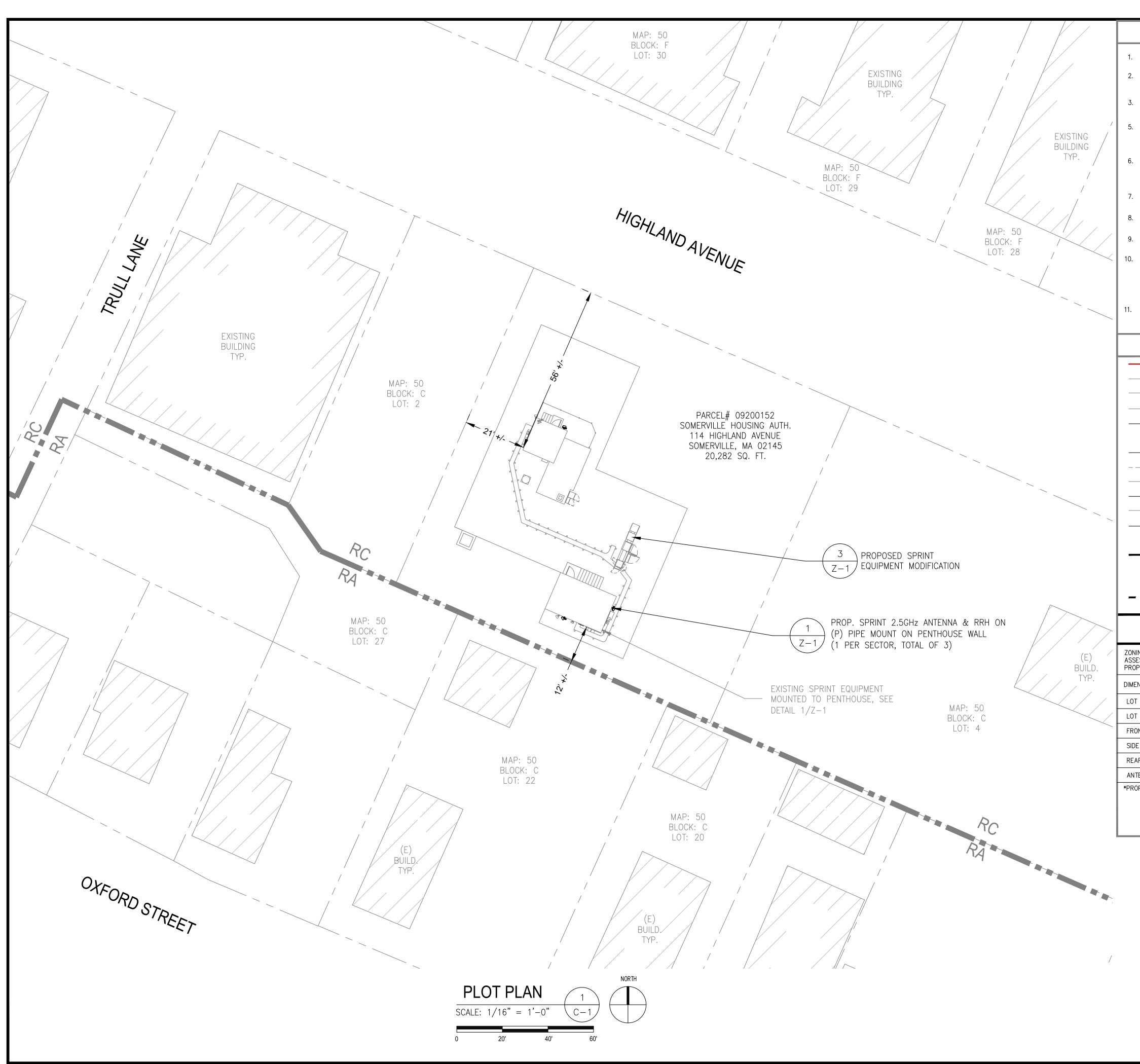
	int )
SITE INFORMATION	AREA MAP
PROPERTY OWNER: SOMERVILLE HOUSING AUTHORITY 114 HIGHLAND AVENUE SOMERVILLE, MA 02145	Albion Playground
<u>TOWER OWNER:</u> N/A (ROOFTOP)	Highland Ave
LATITUDE (NAD83): GOOGLE EARTH 2-C CONFIRMATION 42° 23' 12.999" N 42.3867°	vground Summer St Some RVILL Summer St Some RVILL Some RVILL So
LONGITUDE (NAD83): GOOGLE EARTH 2-C CONFIRMATION -71° 06' 1.000" W -71.1008° COUNTY:	erville Ave Conway Park
MIDDLESEX <u>ZONING JURISDICTION:</u> CITY OF SOMERVILLE	LOCATION MAP GOOGLE EARTH 2-0
ZONING DISTRICT: RESIDENCE C (RC)	
<u>POWER COMPANY:</u> NSTAR ELECTRIC <u>AAV PROVIDER:</u> COMCAST	
SPRINT MARKET MANAGER: RONALD HIBBARD PHONE: 774-269-8812 ronald.hibbard@sprint.com	42°23'12.99"N, 71° 6'1.00"
EQUIPMENT SUPPLIER: ALCATEL-LUCENT 600 MOUNTAIN AVENUE MURRAY HILL, NJ 07974	
	ETAS SUCCESS



