Planning \$ 10.00	Drainage \$	
TCP\$	School Impact \$	

BLDG PERMIT NO.	
FILE#	

# PLANNING CLEARANCE

(site plan review, multi-family development, non-residential development)

Grand Junction Community Development Department

THIS SECTION TO BE COMPLETED BY APPLICANT			
BUILDING ADDRESS 58\$ N. CommERCIAL DR	TAX SCHEDULE NO. 2945 - 102 - 13 - 013		
SUBDIVISION WESTGATE PARK	SQ. FT. OF EXISTING BLDG(S)		
FILING BLK 2 LOT 12	SQ. FT. OF PROPOSED BLDG(S)/ADDITONS A/A		
OWNER NTCH - COLORADO INC  ADDRESS 1600 UTE AVE., SUITE \$10  CITY/STATE/ZIP GRAPAD JUNE TION, CO BISON  APPLICANT VERIZON WIRELESS  ADDRESS 3131 S. VAUCHN WAY, SUITE SSC	USE OF ALL EXISTING BLDG(S) COM / IND / TEXECOM  PDESCRIPTION OF WORK & INTENDED USE:		
CITY/STATE/ZIP AURORA, CO 80014	REPLACE EXISTING ANTENNAS		
TELEPHONE 303-229-4681 BRAD Johnson Submittal requirements are outlined in the SSID (Submittal	V SEE LETTER OF INTENT  Standards for Improvements and Development) document.		
	MUNITY DEVELOPMENT DEPARTMENT STAFF		
zone	LANDSCAPING/SCREENING REQUIRED: YESNO_X		
SETBACKS: FRONT: from Property Line (PL) or from center of ROW, whichever is greater SIDE: from PL REAR: from PL MAX. HEIGHT MAX. COVERAGE OF LOT BY STRUCTURES	PARKING REQUIREMENT: NA SPECIAL CONDITIONS: ONLY SEPLACING AN AXISTING CINTURAL NOT. NEW		
Code.	n, by the Community Development Department Director. The structure in has been completed and a Certificate of Occupancy has been issued Required improvements in the public right-of-way must be guaranteed provements must be completed or guaranteed prior to issuance of a it shall be maintained in an acceptable and healthy condition. The y condition is required by the Grand Junction Zoning and Development mped by City Engineering prior to issuing the Planning Clearance. One		
I hereby acknowledge that I have read this application and the inform	nation is correct; I agree to comply with any and all codes, ordinances, and that failure to comply shall result in legal action, which may include		
Applicant's Signature	Date 8/28/06		
Department Approval JAM Magin für	Sinta C. Date \$128/04		
Additional water and/or sewer tap fee(s) are required: YES	NO WONO. NO Sur Dr Whe Chang		
Utility Accounting	Date 8 200		
VALID FOR SIX MONTHS FROM DATE OF ISSUANCE (Sect	ion 2.2.C.1 Grand Junction Zoning and Development Code)		

(White: Planning) (Yellow: Customer) (Pink: Building Department) (Goldenrod: Utility Accounting)



Verizon Wireless 3131 S Vaughn Way, Suite 550 Aurora, CO 80014

August 26, 2006

Attn: Senta Costello
City of Grand Junction
Community Development – Planning & Zoning
250 North 5<sup>th</sup> Street
Grand Junction, CO 81505

Subject: Verizon Wireless Antenna Modification: DEN-Forsight Park Site Address: 585 N. Commercial Drive, Grand Junction, CO 80303

Dear Ms. Costello,

As discussed several weeks ago, Verizon Wireless is in need of replacing existing panel antennas and two runs of coax cables at the above referenced site in order to ensure that adequate and uninterrupted service is maintained at all times per our License Agreement with the Federal Communications Commission (FCC) along with the ability to offer the residents and visitors of Grand Junction with new wireless services.

I have enclosed a map showing the location of the existing wireless telecommunications facility as well as a set of plans depicting the existing conditions and proposed modifications to the facility. I have also provided "cut-sheets" from the antenna manufacturer (Andrew, EMS, & Amphenol Antel, Inc.) detailing the specifications for the proposed new antennas. The modification shall only include the following:

- 1) The removal of nine (9) of the ten (10) existing Verizon Wireless panel antennas currently on the tower at a height of 82 feet.
- 2) The addition of nine (9) new panel antennas maintaining the 82 foot height. The proposed antennas shall not be mounted any higher than the current antennas and this modification shall not result in a height or bulk increase to the tower. The proposed new antennas shall be similar in size as the existing antennas to be replaced.

