x 25.07"H

FINAL WEST ELEVATION

SCALE	2
1/16"=1'-0"	0 4' 8' 16' 32'

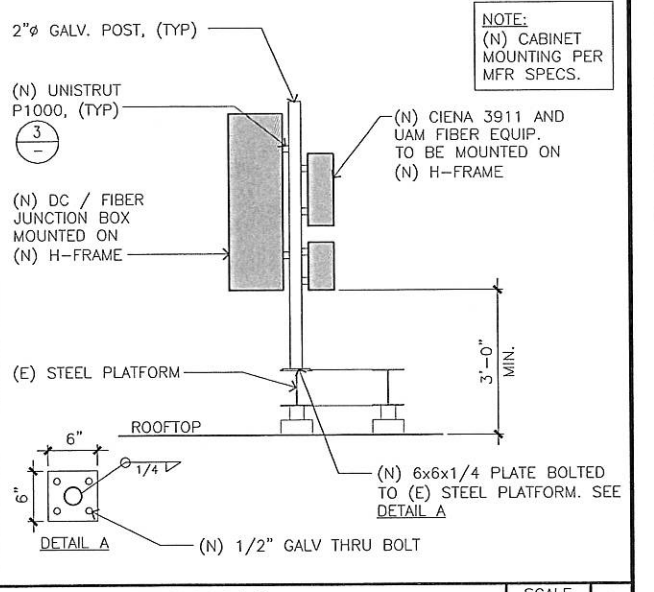
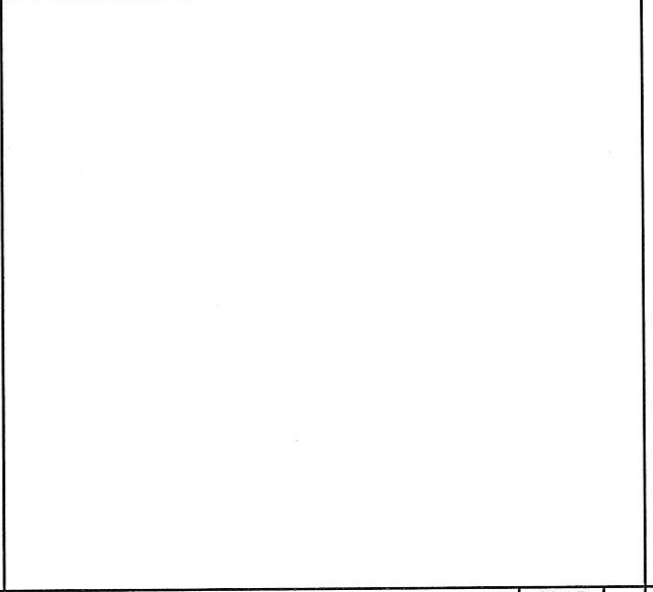
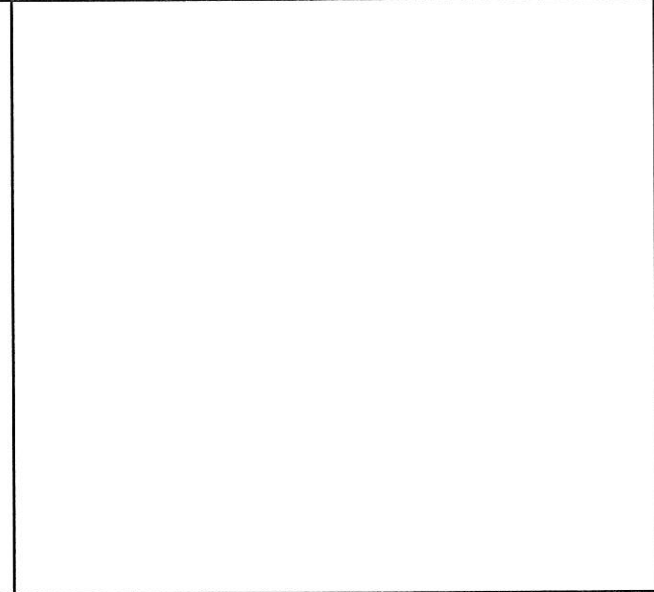
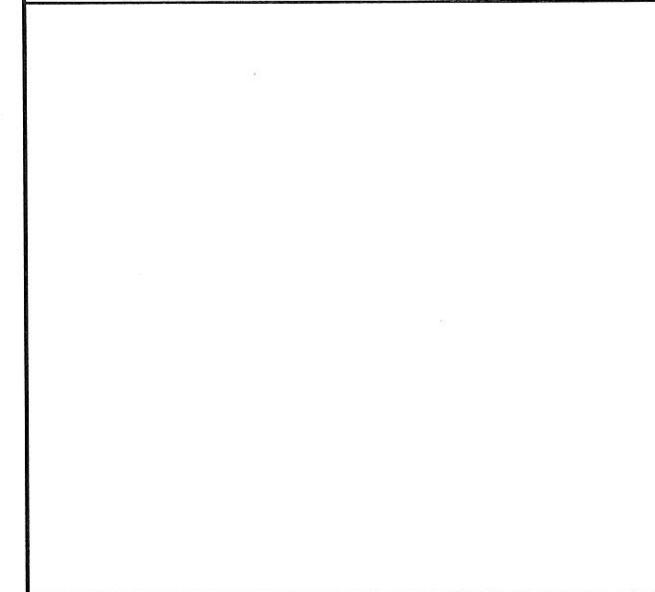


NOT USED SCALE N.T.S. 10

NOT USED SCALE N.T.S. 7

CONDUIT MOUNTING DETAIL SCALE N.T.S. 4

GPS TO FRAME DETAIL SCALE 1\"/>

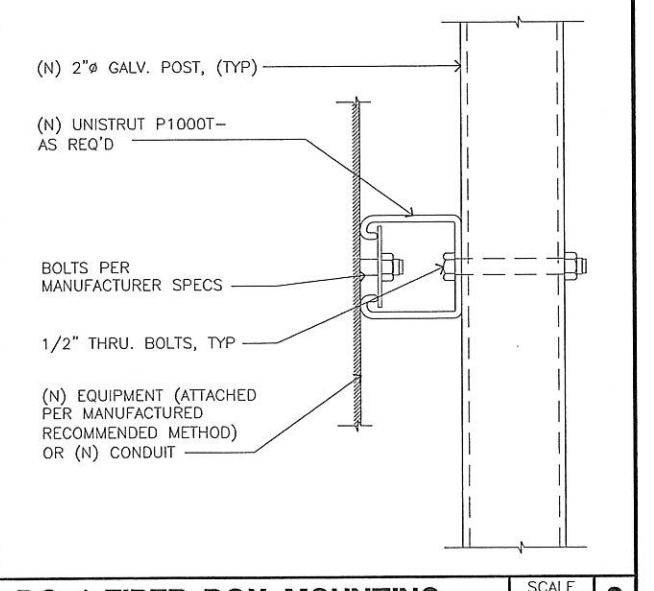
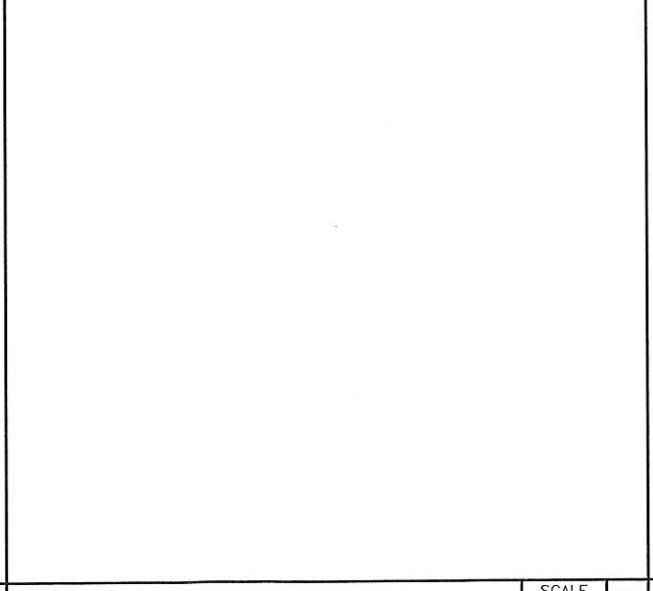
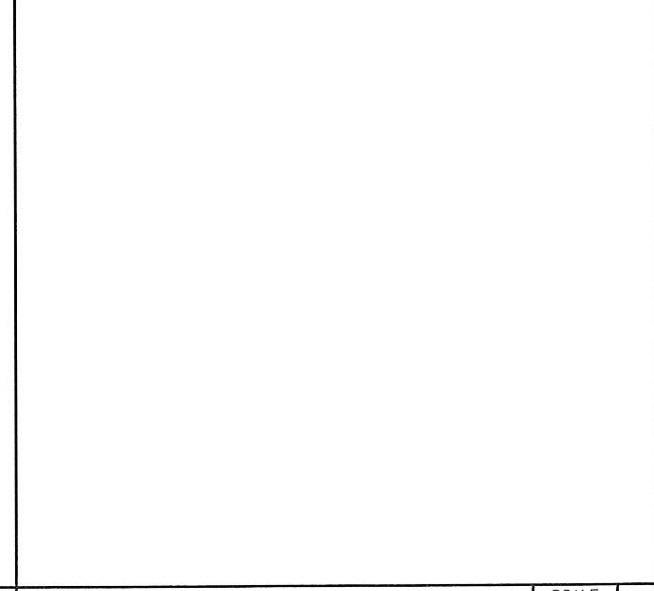
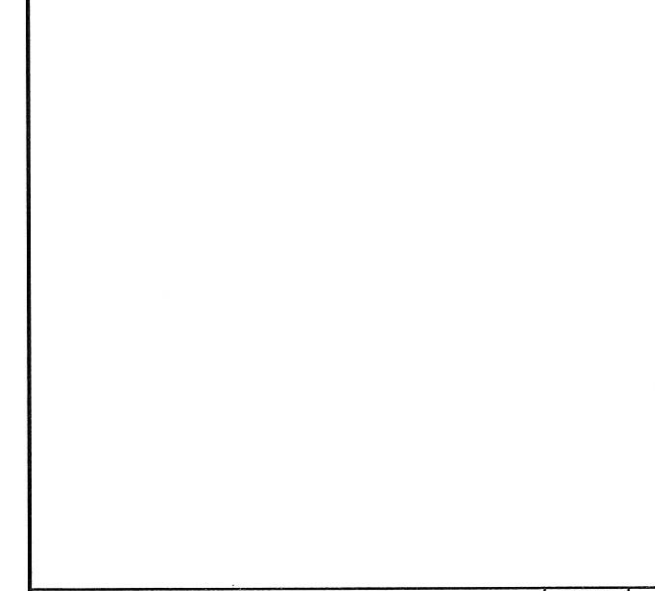