	PROJECT: 2	.5 EQUIPMENT DEPLOYMENT	Sprint <sup>®</sup>
	SITE NAME:	IIGHLAND GARDENS	VISION 1 INTERNATIONAL BLVD, SUITE 800 MAHWAH, NJ 07495 (201) 684-4000
	SITE CASCADE: B	S13XC672	J LEE ASSOCIATES, LLC
	MARKET: B	OSTON	753 FOREST STREET MARLBOROUGH, MA 01752-3047 PHONE: (800) 825-6460 www.guardian-energy.com
		14 HIGHLAND AVENUE OMERVILLE, MA 02145	<b>ENGINEERING GROUP</b> , P.C. <b>Civil Engineering - Site Development</b> <b>Surveying - Telecommunications</b> 500 NORTH BROADWAY EAST PROVIDENCE, RI 02914 PH: 401–354–2403 FAX: 401–633–6354
	SITE TYPE: R	OOFTOP	
	PROJECT DESCRIPTION	DRAWING INDEX	
School St Charter St	SPRINT EQUIPMENT MODIFICATIONS REQUIRED TO SUPPORT MODERNIZATION OF AN EXISTING WIRELESS COMMUNICATIONS FACILITY AND UTILIZATION OF FCC BROADBAND SPECTRUM LICENSE FOR 2.5GHz FREQUENCY, INCLUDING INSTALLATION OF:	T-1     TITLE SHEET     0     MRC	AAB MARC R. CHRETIEN CIVIL
Radoliffe Rd	<ul> <li>GROUND-LEVEL RAN EQUIPMENT, CONSISTING OF</li> <li>* RETROFIT EXISTING MMBTS CABINET WITH 2.5 RADIO ACCESS NETWORK (RAN) EQUIPMENT</li> <li>* (2) ADDITIONAL BATTERY STRING(S) INSIDE EXISTING BATTERY BACKUP (BBU) CABINET</li> </ul>	Z-1     ROOF & EQUIPMENT PLANS     0     MRC       Z-2     ELEVATION     0     MRC	AAB AAB AAB AAB
E Edward L. Leathers Community Park	<ul> <li>TOWER-TOP EQUIPMENT, INCLUDING INSTALLATION OF:</li> <li>* (3) PANEL ANTENNAS</li> <li>* (3) REMOTE RADIO HEADS (RRH)</li> <li>* (1) HYBRID FIBER CABLE (AND ASSOCIATED FIBER, DC POWER, COAXIAL CABLE JUMPERS AND ANTENNA REMOTE ELECTRICAL-TILT (RET) CABLE</li> </ul>		AAB AAB ENGINEER/LAND SURVEYOR DATE IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION
ve ntral Hill Playground Sinnen st Sinnen	SPECIAL ZONING NOTE: BASED ON INFORMATION PROVIDE BY SPRINT REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AND <u>ELIGIBLE FACILITY</u> UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED <u>ELIGIBLE FACILITIES</u> REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW, ADMINISTRATIVE REVIEW).		OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.
erk 2			
C CONFIRMATION	GENERAL NOTES	APPROVALS	0 01/06/14 ISSUED FOR REVIEW
ned	<ol> <li>THIS IS AN UNMANNED TELECOMMUNICATION FACILITY AND NOT FOR HUMAN HABITATION:</li> <li>ADA COMPLIANCE NOT REQUIRED.</li> <li>POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED.</li> <li>NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.</li> <li>CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND</li> </ol>	THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.	
	CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE. 3. NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND	SPRINT:         DATE:	HIGHLAND GARDENS BS13XC672
OTVV	ORDINANCES. BUILDING CODE: MASSACHUSETTS STATE BUILDING CODE 780 CMR 8TH EDITION ELECTRICAL CODE: 2005 NATIONAL ELECTRICAL CODE STRUCTURAL CODE: TIA/EIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.	CONSTRUCTION MANAGER: DATE:	114 HIGHLAND AVENUE SOMERVILLE, MA 02145
	En.	SITE ACQUISITION:       DATE:         RF ENGINEER:       DATE:	DRAWING TITLE TITLE SHEET
	Know what's below. Call before you dig. www.cbyd.com	LANDLORD/ TOWER OWNER: DATE:	DRAWING NUMBER



### GENERAL NOTES:

FIELD SURVEY DATE:	9/06/13
VERTICAL DATUM:	NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
HORIZONTAL DATUM:	NORTH AMERICAN DATUM OF 1983 (NAD83)
PROPERTY OWNER:	SOMERVILLE HOUSING AUTHORITY 114 HIGHLAND AVENUE SOMERVILLE, MA 02145
APPLICANT:	SPRINT 1 INTERNATIONAL BLVD, SUITE 800 MAHWAH, NJ 07495
JURISDICTION:	CITY OF SOMERVILLE
TAX ID:	09200152
ZONING JURISDICTION:	CITY OF SOMERVILLE

PROPERTY LINE INFORMATION IS COMPILED FROM SOMERVILLE'S ONLINE GIS SYSTEM AND MASS GIS, AND IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.

BEARING SYSTEM OF THIS PLAN IS BASED ON TRUE NORTH. TRUE NORTH WAS ESTABLISHED FROM EXISTING PLAN REFERENCE. IT IS NOT INTENDED TO BE AN EXACT REPRESENTATION OF TRUE NORTH.

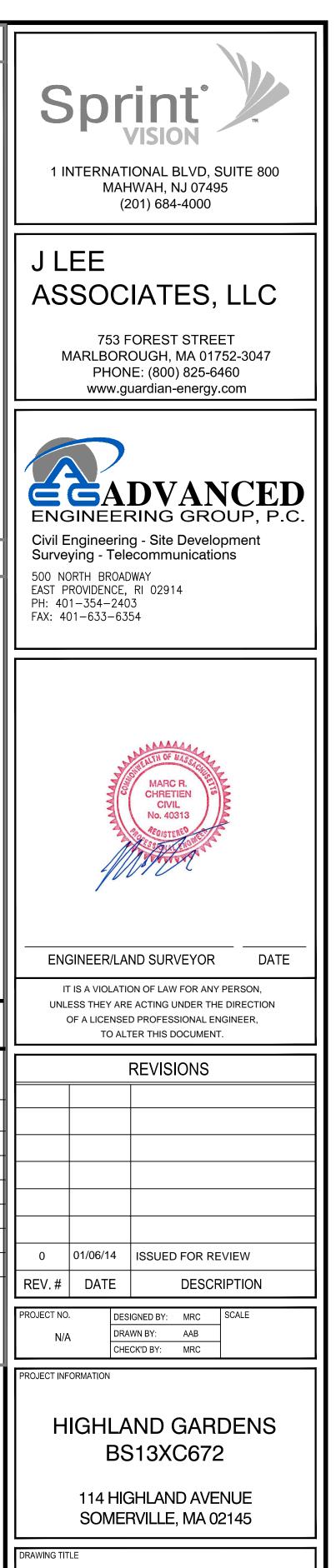
### LEGEND

36	
X	X
	X
OHW	OHW
OHW	—— онw———
UG/E	Ξ/Τ
UG/E	<u> </u>
RESIDE	NCE C

PROPERTY LINE ABUTTING PROPERTY LINE EXIST. CONTOUR EXIST. CHAIN LINK FENCE PROP. CHAIN LINK FENCE EXIST. TREE LINE EXIST. STREET LAYOUT EXIST. EASEMENT EXIST. OVERHEAD UTILITIES PROP. OVERHEAD UTILITIES EXIST. UNDERGROUND UTILITIES PROP. UNDERGROUND UTILITIES EXIST. UTILITY POLE #XXX ZONING BOUNDARY LINE ZONING DISTRICT TOWN BOUNDARY LINE