**Antenna Replacement Schedule** 

Existing Antenna	Existing Antenna Size (H x W x D)	Proposed Replacement Antenna	Proposed Replacement Antenna Size (H x W x D)
Andrew/Decibel DB844H80E-XY	48" x6.5" x 8"	Antel LPA-185063/8CF	47.2" x 6.6" x 5.8"
EMS FR90-11-00DAL4	48" x10" x 3.5"	Antel BXA-185063/8CF	48.75" x 6" x 3.2"
		Andrew/Decibel 844G65VTZASX	48.5" x 12.5" x 8.5"



Verizon Wireless 3131 S Vaughn Way, Suite 550 Aurora, CO 80014

- 3) All associated electronic equipment for the new antennas shall be located within the existing equipment shelter and no part of this equipment will be visible from outside the shelter.
- 4) Removal and replacement of two (2) runs of coax cables size 7/8" with two (2) new runs of coax cables size 1 5/8".
- 5) No other visible or other changes are proposed at this time.

In summary, the site currently has a total of ten (10) panel antennas of which nine (9) will be removed and replaced with similar sized panel antennas. All new antennas shall be mounted at the same heights as the existing antennas. The proposed total number of antennas shall not exceed ten (10). Therefore, there will no net increase in the number of antennas currently at this site and there should be little to no visual differences between the existing and proposed designs.

Please let me know if you have any questions or concerns, or if you are in need of additional information. Please forward any correspondence/permit applications if necessary to my attention at the address provided below. Thank you for your assistance in this matter.

Sincerely,

Brad Johnson

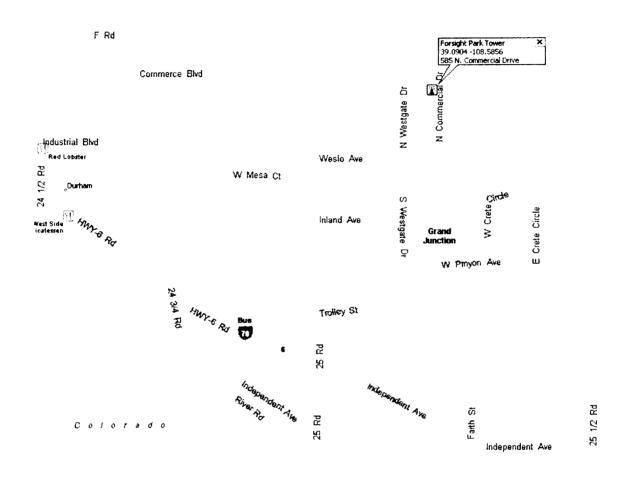
Zoning Manager / Site Acquisition Consultant for Verizon Wireless

REI Wireless Consultants 10518 W. Cooper Drive, Littleton, CO 80127 303.229.4681 phone brad w johnson@hotmail.com



Verizon Wireless 3131 S Vaughn Way, Suite 550 Aurora, CO 80014

## **VICINITY MAP**



# **NTCH - Colorado Collocation Application**

(Application fee of \$1,500 required with submittal)

NTCH - Colorado, Inc.

1600 Ute Avenue, Suite 10

Grand Junction, CO

Attention: Garry Curry

Site Information

Date: May 26,2006

(Application fee of \$1,500 required with submittal)

Main: (970) 234-1357

Fax: (970) 241-0437

garry@cleartalk.net

NTCH Site Information

Date: May 26,2006	NTCH Site ID:	NTCH Site Name: Hokenson
Latitude: 39.090444	Longitude: 108.585639	Source of Coordinates: A-1

State: Colorado

City: Grand Junction

**Tenant Information** 

AGL:

Site ID: NA	Site Name: CO3 Foresight Park
Company Name: Verizon Wireless	Company Representing: Retherford Enterprises, Inc. (if consultant)
Contact Name: Joy Retherford	Contact Address: 10763 Adams Street Northglenn, Colorado 80233
Contact Phone: 720-261-2064	
Contact Fax: 720-929-2405	Contact e-mail: Joyretherford@comcast.net