NOT USED SCALE N.T.S. 11

NOT USED SCALE N.T.S. 8

NOT USED SCALE N.T.S. 5

H-FRAME DETAIL SCALE N.T.S. 2



NOT USED SCALE N.T.S. 12

NOT USED SCALE N.T.S. 9

NOT USED SCALE N.T.S. 6

DC / FIBER BOX MOUNTING SCALE N.T.S. 3

REV	DATE/BY	DESCRIPTION
0	05.02.2012 SR	PRELIMINARY CONSTRUCTION
1	06.04.2012 JMB	PRELIMINARY FINAL CONSTRUCTION
2	07.11.2012 JMB	REVISED PER RF

ENGINEER / CONSULTANT

Alcatel-Lucent

SITE BUILDER

Sprint
Together with NEXTEL

A&E DEVELOPMENT

core
DEVELOPMENT SERVICES
A&E SERVICES
2749 Saturn Street
Brea, California 92821
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www.core.us.com

SEAL

SITE INFORMATION

SITE NAME:
**DOVE
OG03XC095**

SITE ADDRESS:
1401 DOVE ST.
NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

**EQUIPMENT
DETAILS**

DRAWING INFORMATION

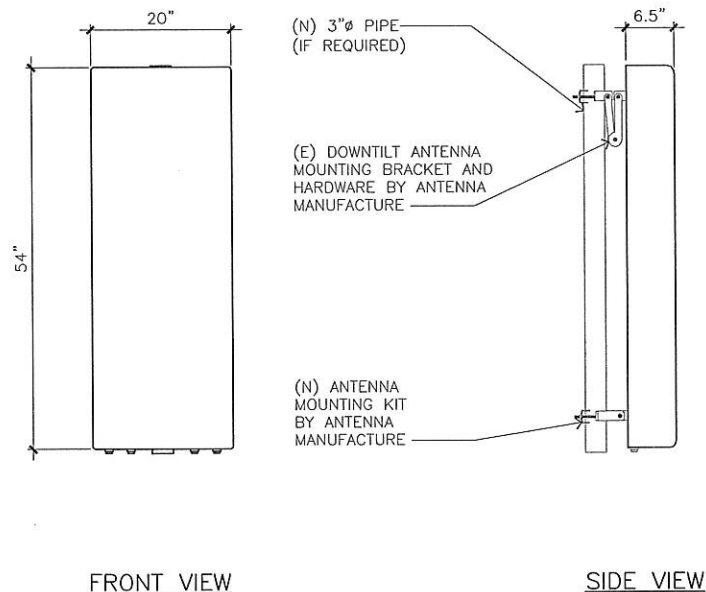
DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

A-6

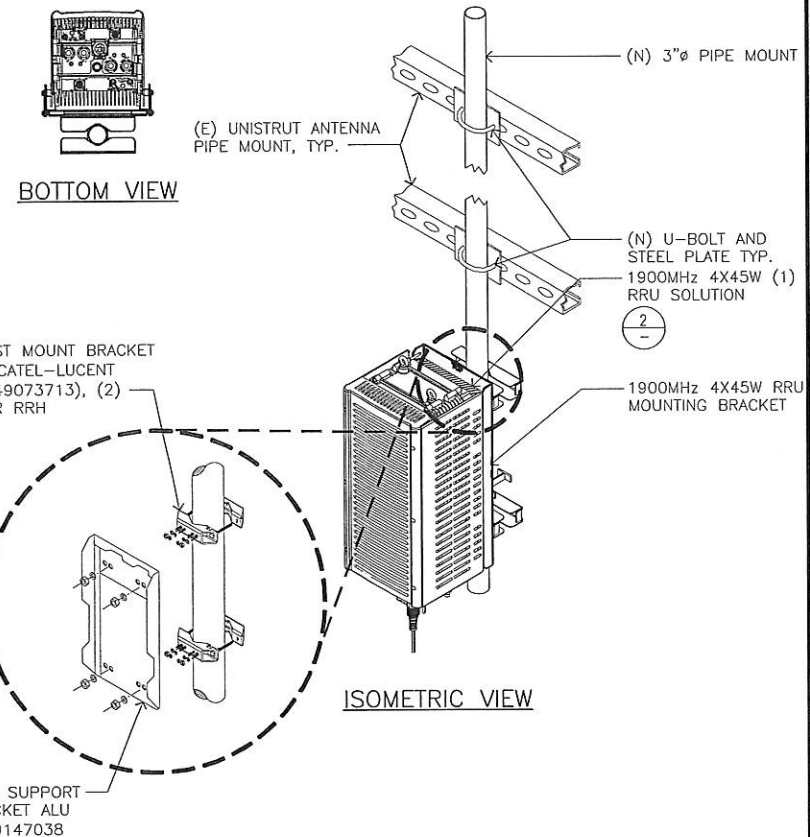
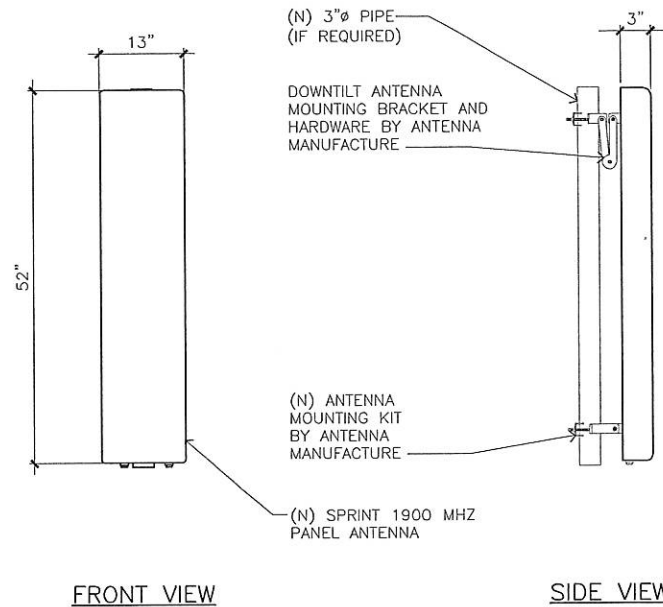
POWERWAVE P40-16-XLPP-RR-A

ANTENNA COLOR: LIGHT GRAY RAL7035
 DIMENSIONS, HxWxD: 54" X 20" X 6.5"
 WEIGHT: 29 LBS
 CONNECTOR: (6) 7/16 DIN FEMALE



POWERWAVE 7762.00-A (PRIMARY)

ANTENNA COLOR: LIGHT GRAY RAL7035
 DIMENSIONS, HxWxD: 52" X 13" X 3"
 WEIGHT: 51.8 LBS (WITH BRACKETS)
 CONNECTOR: (4X) 7/16 DIN FEMALE



ANTENNA SPECIFICATIONS

SCALE N.T.S. **5**

ANTENNA SPECIFICATIONS

SCALE N.T.S. **3**

FULL ASSEMBLY WITH RRH

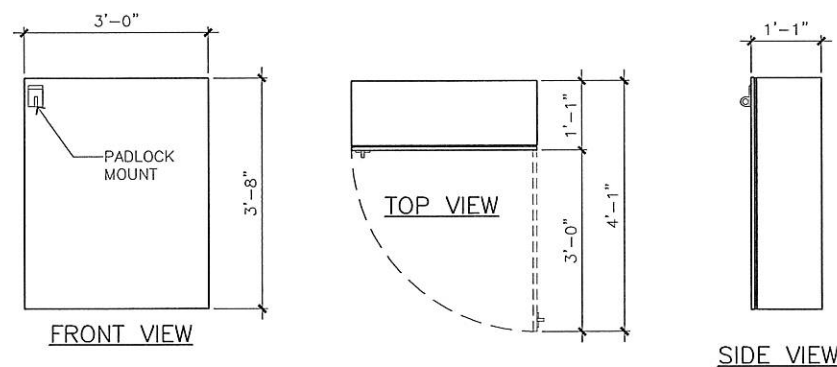
SCALE N.T.S. **1**

FIBER OPTIC & DC POWER JUNCTION BOX

MODEL: TBD
 WEIGHT: 60 LBS
 DIMENSIONS (WxDxH): 36" x 36" x 12"

DC DIST. / FIBER MANG. BOX	CLEARANCES MM (INCHES)	COMMENTS
FRONT	914 (36)	INSTALLATION ACCESS
REAR	50 (1.97)	0" CLR W/ MOUNTING BRACKETS.
RIGHT	152 (6)	INSTALLATION ACCESS
LEFT	152 (6)	INSTALLATION ACCESS
TOP	152 (6)	INSTALLATION ACCESS
BOTTOM	304 (12)	CONDUIT ROUTING

DC DISTRIBUTION / FIBER MANAGEMENT BOX (CONTAINS DC SURGE PROTECTOR, DC CIRCUIT BREAKERS, DC TERMINAL BLOCK AND FIBER OPTIC CABLE INTERFACE CONNECTORS. IF NECESSARY, FINAL LOCATION TO BE DETERMINED BY CONTRACTOR)