### ZONING SUMMARY TABLE

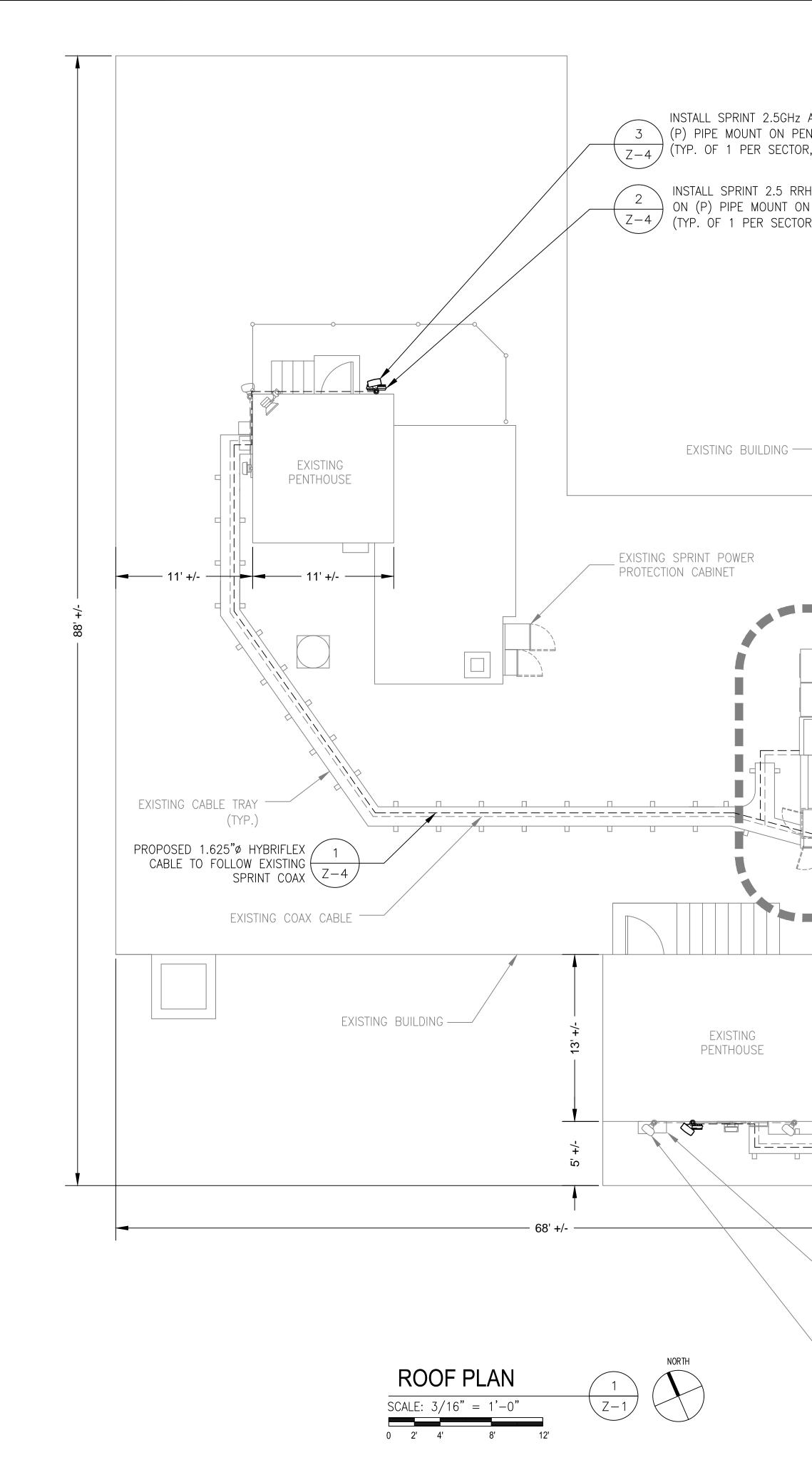
NING DISTRICT: RESIDENCE C (RC) SESSORS ID: 09200152 DPOSED USE: WIRELESS COMMUNICATIO	N FACILITY	
ENSION:	REQUIRED MINIMUM	PROVIDED
T AREA	7,000 FT	20,282 ± FT
T FRONTAGE	30 FT	115± FT
ONT YARD SETBACK*	15 FT	56± FT
DE YARD SETBACK*	27 FT	21± FT
AR YARD SETBACK*	25 FT	12± FT
ITENNA HEIGHT OF ABOVE ROOF	40 FT	10± FT
OPOSED EQUIPMENT TO NEAREST LOT LINE		



PLOT PLAN

# C-1

DRAWING NUMBER



INSTALL SPRINT 2.5GHz ANTENNA ON  $3 \setminus (P)$  PIPE MOUNT ON PENTHOUSE WALL (TYP. OF 1 PER SECTOR, TOTAL OF 3)

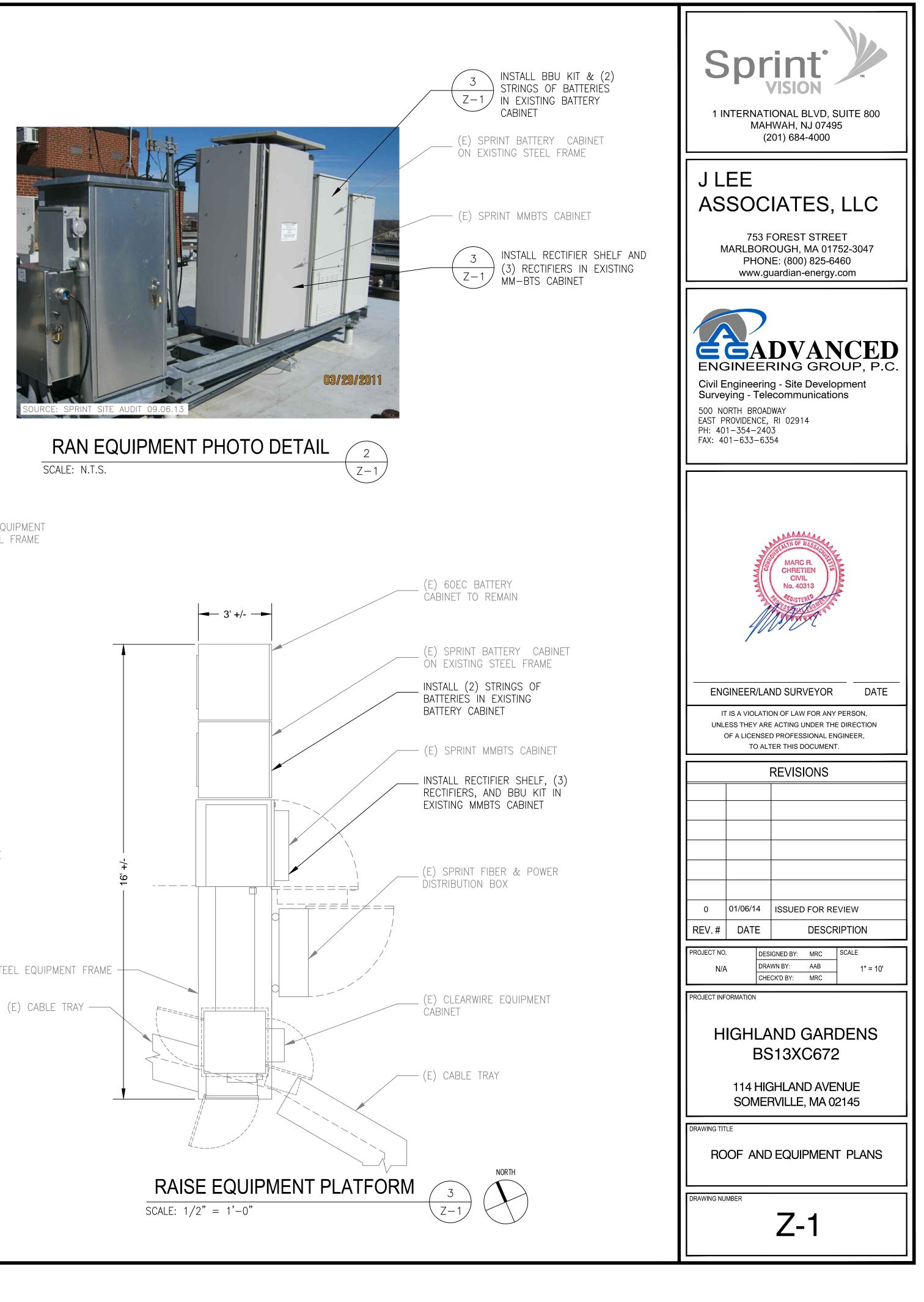
INSTALL SPRINT 2.5 RRH BELOW ANTENNA ON (P) PIPE MOUNT ON PENTHOUSE WALL Z-4 (TYP. OF 1 PER SECTOR, TOTAL OF 3)

