

PUP2013-00006

Zoning

Telecommunications Tower

Three Chopt District

400

Feet



PS January 2013

Ref: 743-770-4669



COMMONWEALTH OF VIRGINIA
COUNTY OF HENRICO

John A. Vithoulkas
County Manager

May 21, 2013

Sprint
c/o Mr. Mike Ahl
2 Industrial Drive
Fairfield, NJ 07004

Re: Provisional Use Permit PUP2013-00006

Dear Mr. Ahl:

The Board of Supervisors at its meeting on May 14, 2013, granted your request for a Provisional Use Permit under Sections 24-95(a)(3), 24-120 and 24-122.1 of Chapter 24 of the County Code in order to replace an existing light pole with a 124' high monopole-style telecommunications tower and related equipment, on part of Parcel 743-770-4669, subject to the following conditions:

1. If the use of the tower for communication purposes is discontinued for 180 days, the antennas and all related structures shall be removed from the site within ninety (90) days. Within ten (10) business days after written request by the County, the owner of the antennas and equipment shall provide the County with written confirmation of the status of the facility, the number of and identity of users, available co-location space and such additional information as may be reasonably requested.
2. Application for a building permit to install the light pole replacement/telecommunication tower must be made within one year after the Provisional Use Permit is granted by the Board of Supervisors, unless an extension of time is granted by the Director of Planning upon a written request by the applicant.
3. The applicant shall obtain approval from the Planning Commission should the FAA require the addition of standard obstruction marking and lighting (i.e. red lighting and orange and white striping) to the light pole/tower. Any changes to the proposed galvanized finish of the light pole/tower shall be submitted to the Director of Planning for approval.
4. When site construction is initiated as a result of this Provisional Use Permit, the applicant shall complete requirements prescribed by Chapter 10 of the Henrico County Code. In particular, land disturbance of more than 2,500 square feet will require that construction plans include a detailed drainage and erosion control plan

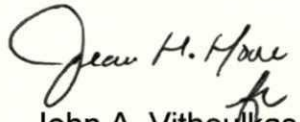
prepared by a professional engineer certified in the State of Virginia. Ten (10) sets of the construction plans shall be submitted to the Department of Public Works for approval.

5. If ownership of the lease is transferred to another provider, the new owner shall submit a Transfer of Provisional Use Permit.
6. The height of the light pole/tower and any attached equipment shall not exceed 124 feet.
7. This permit shall apply only to the 247± square foot lease area identified on Exhibit C (see case file). Ground equipment shall be located within an enclosed and secure building of the type shown on Exhibit E (see case file).
8. Low-profile "flush mounted" antennas or a similar style of equipment as approved by the Director of Planning to reduce the visual profile of equipment shall be installed on the light pole/tower.
9. The co-location of additional users, as technically feasible and in accordance with the Lease Agreement with the County School Board shall be allowed at this site.
10. Prior to the co-location of any carrier's antennas or addition of equipment lease space, a revised site plan and equipment placement details shall be submitted to the Planning Department for approval.
11. To maintain visual and sound buffering, a supplemental landscaping plan may be required by the Director of Planning. The Director of Planning may waive the enforcement of this condition if it is deemed unnecessary.
12. Any UHF, VHF or other type of receivers/transmitters that would interfere with the County's Division of Police emergency communications are prohibited from this pole/tower.
13. A UV resistant, vinyl coated polyester shade density screen or equivalent shall be submitted to the Director of Planning and Henrico County Public Schools for approval and installed and maintained around the security chain link fence. The density and color shall match existing screening and dimensions. Installation shall be in accordance with manufacturer's specifications. If the shade screen is found to be in need of maintenance or replacement, the tower owner shall repair or replace the screen within 30 days from being notified.
14. Telecommunication cables shall be prohibited on the exterior of the light pole/tower.
15. Any future owner of the communication facility shall abide by all conditions approved with this request.

Sprint
May 21, 2013
Page 3

The Planning Department has been advised of the action of the Board of Supervisors and requested to revise its records and to place a copy of this notification in the Provisional Use Permit Index.