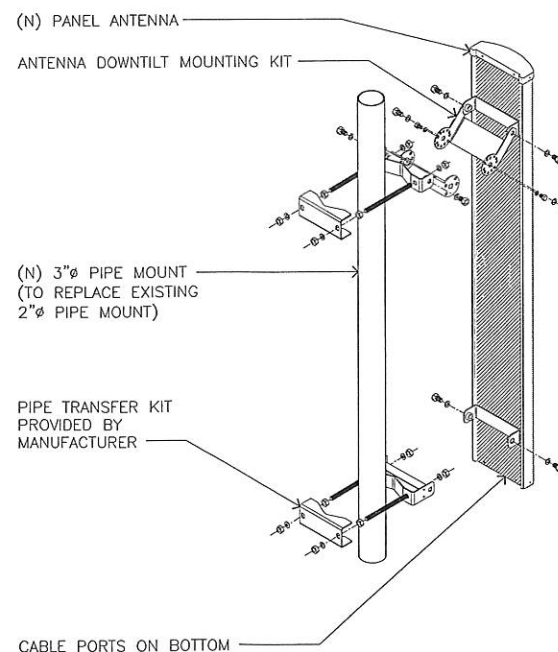
DC DISTRIBUTION / FIBER MANAGEMENT BOX (CONTAINS DC SURGE PROTECTOR, DC CIRCUIT BREAKERS, DC TERMINAL BLOCK AND FIBER OPTIC CABLE INTERFACE CONNECTORS. IF NECESSARY, FINAL LOCATION TO BE DETERMINED BY CONTRACTOR)

DC / FIBER MANAGEMENT BOX

SCALE N.T.S. **6**

ANTENNA MOUNTING DETAIL

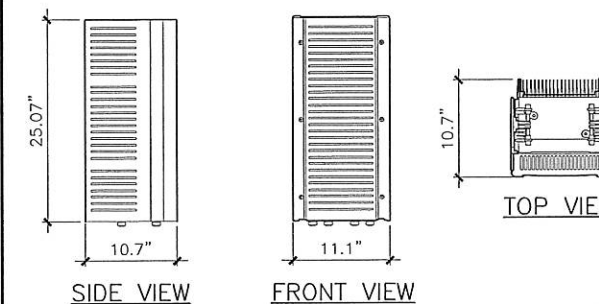
SCALE N.T.S. **4**



1900 MHz 4X45W 65MHz RRH

MANUFACTURE: ALCATEL-LUCENT
 MODEL: CDMA/LTE DUAL TECH 4X45W
 WEIGHT: 59.5 LBS.

RRH CABINET	CLEARANCES MM (INCHES)	COMMENTS
FRONT	914 (36)	INSTALLATION ACCESS
REAR	50 (1.97)	0" CLR W/ MOUNTING BRACKETS.
RIGHT	300 (11.82)	AIR FLOW
LEFT	300 (11.82)	AIR FLOW
TOP	300 (11.82)	AIR FLOW
BOTTOM	355 (14)	CONDUIT ROUTING



RRH 1900 4X45 65MHz

SCALE N.T.S. **2**

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0	05.02.2012 SR	PRELIMINARY CONSTRUCTION
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SEAL

SITE INFORMATION

SITE NAME: **DOVE OG03XC095**

SITE ADDRESS: 1401 DOVE ST. NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

EQUIPMENT DETAILS

DRAWING INFORMATION

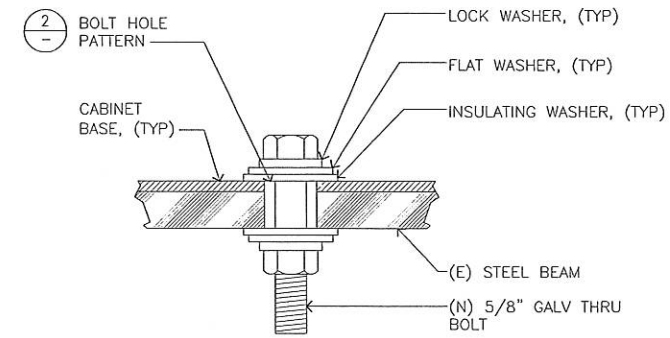
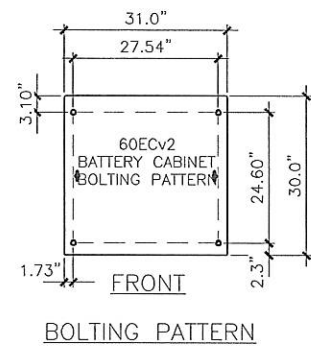
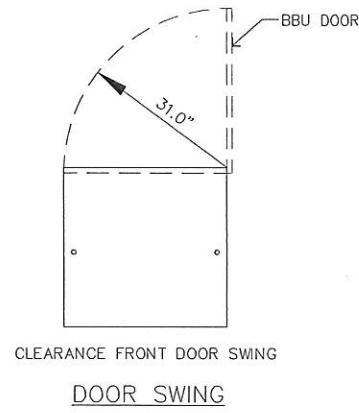
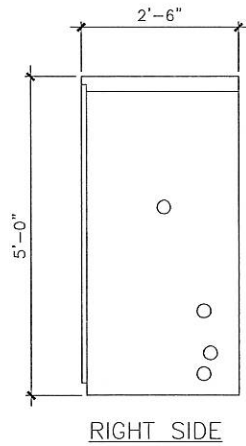
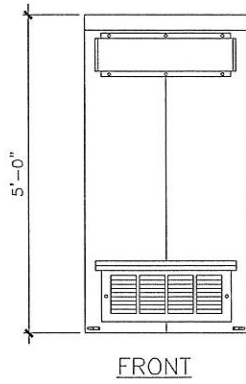
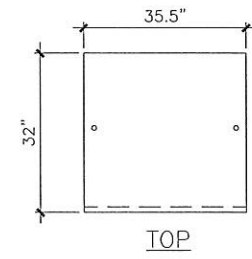
DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

A-7

BATTERY CABINET

MODEL: ALU 60ECv2
 WEIGHT: 425 LBS
 DIMENSIONS (WxDxH) 31" x 30" x 60"

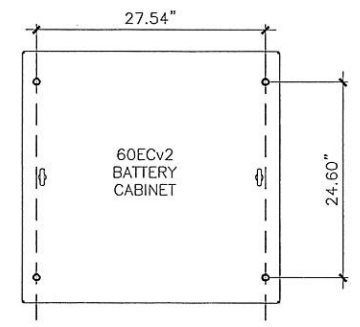


EQUIPMENT ANCHORAGE

SCALE
N.T.S. **1**

BATTERY CABINET

SCALE
1:16 **3**



TOP VIEW

INSTALLATION INSTRUCTIONS INTERFACE KIT FOR ATTACHMENT OF -48V 60ECv2 BATTERY CABINET TO OUTDOOR 9927 DISTRIBUTED BASE STATION CABINET WITH INTEGRATED POWER

SEISMIC ZONE	ANCHOR TYPE	HOLE SIZE	WRENCH	TORQUE NEWTON METERS	TORQUE FOOT POUNDS
0, 1, 2	1/2" DROP-IN	5/8" BIT 2" DEEP	3/4"	24NM	18 FT-LB
3, 4,	12MM EXPANSION STUD	11/16" BIT 4" DEEP MIN	19MM	79NM	58 FT-LB

NOT USED

4 BBU ANCHORING LAYOUT

N.T.S.
1:16 **2**

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Alcatel-Lucent

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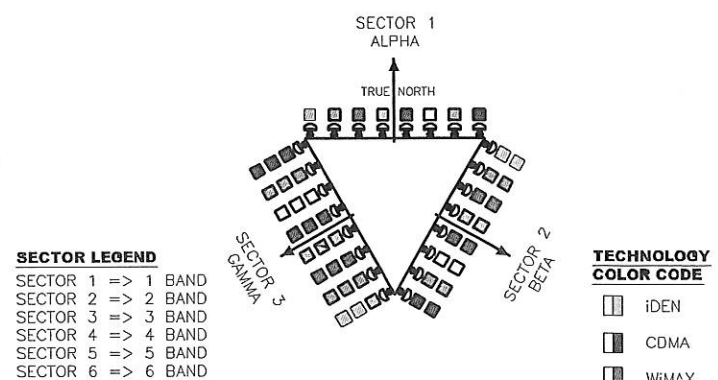
SHEET NUMBER

A-8

TYPICAL COAX CABLE COLOR CODING SCHEME				
SECTOR	CABLE	FIRST RING	SECOND RING	THIRD RING
1 ALPHA	1	GREEN	NO TAPE	NO TAPE
1	2	BLUE	NO TAPE	NO TAPE
1	3	BROWN	NO TAPE	NO TAPE
1	4	WHITE	NO TAPE	NO TAPE
1	5	RED	NO TAPE	NO TAPE
1	6	SLATE	NO TAPE	NO TAPE
1	7	PURPLE	NO TAPE	NO TAPE
1	8	ORANGE	NO TAPE	NO TAPE
2 BETA	1	GREEN	GREEN	NO TAPE
2	2	BLUE	BLUE	NO TAPE
2	3	BROWN	BROWN	NO TAPE
2	4	WHITE	WHITE	NO TAPE
2	5	RED	RED	NO TAPE
2	6	SLATE	SLATE	NO TAPE
2	7	PURPLE	PURPLE	NO TAPE
2	8	ORANGE	ORANGE	NO TAPE
3 GAMMA	1	GREEN	GREEN	GREEN
3	2	BLUE	BLUE	BLUE
3	3	BROWN	BROWN	BROWN
3	4	WHITE	WHITE	WHITE
3	5	RED	RED	RED
3	6	SLATE	SLATE	SLATE
3	7	PURPLE	PURPLE	PURPLE
3	8	ORANGE	ORANGE	ORANGE