╼╨╤╴═╶╤┙ 

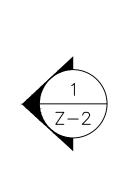
A/C UNIT

3

Z-1



EXISTING SPRINT EQUIPMENT MOUNTED TO STEEL FRAME



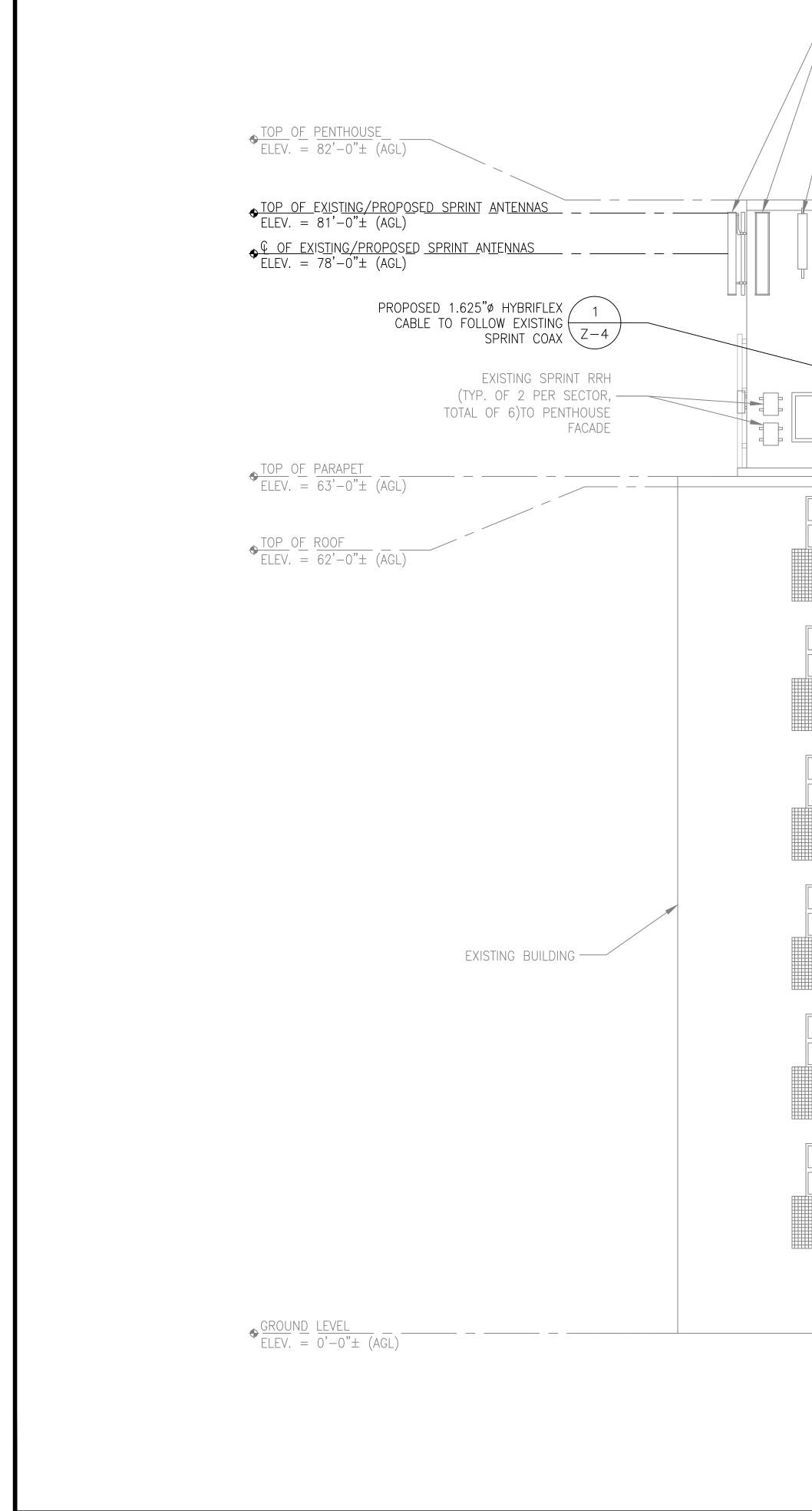
EXISTING VERTICAL CABLE TRAY

EXISTING CLEARWIRE PANEL ANTENNAS

(E) STEEL EQUIPMENT FRAME -

EXISTING SPRINT RRH (TYP. OF 2 PER SECTOR, TOTAL OF 6)TO PENTHOUSE FACADE

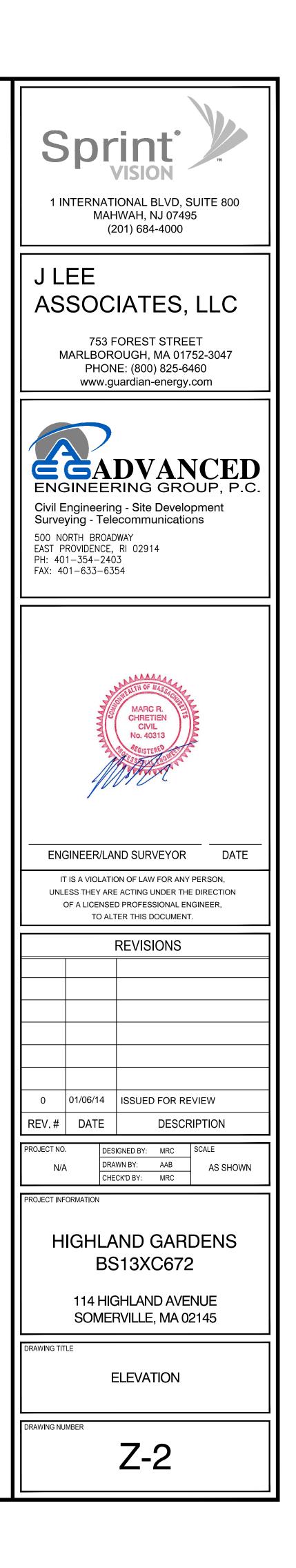
EXISTING SPRINT 1900/800MHz ANTENNAS (TYP. OF 1 PER SECTOR, TOTAL OF 3) MOUNTED TO EXISTING PENTHOUSE