**Leasing Information** 

Contact Name: (if different)	Phone:	
Name of Company to Appear on Lease: Colorado RSA NO.3 Limited Partnership, a Delaware limited partnership, d/b/a Verizon Wireless	State Incorporated: Delaware	Tax ID #:
Signatory Name: Keith A. Surratt	Signatory Title: West A	rea Vice President- Network
Corporate Address: 180 Washington Valley Road Bedminster, New Jersey 07921 Attention: Network Real Estate	Notice Address: 180 Washington Vall Bedminster, New Jer Attention: Network Rea With Copies to:	sey 07921
Name / Phone & Address to Send Leases For Execution: (if different) Joy Retherford720-261-2064 10763 Adams Street Northglenn, CO 80233	# of Original Leases Required: Two	Special Instructions:

## **Construction Information**

Contact Name: Jerry Bell	Phone: 303-594-0007
Fax: 303-873-2684	e-mail:Jerald.bell@verizonwireless.com
Mobile: 303-594-0007	Projected Installation Date: ASAP

**Tenant Emergency Contact** 

Name:	Phone:

# **Equipment Specifications**

TECHNOLOGY TYPE: Existing cellular/ add EVDO	
	· ·
The Decibel antennas we currently have at this site operate at the 880 MHz- 890MHz and 891.5MHZ-894MHz frequency to provide cellular service. We will be retaining some of the Decibel antennas to continue to provide this service and replacing some Decibel antennas with Antel antennas to accommodate EVDO at the 1965MHz-1969.95MHz and 1965 MHz – 1969.95MHz frequency.	
ANTENNA: Replace (8) DB844H80E-XY and (1) FR90-11-00DAL4 with decibel and antel antennas	Tenant Provided Shelter / Pad:
Quantity: Replace (8) DB844H8E-XY and (1) FR90-11-00DAL4 with	Dimensions:
decibel and antel antennas	
Type (panel, omni, receive, transmit, etc.): panel	Type Shelter / Pad:
Manufacturer: Decibel and EMS Decibel and Antel	
Model: (-8) DB844H80E-XY (+4)Decibel 844G65VTZASX (+4)Antel LPA1850063/8CF Y sector (-1) FR90-11-00DAL4 (+1)Antel BXA185063/8CF	Existing Shelter Space:
Length: 48 x 6 x 8 in 48.5 x 12.5 x 8.5 in	Dimensions Needed:
47.2 x 6.4 x 5.8 in	Dimensions Needed.
Y sector 48 x 6 x 8 in 50.3 x 6.1 x 3.2 in	
Weight (-8) 10 lbs (+4) 16 lbs	
(+4) 9 lbs	
Y sector (-1) 17 lbs (+1) 10 lbs	
Mounting Height: X and Z sector 82' Y sector 125' (list for each antenna)	IF EXISTING SPACE IN OWNER'S SHELTER IS BEING USED, PLEASE PROVIDE EQUIPMENT SPECIFICATIONS:
At base of the antenna: X and Z sector 78' Y sector 121'	
At centerline of the antenna: X and Z sector 80' Y sector 123'	Transmitter:
At tip of the antenna: X and Z sector 82' Y sector 125'	Quantity:
Orientation: 349 109 229	Manufacturer:
Downtilt:	Model:
CABLE: Replace two 7/8" with 1 5/8" in the Y sector	Power Output (Watts):
Number of Lines:2	
	Transmitter Cabinet:
Type: AVA7-50	
Type: AVA7-50 Size: 1 5/8"	Quantity:
	Quantity:  Manufacturer:
Size: 1 5/8"	
Size: 1 5/8"  DISH:	Manufacturer:



# FV90-11-XXDAL4

# Vertical Polarization 806 MHz - 896 MHz

SlimGEM™ OptiFill™ Suppressor™

# **Electrical Specifications**

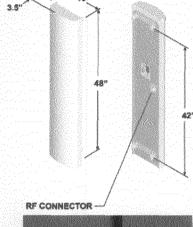
Azimuth Beamwidth Elevation Beamwidth Elevation Sidelobes (Upper)