ANTENNA AND CABLE COLOR CODING

(3 SECTORED / MULTIPLE RF CHANNELS) ASSUMING 8 LINES AND ANTENNAS



EXAMPLE - SECTOR 2, CABLE 2, 800MHz RADIO #1



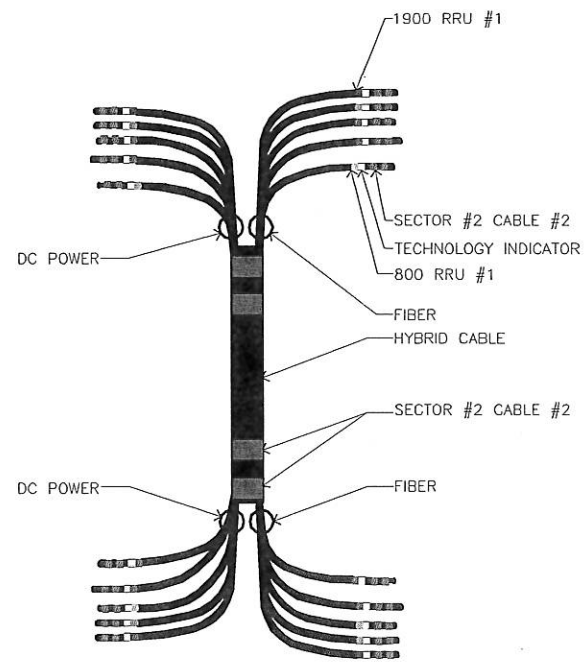
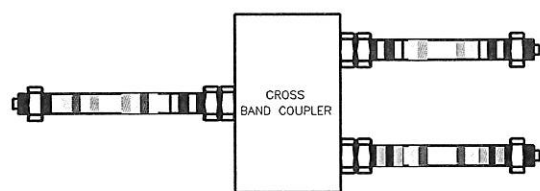
EXAMPLE - SECTOR 3, CABLE 1, 1900MHz RADIO #1



EXAMPLE - SECTOR 1, CABLE 4, 800MHz RADIO #1 AND 1900MHz RADIO #1



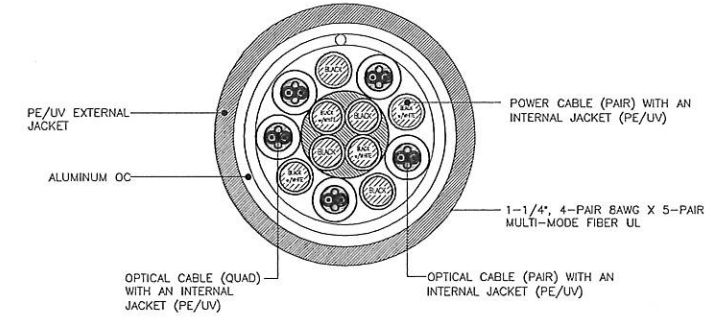
- COLOR BAND TO BE 2" WIDE ON MAIN LINE.
- SPACING TO BE 1" BETWEEN BANDS AND 2" BETWEEN LINE AND TECHNOLOGY BANDS. NO SPACE BETWEEN TECHNOLOGY COLOR BANDS.
- COLOR BAND ON JUMPERS 1" WIDE W/ 1" SPACE.
- START COLOR BANDS 2" BEYOND WEATHERPROOFING.
- START SECTOR COLOR NEXT TO END CONNECTOR.



HYBRID CABLE COLOR CODE

SCALE 1
N.T.S.

STRUCTURE	
OUTER CONDUCTOR ARMOR: CORRUGATED ALUMINUM	[MM (IN)] 36.0 (1.42)
JACKET: FLAME RETARDANT, POLYETHYLENE, PE	[MM (IN)] 39.0 (1.54)
UV-PROTECTION: INDIVIDUAL AND EXTERNAL JACKET	YES
MECHANICAL PROPERTIES	
WEIGHT, APPROXIMATE	[KG/M (LB/FT)] 1.9 (1.30)
MINIMUM BENDING RADIUS, SINGLE BENDING	[MM (IN)] 200 (8)
MINIMUM BENDING RADIUS, REPEATED BENDING	[MM (IN)] 500 (20)
RECOMMENDED/MAXIMUM CLAMP	[M (FT)] 1.0/1.2 (3.25/4.0)
ELECTRICAL PROPERTIES	
DC-RESISTANCE OUTER CONDUCTOR ARMOR	[W/KM (W/1000FT)] 0.9 (0.27)
DC-RESISTANCE POWER CABLE, 8.4MM2 (8AWG)	[W/KM (W/1000FT)] 2.1 (0.307)
FIBER OPTIC PROPERTIES	
VERSION	MULTI-MODE
QUANTITY, FIBER COUNT	6 (4 PAIRS), (1 QUAD)
CORE/CLAD	[MM] 50/125
PRIMARY COATING (ACRYLATE)	[MM] 245
BUFFER DIAMETER, NOMINAL	[MM] 900
SECONDARY PROTECTION, JACKET, NOMINAL	[MM (IN)] 2.0 (0.08)
STANDARDS (MEETS OR EXCEEDS)	UL94-V0 UL1666 ROHS COMPLIANT
DC POWER CABLE PROPERTIES	
SIZE	[MM2(AWG)] 8.4 (8)
QUANTITY, WIRE COUNTS (4 PAIRS)	TYPE UV PROTECTED
STRANDS	19
PRIMARY JACKET DIAMETER, NOMINAL	[MM (IN)] 6.8 (0.27)
STANDARDS (MEETS OR EXCEEDS)	UL
ENVIRONMENT	
INSTALLATION TEMPERATURE	[°C (°F)] -40 TO +65 (-40 TO149)
OPERATION TEMPERATURE	[°C (°F)] -40 TO +65 (-40 TO149)



HB114-1-0813U4-M5J
HYBRIFLEX™ RRH HYBRID FEEDER CABLING SOLUTION

COAXIAL CABLE COLOR CODE

SCALE 5
N.T.S.

TECHNOLOGY COLOR CODE	FIRST RING	SECOND RING
800 #1	YELLOW	GREEN
1900 #1	YELLOW	RED
1900 #2	YELLOW	BROWN
RESERVED	YELLOW	BLUE
RESERVED	YELLOW	SLATE
RESERVED	YELLOW	ORANGE
RESERVED	YELLOW	WHITE

ANTENNA AND CABLE COLOR CODE

SCALE 3
N.T.S.

Market	Orange County		
Cascade ID	OG03XC095		
		SECTOR 1	SECTOR 2
Split sector present	No	No	No
1900MHz_Azimuth	20	150	245
1900MHz_No_of_Antennas	1	1	1
1900MHz_RADCenter(ft)	92.2	92.2	92.2
1900MHz_Antenna_Make	Powerwave	Powerwave	Powerwave
1900MHz_Antenna_Model	7762.00-A	P40-16-XLPP-RR-A	7762.00-A
1900MHz_Horizontal_Beamwidth	93	40	93
1900MHz_Vertical_Beamwidth	6.7	6.5	6.7
1900MHz_AntennaHeight(ft)	4.3	4.5	4.3
1900MHz_AntennaGain(dBd)	14.1	15.9	14.1
1900MHz_E_Tilt	-5	-6	-2
1900MHz_M_Tilt	0	0	0
1900MHz_Carrier_Forecast_Year_2013	3	3	3
1900MHz_RRH_Manufacturer	ALU	ALU	ALU
1900MHz_RRH_Model	RRH 1900 4X45 65MHz	RRH 1900 4X45 65MHz	RRH 1900 4X45 65MHz
1900MHz_RRH_Count	1	1	1
1900MHz_RRH_Location	Top of the Tower/Pole	Top of the Tower/Pole	Top of the Tower/Pole
1900MHz_Combiner_Model	No Combiner needed	No Combiner needed	No Combiner needed
1900MHz_Top_Jumper #1_Length (RRH or Combiner-to-Antenna, ft)	10	10	10
1900MHz_Top_Jumper #1_Cable_Model (RRH or Combiner-to-Antenna)	LCF12-50J	LCF12-50J	LCF12-50J

FREQUENCY COLOR CODE

SCALE 6
N.T.S.

RFDS FORM

SCALE 4
N.T.S.

HYBRIFLEX™ 1 - 1/4", MULTI-MODE FIBER

SCALE 2
N.T.S.

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0	05.02.2012 SR	PRELIMINARY CONSTRUCTION
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ENGINEER / CONSULTANT



SITE BUILDER



A&E DEVELOPMENT



SEAL

SITE INFORMATION

SITE NAME: DOVE
OG03XC095

SITE ADDRESS: 1401 DOVE ST.
NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