	EXISTING SPRINT 1900 (TYP. OF 1 PER SEC MOUNTED TO EXISTING	TOR, TOTAL OF 3)	6				
	EXISTING CLEARWIRE PANEL ANTENNAS	$\overline{\left(\begin{array}{c} 3\\ Z-4\end{array}\right)}$	(P) PIPE MOU	T 2.5GHz ANTENNA OP NT ON PENTHOUSE WA ER SECTOR, TOTAL OF	ALL		
	EXISTING PENTHOUSE	2 Z-4	INSTALL SPRIN	NT 2.5 RRH BELOW AN MOUNT ON PENTHOUS ER SECTOR, TOTAL OF	SE WALL		_ EXISTING PENTHOUSE
A/C UNIT		EXISTING VERTIC	CAL				
		EXISTING SPRINT E MOUNTED TO STE					
	F	PARTIAL EAS	ST ELEVAT				

Z-2

SCALE: 1/8" = 1'-0"0 5' 10' 20'

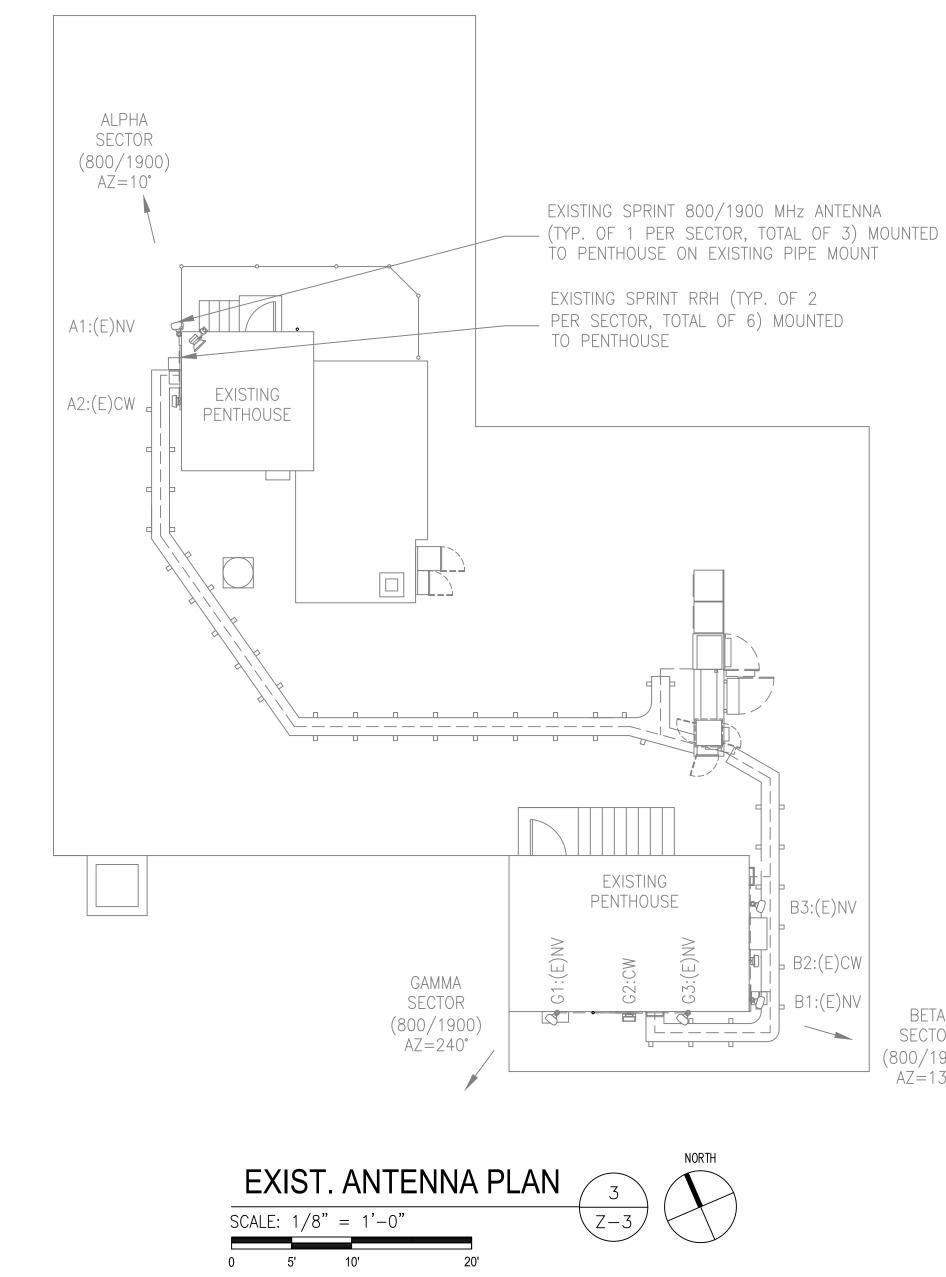






EXIST. PENTHOUSE ELEVATION PHOTO DETAIL

SCALE: N.T.S.



(E) CLEARWIRE \_\_\_\_ PÀNEL ANTENNA

(E) SPRINT (800/1900) ANTENNA TO \_\_\_\_\_ (TYP. OF 1 PER SECTOR, TOTAL OF 3)