Sincerely,


John A. Vithoulkas
County Manager

pc: Mr. Tom Sciroto
The County School Board of Henrico
Director, Real Estate Assessment
Provisional Use Permit Index

LEGEND	
PROPOSED	NEW
(E)	EXISTING
---	CENTER LINE
---	PROPERTY LINE
-X-	FENCE LINE
-G-	GROUND WIRE
-OHP-	OVERHEAD POWER
-OHT-	OVERHEAD TELCO
-P-	UNDERGROUND POWER CONDUIT
-T-	UNDERGROUND TELCO CONDUIT



NORTH

FOR 24" X 36" PLOT - 1" = 60'
FOR 11" X 17" PLOT - 1" = 120'

LEGEND

PROPOSED	NEW
(E)	EXISTING
---	CENTER LINE
---	PROPERTY LINE
-X-	FENCE LINE
-G-	GROUND WIRE
-OHP-	OVERHEAD POWER
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-P-	UNDERGROUND POWER CONDUIT
-T-	UNDERGROUND TELCO CONDUIT

TWIN HICKORY RD

EXHIBIT B

PUP2013-00006



827 Diligence Drive, Suite 100
Newport News, VA 23606
PHONE: 757-873-5887
PHONE: 757-582-8791
FAX: 757-873-5801

CONSULTANT:



CONSULTING GROUP, INC.
9221 LYNDON B JOHNSON FREEWAY
SUITE 204, DALLAS, TX 75243
PHONE: 972-231-8893
FAX: 866-364-8375
WWW.ALLPROCGI.COM

SITE NUMBER:

RI80XC001

SITE NAME:

NUCKOLS WEST

SITE ADDRESS:

4801 TWIN HICKORY RD
GLEN ALLEN, VA 23059

STAMP HERE:

NOT VALID WITHOUT
P.E. STAMP & SIGNATURE

DRAWN BY:	R. MADLOCK
APPROVED BY:	J. GEORGE
ACGI JOB #	12-3420

REVISION			
NO	DESCRIPTION	BY	DATE
A	ISSUED FOR REVIEW	RM	09/26/12
B	REDLINES	RM	10/17/12
C	REDLINES	RM	01/08/13
D	ADDED VERSAFLEX 9.0	RM	03/13/13
E	REMOVE FENCE	RM	03/14/13

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:

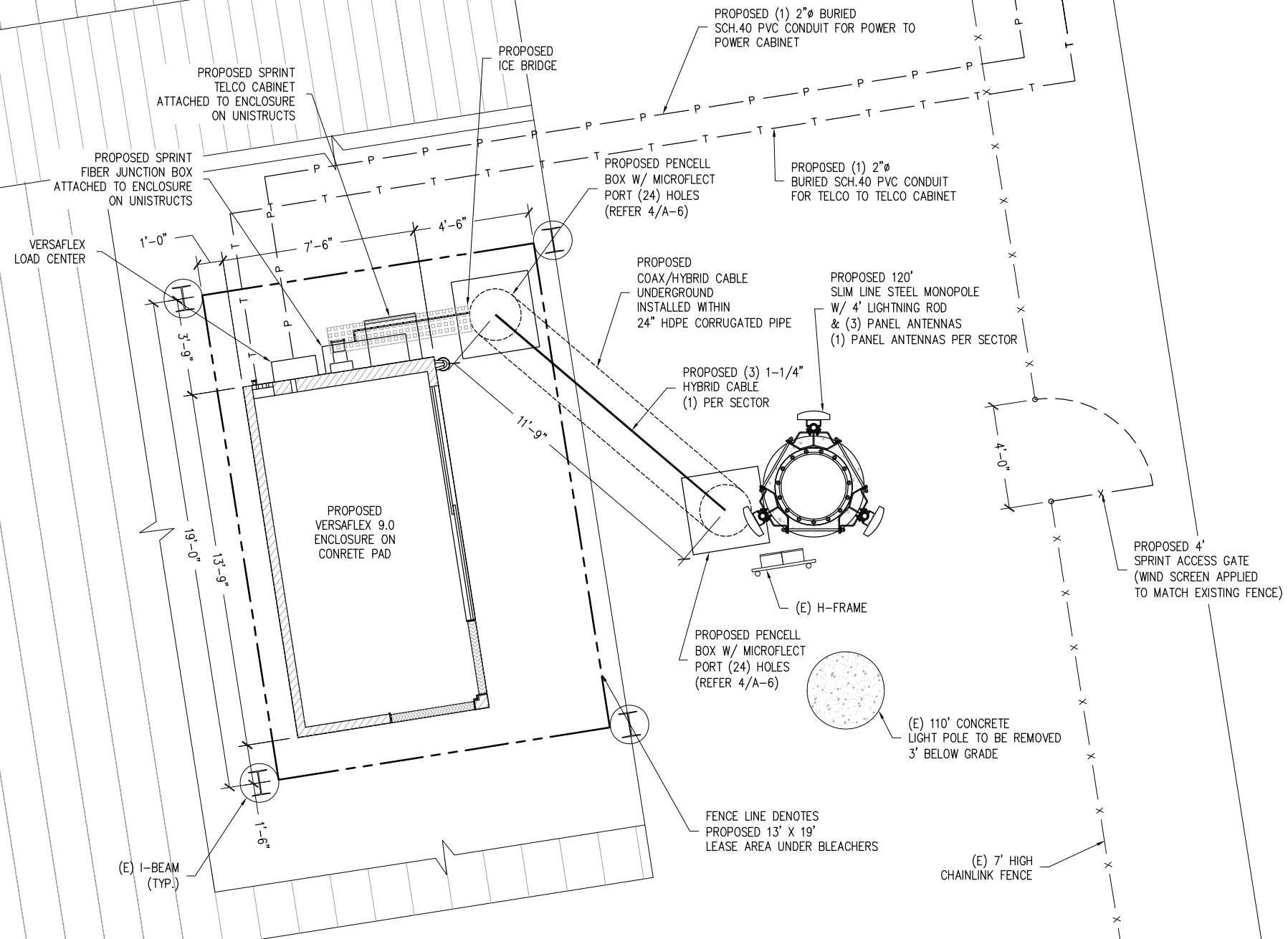
A-1

OVERALL SITE PLAN

1

LEGEND

PROPOSED	NEW
(E)	EXISTING
---	CENTER LINE
---	PROPERTY LINE
-X-	FENCE LINE
-G-	GROUND WIRE
-OHP-	OVERHEAD POWER
-OHT-	OVERHEAD TELCO
-P-	UNDERGROUND POWER CONDUIT
-T-	UNDERGROUND TELCO CONDUIT



NOTE:
POLE IS HOLLOW AND WILL REQUIRE STONE FILL FROM ITS BASE TO LIMITS OF DEMOLITION PRIOR TO COVERING.

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SHEET TITLE:
ENLARGED SITE PLAN

SHEET NUMBER:
A-2



NORTH

FOR 24" X 36" PLOT - 3/8" = 1'0" 1' 2' 4'
FOR 11" X 17" PLOT - 3/16" = 1'0" 1' 2' 4'

ENLARGED SITE PLAN

EXHIBIT C

PUP2013-00006

ANALYSIS AND DESIGN OF TOWER AND FOUNDATION BY OTHERS. NO ERECTION OR MODIFICATION OF TOWER AND FOUNDATION SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.

RAD CENTER OF PROPOSED SPRINT ANTENNAS
120'-0"± AGL

PROPOSED 4' LIGHTNING ROD

TOTAL HEIGHT
124'-0"± AGL

PROPOSED (3) PANEL ANTENNAS
(1) PANEL ANTENNAS PER SECTOR

EXISTING LIGHTS TO BE MOVED OVER TO PROPOSED POLE. TO BE CONFIGURE BY COUNTY APPROVED LIGHTING SPECIALIST

NOTES:

ANY PROPERTY OWNER POWER, CONTROL OR TELECOMMUNICATIONS WIRING IN PLACE AT THE TIME OF CONSTRUCTION WHICH MAY BE IN CONFLICT WITH THE INSTALLATION OF THE APPLICANTS SCHEDULED FOUNDATIONS, FIXTURES, ETC. WILL BE RELOCATED AT THE SOLE EXPENSE OF THE APPLICANT.

PROPOSED (3) 1-1/4" HYBRID CABLE
(1) PER SECTOR (ROUTED INSIDE)

PROPOSED 120' SLIM LINE STEEL MONOPOLE

NOTES:

PERTAINING TO RELOCATING EXISTING LIGHTING FROM EXISTING CONCRETE POLE TO STEEL MONOPOLE:
AT THE APPLICANTS SOLE EXPENSE LIGHTING WILL BE:
1. DISCONNECTED FROM ITS PRESENT POWER SOURCE.
2. LIGHTS AND BRACKETS REMOVED FROM EXISTING POLE NOTING ANY LIGHT FIXTURES NOT WORKING PRIOR TO REMOVAL.
3. STORED IN AN AREA SO AS NOT TO IMPEDE NORMAL SCHOOL ACTIVITY.
4. REINSTALLATION ON THE PROPOSED STEEL MONOPOLE, ALL WIRING TO BE CONCEALED INSIDE THE POLE AND PROPER RECONNECTION TO POWER SOURCE.
5. APPLICANT AT ITS EXPENSE TO HIRE A PROPERTY OWNER APPROVED LIGHTING CONTRACTOR TO RE-AIM THE LIGHTS TO PROVIDE EQUAL LIGHTING COVERAGE TO WHAT EXISTED PRIOR TO RELOCATION.