ANTENNA AND EQUIPMENT WIRING DIAGRAM

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

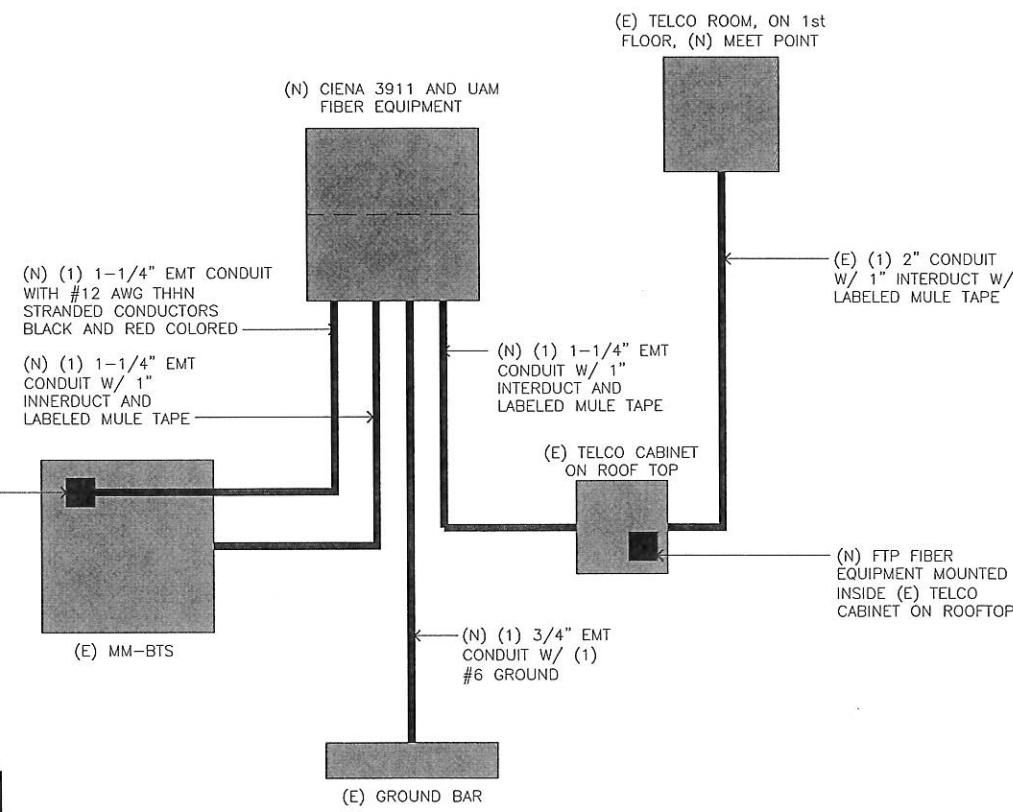
SHEET NUMBER

RF



UNDERGROUND SERVICE
ALERT OF SOUTHERN
CALIFORNIA
Call: TOLL FREE
811

(N) 15 AMP
-48VDC CIRCUIT
BREAKER IN (E)
DC POWER PANEL



NOTE:
1. ALL NEW FIBER/CABLE RUNS TO UTILIZE EXISTING CONDUIT PATHS PREVIOUSLY ESTABLISHED WITHIN A PRE-APPROVED ACCESS/UTILITY EASEMENT
2. (E) CONDUIT PATH SHOWN IS ESTIMATED. VERIFY ACTUAL PATH IN FIELD.

FIBER SCHEMATIC

SCOPE OF WORK:

AT&T WILL PROVIDE FIBER OPTIC CONNECTIVITY TO AFOREMENTIONED SPRINT WIRELESS CELL SITE.

FIBER PATH:
THE HOP / MEET POINT IS AT THE (E) TELCO ROOM ON 1st. FLOOR OF (E) BUILDING. SPRINT GC IS TO UTILIZE (E) (1) 2" CONDUIT W/ 1" INTERDUCT W/ LABELED MULE TAPE TO (E) TELCO CABINET, (N) FTP FIBER EQUIPMENT TO BE INSTALLED IN (E) TELCO CABINET ON ROOF TOP. (1) (N) 1-1/4" EMT FIBER CONDUIT FROM (N) FTP FIBER EQUIPMENT TO (N) CIENA 3911/UAM FIBER EQUIPMENT ON (N) H-FRAME ON (E) STEEL PLATFORM ON ROOF TOP, (1) (N) 1-1/4" EMT FIBER CONDUIT FROM (N) UAM FIBER EQUIPMENT TO (E) MMBTS CABINET.

EQUIPMENT:
SPRINT GC WILL INSTALL (N) CIENA 3911 & UAM FIBER EQUIPMENT AND (N) D/C FIBER BOX MOUNTED ON (N) H-FRAME. (N) H-FRAME TO BE MOUNTED ON (E) STEEL PLATFORM.

POWER:
SPRINT GC TO INSTALL (1) (N) 1-1/4" DIA. EMT SCHEDULE 40 POWER CONDUIT WITH #12 AWG THHN STRANDED CONDUCTORS BLACK AND RED COLORED FROM (N) DC PANEL WITHIN (N) MMBTS CABINET TO (N) UAM/CIENA FIBER EQUIPMENT.

GROUNDING:
SPRINT GC TO PROVIDE AND INSTALL (1) 3/4" DIA EMT CONDUIT, WITH (1) (N) #6 AWG GREEN SOLID WIRE ROUTED WITHIN, FROM (E) GROUND BAR TO THE (N) UAM FIBER EQUIPMENT



UNDERGROUND SERVICE
ALERT OF SOUTHERN
CALIFORNIA
Call: TOLL FREE
811

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SITE BUILDER



A&E DEVELOPMENT



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SEAL

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NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

FIBER ROUTING PLAN

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

FIBER

SPRINT GC TO INSTALL (1) (N) 1-1/4" DIA. EMT CONDUIT W/ 1" INTERDUCT W/ LABELED MULE TAPE FROM (E) TELCO CABINET TO (N) CIENA 3911 AND UAM FIBER EQUIPMENT ON (N) H-FRAME (APPROX: ±25'-0")

SPRINT GC TO INSTALL (1) (N) 3/4" DIA. EMT, WITH (1) #6 AWG GREEN SOLID WIRE ROUTED WITHIN, FROM (E) GROUND BAR TO THE (N) UAM FIBER EQUIPMENT (APPROX: ±22'-0")

(E) PENTHOUSE ON ROOFTOP
(E) 'SPRINT' PANEL ANTENNA MOUNTED TO (E) PENTHOUSE

SPRINT GC TO INSTALL (1) (N) 1-1/4" DIA. EMT SCHEDULE 40 POWER CONDUIT WITH #12 AWG THHN STRANDED CONDUCTORS BLACK AND RED COLORED FROM (N) DC PANEL WITHIN (N) MMBTS CABINET TO (N) UAM/CIENA FIBER EQUIPMENT (APPROX: ±6'-0")

SPRINT GC TO INSTALL (1) (N) 1-1/4" DIA. EMT SCHEDULE 40 FIBER CONDUIT FROM (N) UAM FIBER EQUIPMENT TO (N) MM-BTS EQUIPMENT CABINET (APPROX: ±6'-0")

(N) FIBER BACKHAUL EQUIPMENT MOUNTED TO (N) H-FRAME

(N) 'SPRINT' FIBER / DC DISTRIBUTION BOX MOUNTED TO (N) H-FRAME

(E) 'SPRINT' COAX CABLE TRAY

(N) 'SPRINT' GPS ANTENNA MOUNTED TO (E) PIPE MOUNT

(UPGRADED) 'SPRINT' MMBTS 9927 EQUIPMENT CABINET

(E) 'SPRINT' POWERHOUSE 24 CABINET TO REMAIN

(N) 'SPRINT' 60ECV2 BATTERY CABINET (TOTAL 1)

(E) MGB MOUNTED TO (E) STEEL PLATFORM

SPRINT G.C TO UTILIZE (1) (E) 2" DIA. CONDUIT AND INSTALL (1) 1" INTERDUCT W/ LABELED MULE TAPE TO (E) TELCO CABINET ON (E) STEEL PLATFORM ON ROOF TOP (APPROX: ±100'-0")

(N) FTP FIBER EQUIPMENT MOUNTED ON (E) BACKBOARD WITHIN (E) TELCO CABINET ON ROOF TOP

(E) 'SPRINT' TELCO CABINET TO REMAIN

(E) 'SPRINT' STEEL PLATFORM MOUNTED ON ROOFTOP

(E) WALKING PADS, TYP.

(E) ROOFTOP



ENLARGED SITE PLAN

SCALE	1
3/4"=1'-0"	0 6' 1' 2'

GENERAL NOTES & SPECIFICATIONS:

1. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION ACCEPTABLE BY THE JURISDICTION OF THE NATIONAL ELECTRICAL CODE, CALIFORNIA ELECTRICAL CODE, STATE FIRE MARSHALL REGULATIONS, AND ALL OTHER STATE AND LOCAL CODES, LAWS, AND ORDINANCES HAVING JURISDICTION ALBEIT NOT SHOWN ON DRAWINGS OR SHOWN OTHERWISE.

2. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION REQUIREMENTS.

3. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND VERIFY EXISTING CONDITIONS BEFORE BIDDING AND SHALL INCLUDE IN HIS BID THE NECESSARY COSTS TO CONSTRUCT THIS PROJECT IN ACCORDANCE WITH INTENT OF THE ELECTRICAL DRAWINGS, SPECIFICATIONS, SERVING UTILITY COMPANY'S REQUIREMENTS AND ALL APPLICABLE CODES. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT BEFORE SUBMITTING BID. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, POWER AND TELEPHONE SERVICE REQUIREMENTS WITH UTILITY SERVICE PLANNER AND THE EXACT SERVING UTILITY POINTS OF CONNECTION AND PROVIDE ALL SERVICE RELATED EQUIPMENT AND INSTALLATION IN BID. UTILITY SERVICE REQUIREMENTS SHOWN ON THE DRAWINGS ARE BASED ON PRELIMINARY SITE VISIT AND INFORMATION AVAILABLE AT THIS TIME OF VISIT AND ARE NOT GUARANTEED BY ENGINEER OR SERVING UTILITY COMPANY. REFER TO ARCHITECTURAL DRAWINGS AND VISIT SITE PRIOR TO BID TO REVIEW EXISTING TOPOGRAPHY MAPS, LANDSCAPING AND CONSTRUCTION TO BECOME FAMILIAR WITH SLOPE CONDITIONS AND EXISTING CONSTRUCTION AND LANDSCAPING. ADJUST CONDUIT ROUTING INDICATED TO AVOID DISTURBING EXISTING CONDITION WHERE POSSIBLE. SAWCUT EXISTING SURFACE WHERE REQUIRED FOR CONDUIT AND STRUCTURE INSTALLATION AND PATCH TO MATCH EXISTING. REPAIR OR REPLACE ALL SOD, LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS AND WIRING, PIPING ETC. ALTERED BY THE ELECTRICAL WORK TO MATCH EXISTING AND TO MAKE SYSTEMS OPERABLE.

4. THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF NECA MANUAL OF GOOD WORKMANSHIP" (STANDARD OF INSTALLATION).

5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, INCLUDING BUT NOT LIMITED TO COMPLETE ELECTRICAL SYSTEMS, POWER AND LIGHTING, TELEPHONE CONDUIT SYSTEM, SIGNAL SYSTEMS, PANELBOARDS(S), CONTROL WIRING, GROUNDING, CONDUIT ONLY SYSTEMS ETC., FOR A COMPLETE AND PROPERLY OPERATING SYSTEM, ENERGIZED THROUGHOUT AND AS INDICATED ON THE DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.

6. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL UL WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, AND NBFU.

7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING DIMENSIONS AND CONDITIONS. HE SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.

8. ALL WIRING SHALL BE IN METALLIC CONDUIT. RIGID GALVANIZED CONDUIT SHALL BE USED IN OR UNDER CONCRETE SLABS ON GRADE FIVE FEET BEFORE STUBBING UP, WHERE EXPOSED TO WEATHER, AND WHERE SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 80 SHALL BE USED IN OR UNDER CONCRETE OR BURIED UNDERGROUND. EMT CONDUITS SHALL BE USED INSIDE STRUCTURE OR BUILDINGS. FLEXIBLE CONDUIT SHALL BE USED WHERE THE STRUCTURAL CONDITIONS MAKE THE USE OF RIGID CONDUIT IMPRACTICAL, AND FOR SHORT CONNECTIONS TO VIBRATING EQUIPMENT. USE NEOPRENE JACKETED FLEXIBLE CONDUIT AND FITTINGS WHERE EXPOSED TO WEATHER.

9. ALL WIRING SHALL BE CONCEALED IN FINISHED AREAS. INSTALL EXPOSED RACEWAYS PARALLEL WITH OR PERPENDICULAR TO THE LINES OF BUILDING. PAINT RACEWAYS TO MATCH MOUNTING SURFACE. PENETRATIONS OF ALL WALLS OR CEILINGS SHALL BE SEALED AND FIRE RATING MAINTAINED IN ACCORDANCE WITH UL W11001, UL W15001 AND ALL LOCAL AND NATIONAL CODES. DO NOT PENETRATE OR RUN CONDUITS IN AND OUT OF RATED CORRIDOR OR STAIRWELL ENCLOSURE FOR CIRCUITS NOT INTENDED TO SERVE THE EQUIPMENT WITHIN THE ENCLOSURE. CONDUIT MUST BE RUN OUTSIDE OF RATED ENCLOSURE ENVELOPS.

10. ALL CONDUCTORS SHALL BE COPPER AND RATED 600 VOLTS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE 75°C RATED COPPER TYPE "DUAL RATED THHN/THWN" #12, & #10 SOLID, #8 AND LARGER STRANDED, CONTROLS AND SIGNAL WIRING SHALL BE STRANDED.

11. OUTLET BOXES SHALL BE CAST FERROUS METAL WITH WATERTIGHT GASKETED CAST FERROUS COVERS, THREADED HUBS, AND STAINLESS STEEL SCREWS. USE CROUSE-HINDS OR APPLETON TYPE FS OR FD BOXES OR APPROVED EQUAL BY ENGINEER.

12. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS WITH CONSTRUCTION MANAGER BEFORE ROUGH-IN.

13. ELECTRICAL LAYOUT DRAWINGS ARE DIAGRAMMATIC. INSTALL THE ELECTRICAL SYSTEMS WITHOUT INTERFERING WITH STRUCTURES OR OTHER SYSTEMS.

14. ALL SURFACE-MOUNTED ELECTRICAL EQUIPMENT AND DEVICES SHALL BE PROPERLY SECURED. PROVIDE STRUCTURAL SUPPORT AS NECESSARY FOR MOUNTING EQUIPMENT.

15. CONTRACTOR SHALL LABEL THE COVER PLATE OF EACH ELECTRICAL OUTLET AND JUNCTION BOX WITH INDELIBLE INK FELT PEN. THE LABEL SHOULD SHOW PANEL AND CIRCUIT NUMBER CONTAINED IN THE BOX.

16. GROUP CONDUITS TOGETHER AND SUPPORT WITH UNISTRUT.

17. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT EQUIPMENT LOCATIONS. ALL EQUIPMENT AND STUB-UP LOCATIONS SHALL BE VERIFIED WITH ENGINEER BEFORE ROUGH-IN.

18. PROVIDE SEPARATE GROUND WIRE IN ALL FLEXIBLE AND PVC CONDUITS.

19. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN THE UNIFORMITY AND CONTINUITY OF THE GROUNDING SYSTEM.

20. TEST THE ENTIRE SYSTEM TO DEMONSTRATE THAT THE ELECTRICAL COMPONENTS AND SPECIAL SYSTEMS ARE COMPLETE AND FUNCTION PROPERLY, INCLUDING BUT NOT LIMITED TO INSULATION AND GROUNDING TESTS. MAKE NECESSARY CORRECTIONS AND LEAVE SYSTEMS READY FOR OPERATION.

21. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.

22. AT COMPLETION OF THE JOB, THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER WITH SPARE PARTS, ALL THE EQUIPMENT MANUALS, SPARE PARTS LIST AS RECOMMENDED BY THE MANUFACTURER, EQUIPMENT REPRESENTATIVE ADDRESS AND PHONE NUMBER. FURNISH ONE (1) COMPLETED SET OF "AS-BUILT" ELECTRICAL PLANS SHOWING LOCATIONS OF OUTLETS, CONDUIT RUNS, AND PANELBOARD CIRCUIT NUMBERS. ELECTRICAL CONTRACTOR SHALL PROVIDE ACCURATE DIRECTORIES IN PANELBOARD FRONTS AT COMPLETION OF BUILD-OUT. PANELBOARD DIRECTORIES SHALL INCLUDE THE EQUIPMENT SERVED AND WATTAGE.

23. REFER TO SPRINT'S STANDARD SPECIFICATIONS AS PART OF THIS CONSTRUCTION DOCUMENT. ANY CONFLICT BETWEEN THESE DRAWINGS, SPRINT'S STANDARD SPECIFICATIONS, AND APPLICABLE CODES, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

24. ALL WORK TO BE EXECUTED IN WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.

25. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, UNLESS NOTED OTHERWISE AND COORDINATED WITH THE GENERAL CONTRACTOR.

26. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:

FIXED EQUIPMENT ON GRADE	33% OF OPERATING WEIGHT
FIXED EQUIPMENT ON STRUCTURE	30% OF OPERATING WEIGHT
EMERGENCY POWER & COMMUNICATION EQUIPMENT ON GRADE	30% OF OPERATING WEIGHT
EMERGENCY POWER & COMMUNICATION EQUIPMENT ON STRUCTURE	73% OF OPERATING WEIGHT

FOR FLEXIBILITY OF MOUNTED EQUIPMENT USE 2X THE ABOVE VALUES. SIMULTANEOUS VERTICAL FORCE 1/3X HORIZONTAL FORCE.

27. THE CONTRACTOR AGREE THAT, IN ACCORDANCE WITH GENERALLY CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT AT ALL TIME. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

CONDUITS:

1. 1-2" MINIMUM DIAMETER DUCT OF APPROVED MATERIAL WITHIN OR ON BUILDINGS-RIGID GALVANIZED STEEL (WHEN REQUIRED), OR ELECTRO-METALLIC TUBING(EMT). IN UNDERGROUND - PVC SCHEDULE 40 OR EQUIVALENT FOR STRAIGHT SECTIONS, BENDS SHALL BE PVC SCHEDULE 80. PULL ROPES IN ALL DUCTS (MIN. 3/8" POLY PULL ROPE) AND A MEASURING TAPE MUST BE IN PLACE TO DETERMINE "AS-BUILT" CONDUIT LENGTH; BOTH MUST BE IN ONE CONTINUOUS PIECE.

2. WITHIN BUILDINGS: ELECTRICAL LB'S AND CONDUITS ARE NOT ACCEPTABLE AS PULL BOXES. NO 90 DEGREE TRANSITIONS AT OR IN PULL BOXES (UNLESS A 10" BENDING RADIUS CAN BE MAINTAINED) IN-LINE PULL BOX MINIMUM DIMENSIONS = 24"L X 6"W X 6"D. 30"L X 6"W X 6"D PREFERRED. PULL BOXES MUST BE EASILY ACCESSIBLE (TELEPHONE COMPANY WILL NOT REMOVE CEILING TILES). VERTICAL SECTIONS OF CONDUIT WILL REQUIRE A PULL BOX EVERY 100 FEET AND APPROVED RESTRAINTS. MAXIMUM OF 300 FEET HORIZONTAL BETWEEN PULL-BOXES. MAXIMUM OF 2-90 DEGREE BENDS BETWEEN PULL-BOXES. MINIMUM CONDUIT BEND RADIUS OF 10 CABLE DIAMETERS (12"). FIRE STOPPING REQUIRED WHEN OPENINGS ARE MADE IN ANY FIRE RATED BARRIER. ALL EXTERNAL CONDUIT TERMINATIONS SHALL BE WEATHER TIGHT.

3. IN UNDERGROUND CONSTRUCTION: CONDUIT LENGTH MAXIMUM OF 300 FEET BETWEEN PULL BOXES. CONDUIT BENDS MUST HAVE A RADIUS 10 TIMES CONDUIT SIZE (20").

TRENCHING:

1. MINIMUM COVERAGE OF DUCT ON PRIVATE PROPERTY - 18" UNDER CONCRETE SURFACE OR AS SPECIFIED BY PERMITTING OWNER/AGENT.

2. MINIMUM COVERAGE OF DUCT ON PRIVATE PROPERTY = 24" UNDER DIRT SURFACE OR AS SPECIFIED BY PERMITTING OWNER/AGENT.

3. MINIMUM COVERAGE OR DUCT IN PUBLIC R/W = 30" BELOW GUTTER GRADE OR AS SPECIFIED BY PERMITTING AGENT.

4. MINIMUM 12" SEPARATION IN JOINT TRENCH BETWEEN POWER AND TELCO.

5. PULL BOXES - MINIMUM 17"W X 30"L.

6. SPLICE BOXES WILL BE SIZED BY SERVING TELEPHONE COMPANY. DETAILS WILL BE PROVIDED BY TELEPHONE COMPANY OR INTERCONNECT ENGINEER.