(E) CLEARWIRE \_\_\_\_ PANEL ANTENNA

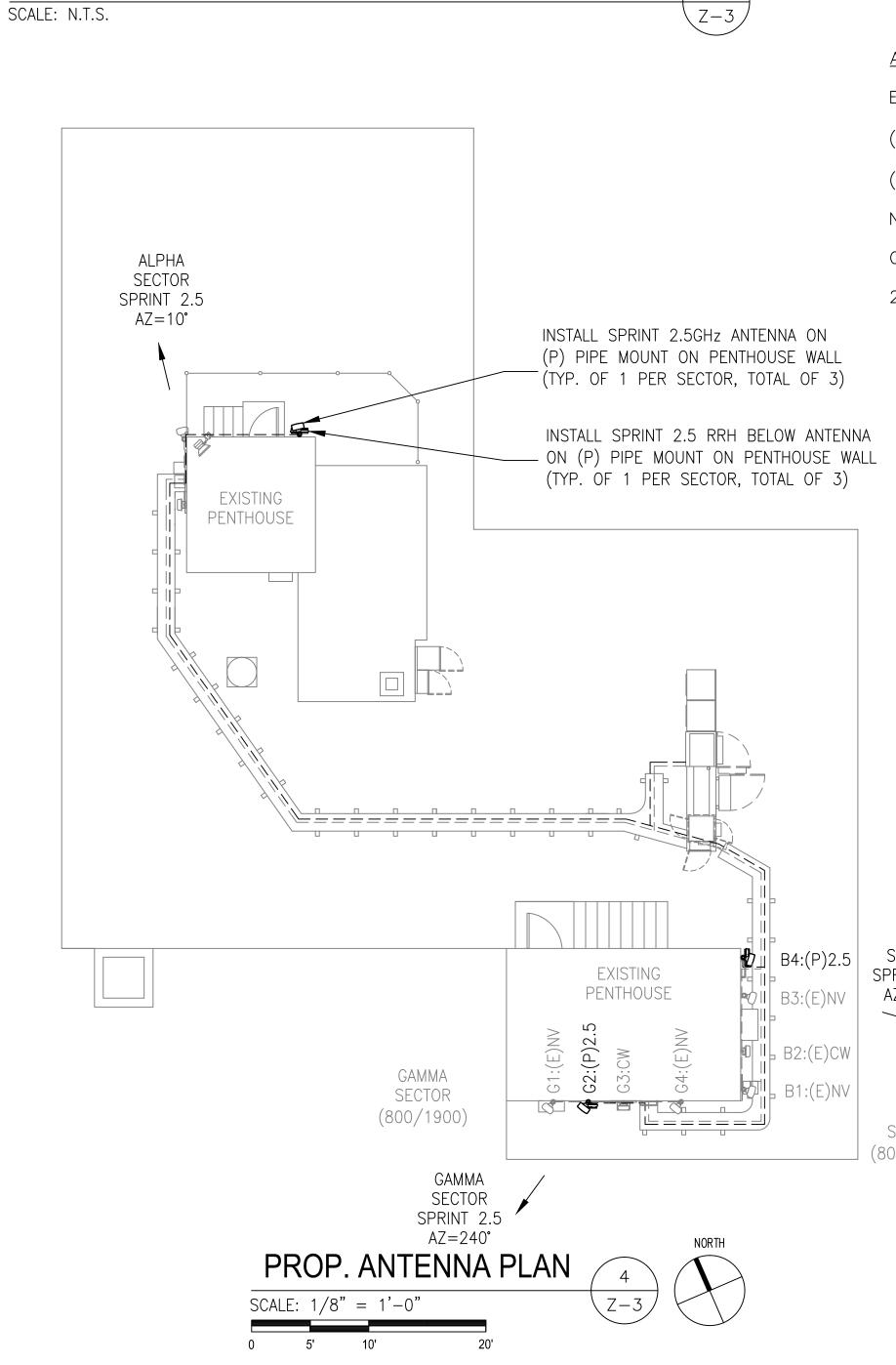
(E) SPRINT (800/1900) ANTENNA TO \_\_\_\_\_ (TYP. OF 1 PER SECTOR, TOTAL OF 3)

(E) SPRINT (800/1900) ANTENNA TO (TYP. OF 1 PER SECTOR, TOTAL OF 3)

(E) VERTICAL CABLE TRAY



## EXIST. PENTHOUSE ELEVATION PHOTO DETAIL



Z-3

B3:(E)NV •D | = B2:(E)CW B1:(E)NV 

BETA

SECTOR

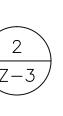
(800/1900) AZ=130°

(E) SPRINT (800/1900) ANTENNA TO (TYP. OF 1 PER SECTOR, TOTAL OF 3)

INSTALL 2.5GHz ANTENNA ON (P) PIPE MOUNT ON PENTHOUSE WALL (TÝP. OF 1 PER SECTOR, TOTAL OF 3)

INSTALL SPRINT 2.5 RRH BELOW ANTENNA - ON (P) PIPE MOUNT ON PENTHOUSE WALL (TYP. OF 1 PER SECTOR, TOTAL OF 3)

(E) VERTICAL CABLE TRAY

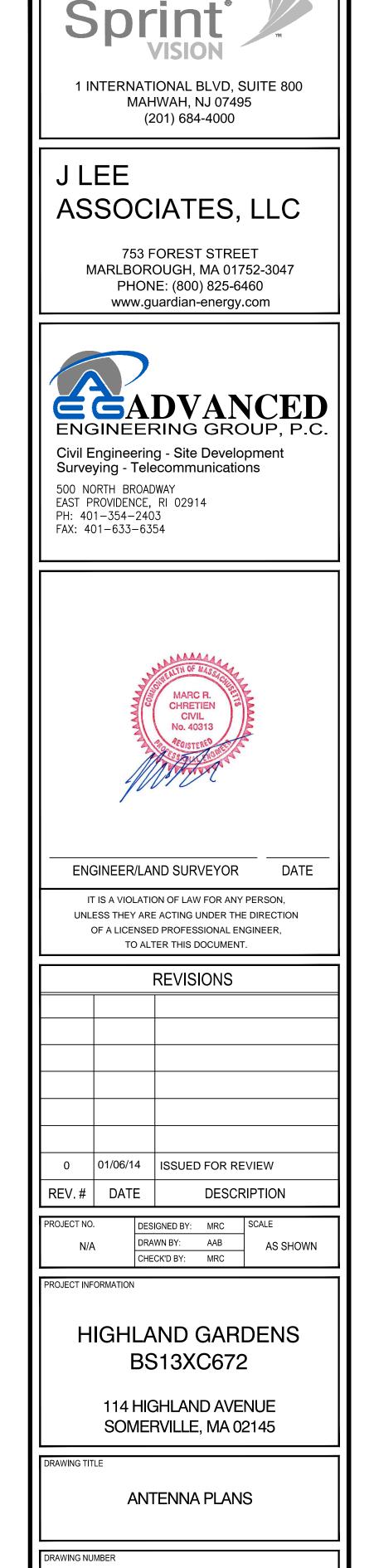


NOTE: EXISTING AZIMUTHS FROM SPRINT SITE AUDIT DATED 09/06/13

ANTENNA STATUS LEGEND:

- EMPTY EMPTY PIPE
- (E) EXISTING
- (P) INSTALL
- NV SPRINT ANTENNA
- CW CLEARWIRE ANTENNA
- 2.5 SPRINT ANTENNA

BETA SECTOR SPRINT 2.5 AZ=130°	
BETA SECTOR 800/1900)	



Z-3

	<u>HYBRID CABLE</u> MANUF: RFS	DC CONDUCTOR	R SIZE GUIDELINE	
	<u>CABLE</u> FIBER ONLY	<u>LENGTH</u> VARIES	DC CONDUCTOR C USE NV HYBRIFL	ABLE DIAMETER EX 5/8"
(*)	HYBRIFLEX	<200'	8 AWG	1-1/4"
	HYBRIFLEX	225-300'	6 AWG	1-1/4"
	HYBRIFLEX	325–375'	4 AWG	1-1/4"

Fiber Only (Existing DC Power)	Hybrid cable       RFS       HYBRIFLEX       RISER       CABLE       SCHEDULE         MN: HB058-M12-050F       12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC         Connectors, 5/8 cable, 50 ft	50 ft
ōΩ	MN: HB058-M12-075F	75 ft
lg l	MN: H B058-M12-100F	100 ft
Fi	MN: HB058-M12-125F	125 ft
EXi	MN: H B058-M12-150F	150 ft
~	MN: HB058-M12-175F	175 ft
	MN: H B058-M12-200F	200 ft
1		
AWG Power (*)	<b>Hybrid cable</b> MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
bor	MN: HB114-08U3M12-075F	75 ft
<u>ש</u> (*)	MN: HB114-08U3M12-100F	100 ft
M	MN: HB114-08U3M12-125F	125 ft
8/	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	100 ft 125 ft
	: HB114-08U3M12-175F 175 ft	
		-
6 AWG Power	<b>Hybrid cable</b> MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 11/4 cable, 225 ft	225 ft
M	MN: HB114-13U3M12-250F	250 ft
9 A	MN: HB114-13U3M12-275F	275 ft
, v	MN: HB114-13U3M12-300F	300 ft
ower	<b>Hybrid cable</b> MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC	325 ft
Ч Б/	Connectors, 1 1/4 cable, 325 ft	
AWG Power	Connectors, 1 1/4 cable, 325 ft MN: HB114-21U3M12-350F	350 ft