(E) 110' CONCRETE LIGHT POLE TO BE REMOVED 3' BELOW GRADE

NOTE:

POLE IS HOLLOW AND WILL REQUIRE STONE FILL FROM ITS BASE TO LIMITS OF DEMOLITION PRIOR TO COVERING.

(E) BLEACHERS

(E) 7' HIGH CHAINLINK FENCE

PROPOSED VERSAFLEX 9.0 ENCLOSURE ON CONCRETE PAD

FINISHED GRADE
0'-0"± AGL

1 TOWER ELEVATION
-- NOT TO SCALE

TOP VIEW

FRONT VIEW
800/1900
MULTI-MODE

WEIGHT:
57 LBS W/O MOUNTING HARDWARE
64.5 LBS INCLUDING MOUNTING HARDWARE

2 ANTENNA DETAILS
-- NOT TO SCALE

NOTCH FILTER

FRONT VIEW SIDE VIEW TOP VIEW

800 MHZ RRH
(ALU)
WEIGHT = 50.6 LBS.

FRONT VIEW SIDE VIEW TOP VIEW

1900 MHZ RRH
(ALU)
WEIGHT = 60 LBS.

NOTE:
REFER TO R.F. SYSTEM SCHEDULE FOR EXACT RRH SPECIFICATIONS AND QUANTITIES.

3 RRH EQUIPMENT DETAILS
-- NOT TO SCALE

PIPE CAP
PROPOSED 8' PIPE MOUNT
DOWNTILT KIT
NEW ANTENNA

4 PANEL ANTENNA MOUNT DETAIL
-- NOT TO SCALE

FRONT VIEW SIDE VIEW TOP VIEW

800 MHZ NOTCH FILTER
WEIGHT: 9.45 LBS.

PROPOSED SPRINT RRU
PROPOSED SPRINT MULTIPLE RRU MOUNTING BRACKET
SEE MANUFACTURER SPECIFICATIONS.

5 RRH MOUNTING DETAIL
-- NOT TO SCALE

NOTES:

1. CONTRACTOR TO FIELD VERIFY ANTENNA CABLE LENGTHS.
2. ALL MAIN CABLES WILL BE COLOR CODED AT THREE (3) LOCATIONS.
3. COLOR CODE ALL ANTENNA AND COAX WITH 2" WIDE BANDS OF COLORED TAPE WITH 1" SEPARATION BETWEEN BANDS.
4. COLOR CODE ALL TOP AND BOTTOM GROUND KITS WITH 1" WIDE BANDS OF COLORED TAPE WITH 1/2" SEPARATION BETWEEN BANDS.
5. START COLOR BANDS 2" BEYOND WEATHERPROOFING.
6. START SECTOR COLOR NEXT TO END CONNECTOR.
7. ALL MAIN CABLES WILL BE GROUNDED W/ COAXIAL CABLE GROUND KITS AT:
 - THE ANTENNA LEVEL
 - MID LEVEL IF TOWER IS OVER 200'
 - BASE OF TOWER PRIOR TO TURNING HORIZONTAL
 - TERMINATION OF COAX LINES TO JUMPERS
8. ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE CADWELDED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4FT BELOW GROUND BAR
9. PROVIDE BUSS BAR NEAR BTS FOR ATTACHMENT OF WIMAX COAX GROUND KITS

COAXIAL ANTENNA CABLE NOTES:

1. THE ANTENNA COAXIAL CABLE INSTALLER SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING SPRINT WITH 3 TYPEWRITTEN SWEEP TESTS (ANTENNA RETURN LOSS TEST). THIS TEST SHALL BE PERFORMED TO THE SPECIFICATIONS AND PARAMETERS OUTLINED BY THE SPRINT RADIO FREQUENCY (RF) ENGINEER. THIS TEST SHALL BE PERFORMED PRIOR TO FINAL ACCEPTANCE OF THE SITE/
2. THE COAXIAL ANTENNA CABLE INSTALLER SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING SPRINT WITH 3 TYPEWRITTEN TIME DOMAIN REFLECTOMETER (TDR) TESTS TO VERIFY CABLE LENGTH AND TO CHECK FOR WATER DAMAGE.
3. VAPOR WRAP WILL BE USED TO SEAL ALL CONNECTIONS.
4. ALL JUMPERS TO THE ANTENNAS FROM THE MAIN TRANSMISSION LINE WILL BE 1/2" JUMPERS AND SHALL NOT EXCEED 6'-0". MAXIMUM LENGTH FOR THE JUMPERS AT WIMAX BTS UNITS WILL BE 6'-0".
5. IF COAX IS BEING RE-USED FOR THIS INSTALLATION, PRE AND POST ANTENNA LINE SWEEPS ARE REQUIRED.
6. UPON COMPLETION, PROVIDE A HEIGHT VERIFICATION DEPICTING RAD CENTER AND TOP OF ANTENNA.

ANTENNA MOUNTING NOTES:

1. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/EIA/TIA-222; APPENDIX B FOR WIND LOADING; "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES" OR APPLICABLE LOCAL CODES.
2. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIPPED GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
3. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
4. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
5. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH DOUBLE NUTS AND SHALL BE INSTALLED SNUG TIGHT.
6. MINIMUM HORIZONTAL SPACING SHALL BE 2'-0" BETWEEN ALL ANTENNAS.

PROPOSED ALPHA
AZ = 0°
PROPOSED (3) PANEL ANTENNAS (1 PER SECTOR)
PROPOSED GAMMA
AZ = 240°
PROPOSED BETA
AZ = 120°

6 ANTENNA MOUNTING DETAIL
-- NOT TO SCALE

Sprint

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SHEET TITLE:
ELEVATION AND
ANTENNA DETAILS

SHEET NUMBER:
A-3

EXHIBIT D

PUP2013-00006

POWERWAVE

VersaFlex

VersaFlex (9 Bay)**VersaFlex™ Enclosure Solutions**

SPECIFICATIONS	
Length ft(m)	13'9" (4.19)
Width ft(m)	7'6" (2.29)
Height in(m)	8'6" (2.59)
Weight lbs(kg)	4750 (2155)
HVAC	2x5 Ton
Radio Frames	9
Minimum Lease Required	13'9"L x 7'6"W = 103.1 Sq. Ft (4.19L x 2.29W = 9.60m2)

Note: Weights and lengths are approximate measurements and will vary based on customer requirements.

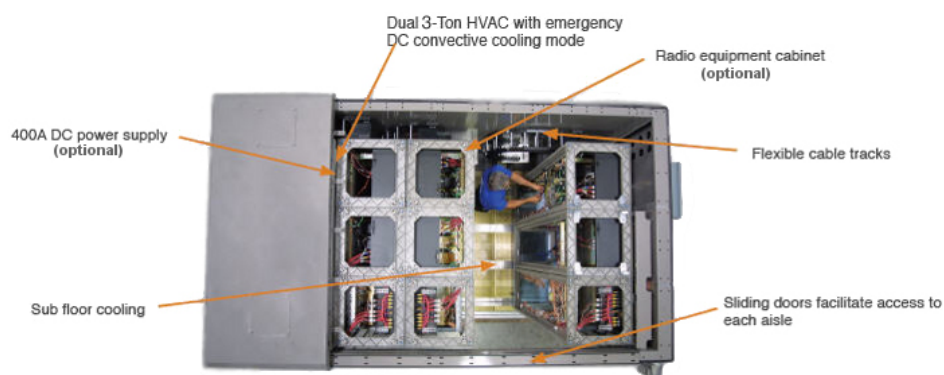
All specifications are subject to change without notice. Please contact your Powerwave representative for complete performance data.



VersaFlex (9 Bay) Enclosure

Key Features/Benefits:

- Utilizes approximately half the space of traditional Shelters.
- Standard weighs only 4,000 lbs (1814 kg) vs. the 30,000 (13608 kg) to 50,000 lbs (22680 kg) of traditional shelters.
- Internal sub-floor HVAC system that eliminates hot spots.
- Sliding door design reduces lease area requirements by eliminating door swing.
- Sliding equipment racks that reduce floor space required and utilizes a rolling cable tray



D031-08439 Rev. D 07/08 Updated: Jul 21 2010 6:12PM

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EXHIBIT E**PUP2013-00006**