BONDING & GROUNDING:

1. # 6 AWG SOLID COPPER INSULATED GROUND WIRE (24" COILED IN TELCO SERVICE BOX) WITH BONDING CLAMPS IN PLACE. THE TELEPHONE GROUND MUST BE BONDED TO THE POWER GROUND. THE TELEPHONE SERVICE CABINET MUST BE BONDED TO THE TELEPHONE GROUND WIRE. ANY QUESTIONS REGARDING TELEPHONE GROUNDS SHOULD BE REFERRED TO THE INTERCONNECT ENGINEER.

2. SERVICE BOX: MINIMUM DIMENSIONS - 30"W X 36"H X 9"D. 3/4" PLYWOOD BACKBOARD MOUNTED IN SERVICE BOX. 36" CLEARANCE FROM GROUND LEVEL TO BOTTOM OF SERVICE BOX PREFERRED. FULL ACCESS FROM FRONT OF BOX; MINIMUM 36" WORKING SPACE IN FRONT AND 36" IN WIDTH. BOX MUST BE WATER RESISTANCE, NEMA 4, GALVANIZED STEEL BOX PAINTED INSIDE AND OUT AND WITH HASP AND PADLOCK.

GROUNDING NOTES:

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.

3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE TIN COATED OR GREEN INSULATED WIRE.

4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE TO A RANGE OF 5 TO 10 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE GROUND CONDUCTOR FROM THE ANTENNA TO GROUNDING POINT. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE SPRINT REPRESENTATIVE.

5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.

7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 30" BELOW GRADE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.

8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" WITH A MINIMUM NO. 6 TINNED COPPER CONDUCTOR AND (2) 2-HOLE COMPRESSION CONNECTOR AT BUS.

10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
 a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS (MECHANICAL CONNECTIONS).
 b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
 c. TWO -(2) HOLE TINNED COPPER COMPRESSION FITTINGS (BUS BAR CONNECTIONS).

11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP.

12. ALL GROUND CONNECTIONS SHALL BE BURNISHED AND SHALL HAVE A COATING OF "KOPR-SHIELD" OR "NO-OX-ID" APPLIED TO THE CONNECTION.

13. ALL CONNECTION HARDWARE AT EQUIPMENT SHALL BE TYPE 316 SS, OR DURIEM BRONZE. "KOPR-SHIELD" OR "NO-OX-ID" APPLIED TO THE CONNECTION.

14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.

15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER PIPE WITHIN FIVE FEET OF WATER SERVICE IF APPLICABLE.

ABBREVIATIONS:

AWG	AMERICAN WIRE GAUGE	KAIC	THOUSAND AMPS INTERRHPTING CAPACITY
AFC	AVAILABLE FAULT CURRENT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BTCW	BARE TINNED COPPER WIRE	(N)	NEW
BTS	BASE TRANSMISSION SYSTEM	Ø	PHASE
C	CONDUIT	P	POLE
CB	CIRCUIT BREAKER	P.O.C.	POINT OF CONNECTION
CO	CONDUIT ONLY	PVC	POLYVINYL CHLORIDE CONDUIT
DWG	DRAWING	(R)	REPLACE OR REWIRE WITH AS (E)
EMT	ELECTRICAL METALLIC TUBING	RGS	RIGID GALVANIZED STEEL
(E)	EXISTING EQUIPMENT	TEL	TELEPHONE
(F)	FUTURE EQUIPMENT	TYP.	TYPICAL
GEN	GENERATOR	U.G.	UNDERGROUND
GFI	GROUND FAULT CIRCUIT INTERRHPTER	UNO	UNLESS NOTED OTHERWISE
GND	GROUND	W	WIRE
		WP	WEATHERPROOF EQUIPMENT

ABBREVIATIONS

SCALE 1
N.T.S.

SYMBOLS:

- G— GROUNDING WIRE, DASHED LINE INDICATES UNDERGROUND
- E— POWER LINE, DASHED INDICATES UNDERGROUND, 3/4"C-2#12&1#12GND, UNO
- T— TELEPHONE LINE, DASHED LINE INDICATES UNDERGROUND
- A— COAXIAL CABLE, DASHED LINE INDICATES UNDERGROUND
- (X/X-X) DETAIL REFERENCE DETAIL NO. X ON SHEET X-X
- ⊗ GROUND ROD, MAXIMUM 10'-0" SPACING.
- ⊗ GROUND ROD WITH ACCESS
- FUSED DISCONNECT SWITCH, 240V, 2P, 30A, WEATHERPROOF, UNO
- Ⓜ UTILITY METER
- ⌋ CIRCUIT BREAKER
- ⌋ FUSE
- Ⓜ DUPLEX RECEPTACLE WITH GFCI IN WEATHERPROOF ENCLOSURE
- SWITCH, 120AC, 20A
ab - SWITCH LEG
m - MANUAL MOTOR STARTER
- CLAMP OR DOUBLE HOLE LUG TYPE GROUND CONNECTION
- EXOTHERMIC CONNECTION (CADWELD) TO GROUND RING AND COMPRESSION CONNECTION TO GROUND HALO


SCALE 3
N.T.S.

SYMBOLS

SCALE 2
N.T.S.

REV	DATE/BY	DESCRIPTION
0	05.02.2012 SR	PRELIMINARY CONSTRUCTION
1	06.04.2012 JMB	PRELIMINARY FINAL CONSTRUCTION
2	07.11.2012 JMB	REVISED PER RF

ENGINEER / CONSULTANT



SITE BUILDER



Together with NEXTEL

A&E DEVELOPMENT



DEVELOPMENT SERVICES
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SEAL

SITE INFORMATION

SITE NAME:
**DOVE
OG03XC095**

SITE ADDRESS:
1401 DOVE ST.
NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

**ELECTRICAL
NOTES**

DRAWING INFORMATION

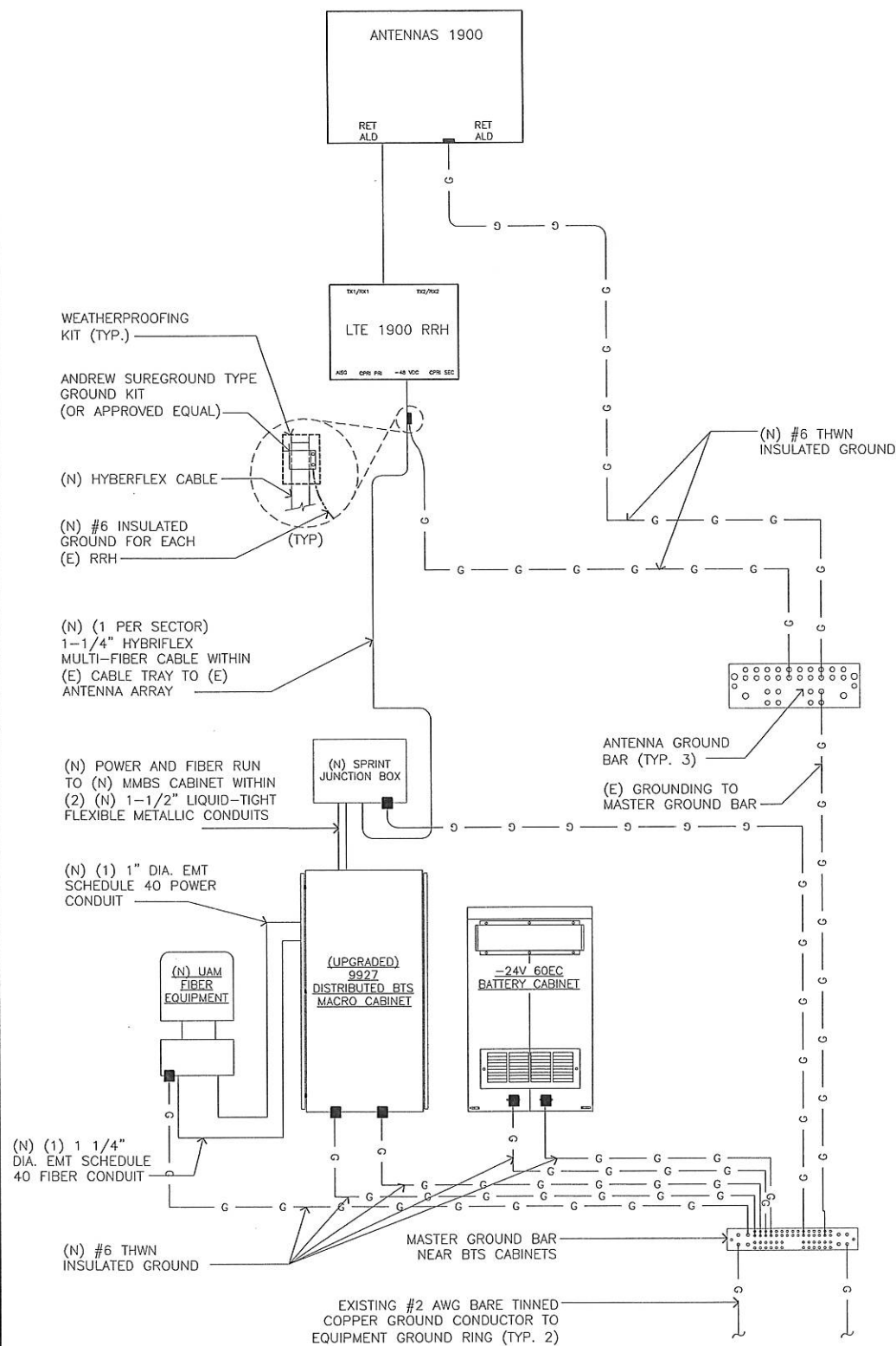
DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

E-1

NOTES

- 1) INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUSS IN THE PANEL BOARD.
- 2) GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.