Ø.319[8.10] 4 AWG PVC DC WIRE QTY.: 6

> Ø1.110[28.19] OVER TAPE

> > BLACK

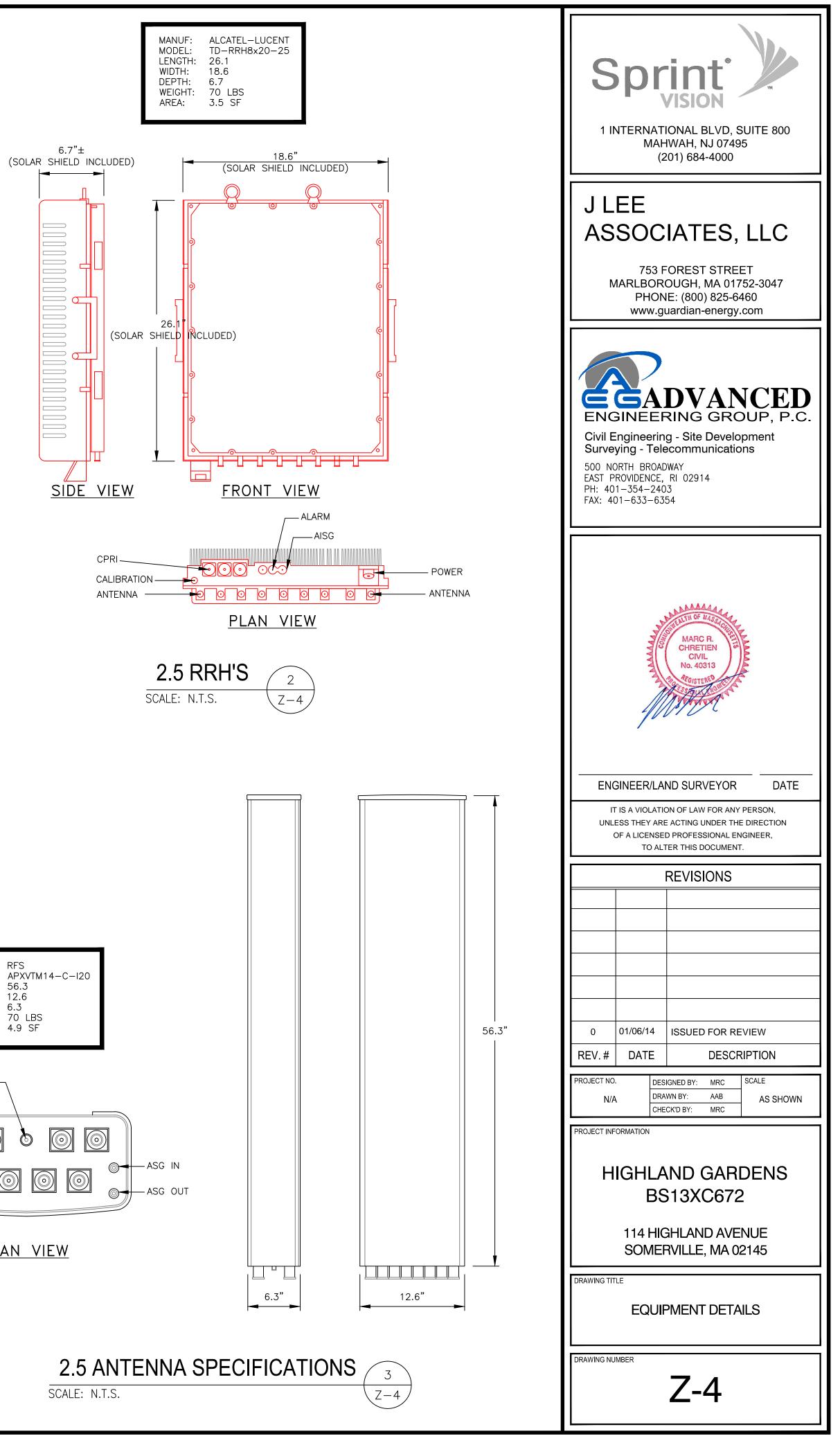
Ø1.110[28.19]\_\_\_ OVER TAPE

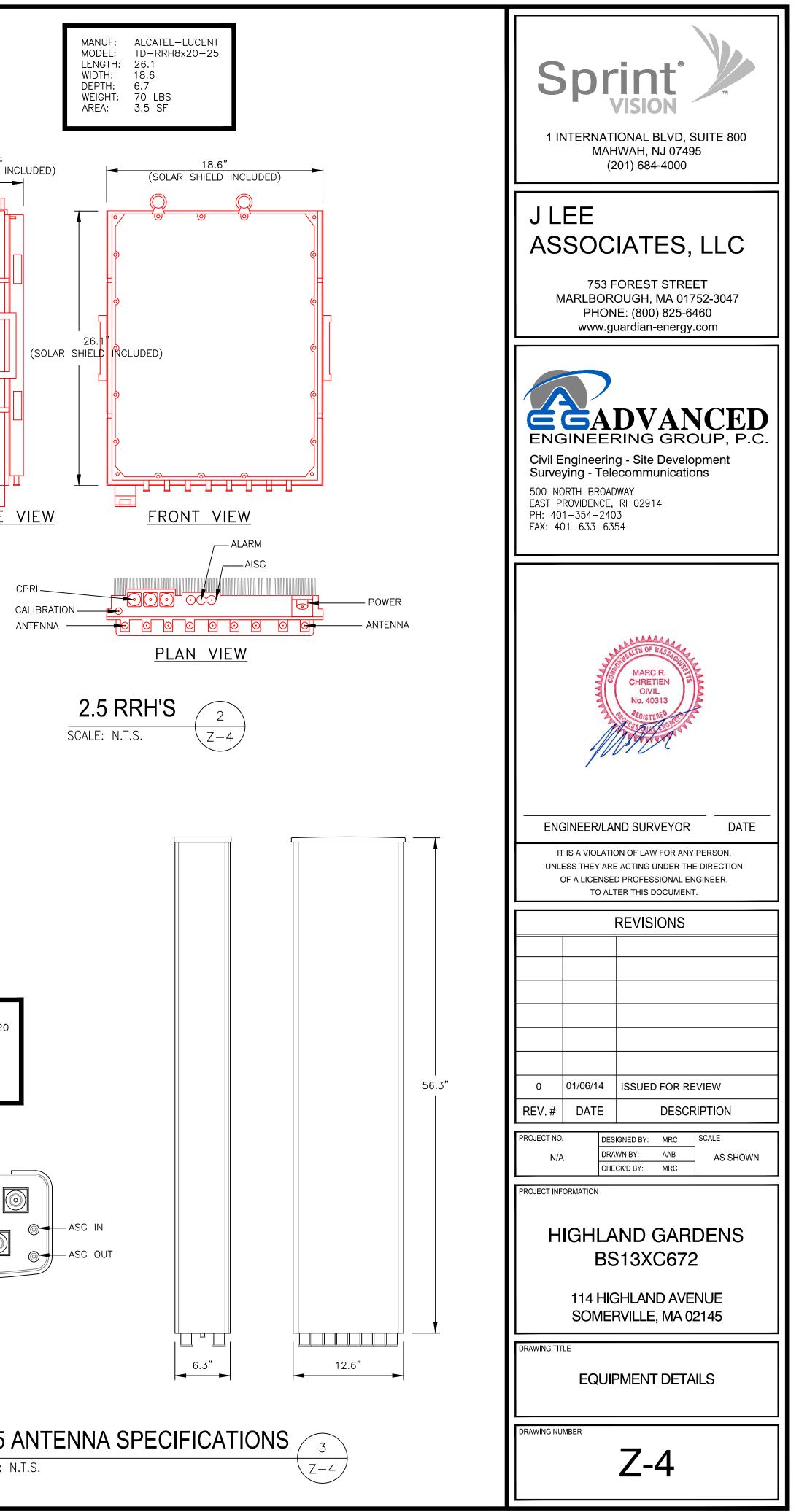
RFS HYBRIFLEX JUMPER CABLE SCHEDULE

>	Hybrid Jumper cable MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
Fiber Only	MN: HBF012-M3-10F1	10 f
er	MN: HBF012-M3-15F1 MN: HBF012-M3-15F1	10 f
Fib	MN: HBF012-M3-20F1	20 f
	MN: HBF012-M3-25F1 MN: HBF012-M3-25F1	20 f
	MN: HBF012-M3-20F1 MN: HBF012-M3-30F1	30 f
	Hybrid Jumper cable	
-	MN: HBF058-08U1M3-5F1	5 ft
ver	5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors,	511
8 AWG Power	5/8 cable	1
5	(*) MN: HBF058-08U1M3-10F1	10 f
AW	MN: HBF058-08U1M3-15F1	15 f
00	MN: HBF058-08U1M3-20F1	20 f
	MN: HBF058-08U1M3-25F1	25 f
	MN: HBF058-08U1M3-30F1	30 f
	Hybrid Jumper cable	
-	MN: HBF058-13U1M3-5F1	5 ft
× e	5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors,	51.
Pol	5/8 cable	
AWG Power	MN: HBF058-13U1M3-10F1	10 f
	MN: HBF058-13U1M3-15F1	15 f
9	MN: HBF058-13U1M3-20F1	20 f
	MN: HBF058-13U1M3-25F1	25 f
	MN: HBF058-13U1M3-30F1	30 f
	Uubrid lumper coble	
	Hybrid Jumper cable MN: HBF078-21U1M3-5F1	
5	5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors,	5 ft
M	7/8 cable	
P	MN: HBF078-21U1M3-10F1	10 f
AWG Power		
I A	MN: HBF078-21U1M3-15F1	15 f
4	MN: HBF078-21U1M3-20F1	20 f
	MN: HBF078-21U1M3-25F1	25 f
	MN: HBF078-21U1M3-30F1	30 f
	* NOTE: SPRINT CM TO CONFIRM HYBRID RISER CABLE AND HYBRID JUMPER CABLE MODEL NUMBERS BEFORE PREPARING BOM.	

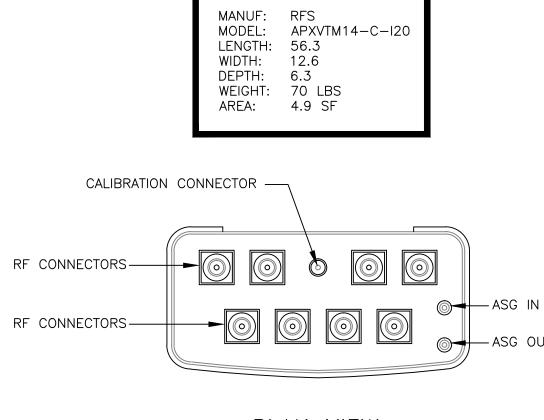
SCALE: N.T.S.

 $\langle Z-4 \rangle$ 

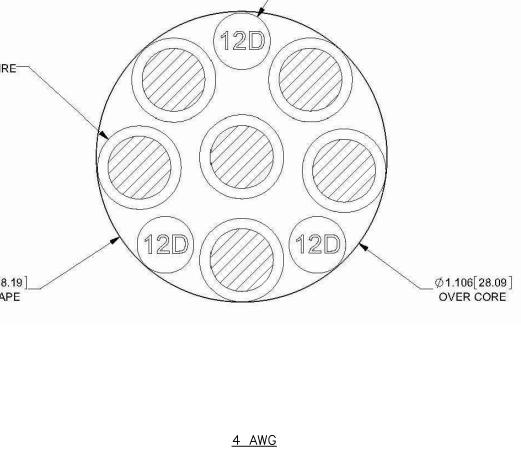




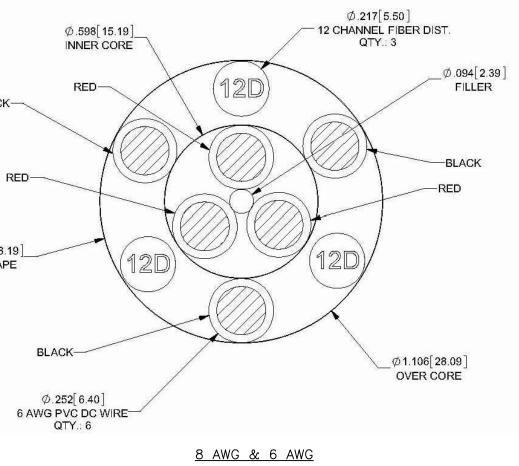


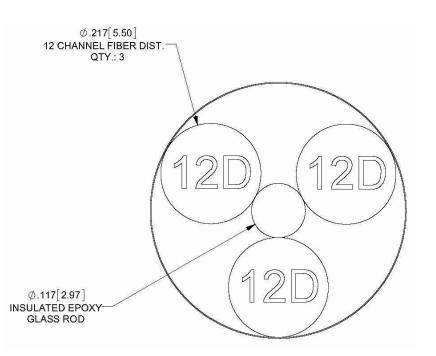


<u>PLAN VIEW</u>



Ø.217[5.50] ──12 CHANNEL FIBER DIST. QTY.: 3





FIBER ONLY

(P) 1/2"ø U-BOLT — (TOTAL OF 2)

(P) WALL MOUNT —

(E) MASONRY WALL ——