SINGLE LINE GROUNDING PLAN

SCALE N.T.S. **4**

NOTES:

EXISTING SINGLE PHASE, 120/240 VAC, 60HZ SERVICE WILL PROVIDE SUFFICIENT POWER REQUIREMENTS FOR NEW (N) SPRINT EQUIPMENT, CABLING & ANTENNA UPGRADES.

GC SHALL COORDINATE WITH ELECTRICIAN PRIOR TO START OF CONSTRUCTION. AS NO ADDITIONAL POWER AND TELEPHONE CONDUIT SHALL BE INSTALLED EXCEPT FOR CABLING WITHIN CONDUIT FROM EACH OF (2) NEW BBU'S TO THE EXISTING POWER CABINET AND FROM THE EXISTING LUCCENT MOD CELL 4.0 EQUIPMENT CABINET TO EACH OF THE RRH UNITS VIA NEW SINGLE HYBRIFLEX FIBER OPTIC CABLING ROUTED FROM THE EXISTING SPRINT EQUIPMENT TO ALL ANTENNA SECTORS

FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY PANEL MANUFACTURE.

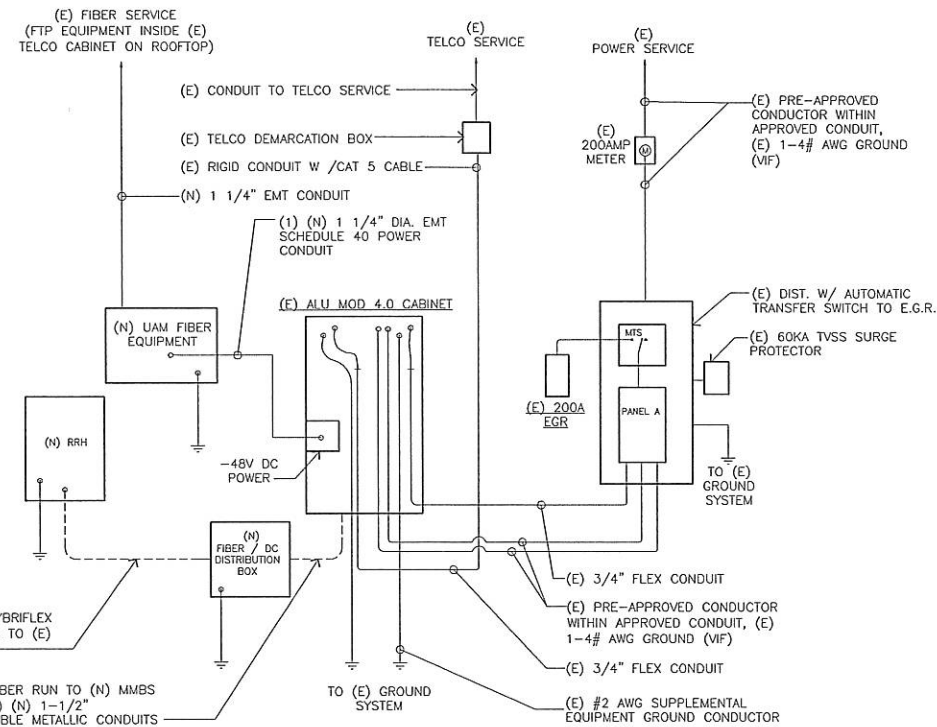
ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. UTILITY COMPANY, AND LOCAL CODE REQUIREMENTS.

EXISTING CONDUIT WITH ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHING, ELBOWS, COUPLINGS, ECT.) NECESSARY FOR NEC COMPLIANCE CONNECTIONS.

SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATING GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.

POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#10 AWG OR LARGER), 600V OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 75°C (WET AND DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.

CUT, COIL AND TAPE A 10 FOOT PITGAL FROM END OF FLEX CONDUIT FOR TERMINATION BY MANUFACTURE.

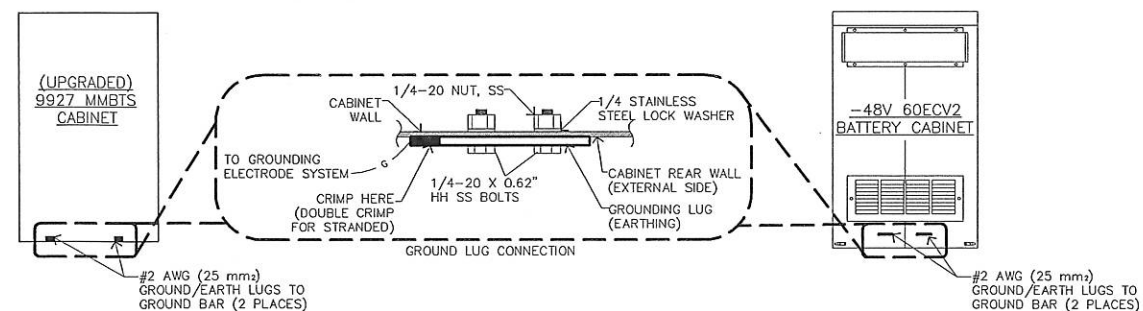


ELECTRICAL LINE DIAGRAM

SCALE N.T.S. **1**

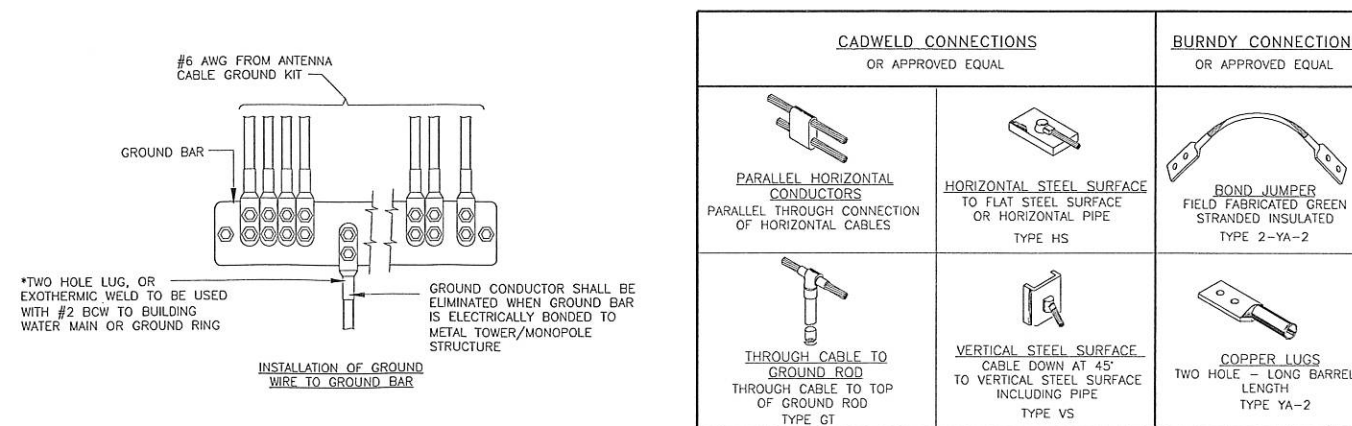
PERFORM THE FOLLOWING STEPS TO INSTALL CABINET GROUNDING CABLES

- 1) LOCATE THE TWO 35MM 2 (2AWG) GROUNDING CABLES CONNECTED TO THE GROUNDING ELECTRODE SYSTEM
- 2) REMOVE THE DOUBLE-HOLE GROUNDING LUG FROM THE BOTTOM REAR OF THE CABINET, OR FROM THE LOOSE PARTS BAG SHIPPED WITH THE CABINET. REFER TO THE FIGURE BELOW.
- 3) CUT EACH CABLE TO THE PROPER LENGTH. IMPORTANT! WHEN PERFORMING THE NEXT STEP, DOUBLE CRIMP THE LUG IF THE WIRE IS STRANDED
- 4) CRIMP A DOUBLE-HOLE TERMINAL LUG ONTO THE END OF EACH CABLE
- 5) VERIFY THAT THE CABINET GROUNDING LUG LOCATION IS FREE OF PAINT AND POLISH, IF REQUIRED
- 6) CONNECT BOTH GROUNDING CABLES TO THE CABINET GROUNDING LOCATIONS. REFER TO THE PREVIOUS FOLLOWING FIGURE, OR THOSE FOLLOWING, AS APPLICABLE. ANTIOXIDANT COMPOUND IS REQUIRED.
- 7) TORQUE ALL CONNECTIONS IN ACCORDANCE WITH THE ELECTRICAL TORQUE REQUIREMENTS



CABINET GROUNDING

SCALE N.T.S. **2**



GROUNDING DETAILS

SCALE N.T.S. **3**

REV	DATE/BY	DESCRIPTION
0	05.02.2012 SR	PRELIMINARY CONSTRUCTION
1	06.04.2012 JMB	PRELIMINARY FINAL CONSTRUCTION
2	07.11.2012 JMB	REVISED PER RF

ENGINEER / CONSULTANT

Alcatel-Lucent

SITE BUILDER

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A&E DEVELOPMENT

core

DEVELOPMENT SERVICES
A&E SERVICES

2749 Saturn Street
Brea, California 92821
(714)729-8404 (714)333-4441 fax
www.core.us.com

SEAL

SITE INFORMATION

SITE NAME:

DOVE
OG03XC095

SITE ADDRESS:

1401 DOVE ST.
NEWPORT BEACH, CA 92660

ORANGE COUNTY

SHEET TITLE

GROUNDING, LINE
DIAGRAM AND
DETAILS

DRAWING INFORMATION

DRAWN BY	CHECKED BY	ISSUE DATE
SR	AP	07.11.2012

SHEET NUMBER

E-2