Gain Polarization Front-to-Back Ratio Electrical Downtilt Options

VSWR
Connectors
Power Handling
Passive Intermodulation
Lightning Protection

90°
14.5°
≥ 18 dB
11.2 dBd (13.3 dBi)
Linear, Vertical
≥ 22 dB
0°, 5°
1.35:1 Max
1; Type 7-16 DIN (female)
500 Watts CW

≤ -150 dBc [2 x 20W (+ 43 dBm)] Chassis Ground

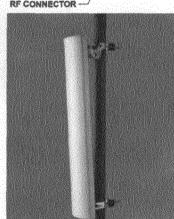


# Mechanical Specifications

Dimensions (L x W x D)

Rated Wind Velocity
Equivalent Flat Plate Area
Front Wind Load @ 100 mph (161 kph)
Side Wind Load @ 100 mph (161 kph)
Weight (Without Mounting Kit)

48 in x 10 in x 3.50 in (122 cm x 25 cm x 9 cm) 150 mph (241 km/hr) 3.33 ft<sup>2</sup> (0.3 m<sup>2</sup>) 98 lbs (435 N) 34 lbs (150 N) 14.2 lbs (6.4 kg)

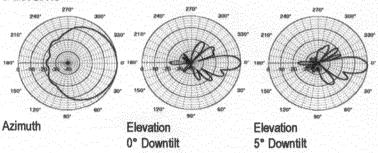


# **Mounting Options**

MTG-P00-10, MTG-S02-10, MTG-DXX-20\*, MTG-CXX-10\*, MTG-C02-10, MTG-TXX-10\*

Note: \*Model number shown represents a series of products. See Mounting Options section for specific model number.

## **Patterns**



EMS' antennas are protecte 5,844,529; 6,067,053; 6,4 5,757,246. EMS' antenna opatent applications and by p EXISTING ANTENNAS

FORESIGHT PARK

100 V 60 11 2/

Revised 04/20/04

+1 770.582.0555 ext. 5310 \* Fax +1 770.729.0036 www.emswireless.com



# DB844H80E-XY

**Directed Dipole Antenna** 

**Decibel® Base Station Antennas** 

- Excellent azimuth roll-off, 15-20% reduction in cell to cell overlap
- Superior front to back ratio
- Low profile, low wind load for easy zoning
- Outstanding field record, with thousands of units deployed, world wide

## **ELECTRICAL**

806 - 896 Frequency (MHz): 870 - 960 Polarization: Vertical Vertical Gain (dBd/dBi): 12.5/14.6 12.8/14.9 Azimuth BW (Deg.): 80 80 Elevation BW (Deg.): 15 15 Beam Tilt (Deg.): 0 0 USLS\* (dB): 15 15 Front-To-Back Ratio\* (dB): 40 40 VSWR: <1.5:1 <1.5:1 Max. Input Power (Watts): 500 500 Impedance (Ohms): 50 50 **Lightning Protection:** DC Ground DC Ground

Weight: 6.3 kg (14 lb)

1,219 x 165 x 203 mm Dimensions (LxWxD):

> $(48 \times 6.5 \times 8 \text{ in})$ 0.10 m² (1.1 ft²)

Max. Wind Load (@ 100 mph):

262.4 N (59 lbf)

Max. Wind Speed:

241 km/h (150 mph)

Hardware Material:

Galvanized Steel

**Connector Type:** 

Max. Wind Area:

7-16 DIN - Female

(1, Back)

Standard Mounting Hardware:

**Light Gray** 

Color:

**DB380** 

**Standard Downtilt** 

Mounting Hardware:

DB5083

FORESITE PARK

# 200-1990 MHz

# **Mechanical specifications**

	Length	1238	mm	48.75	in
	Width	154	mm	6.06	in
	Depth	80	mm	3.15	in
4)	Weight	4.5	kg	10.0	lbs
	Wind Area				
	Front	0.191	m²	2.05	ft <sup>2</sup>

0.099 m<sup>2</sup> Rated Wind Velocity (Safety factor 2.0)

> >322 km/hr >200 mph

1.07 ft<sup>2</sup>

Wind load @ 100 mph (161 km/hr)

Front 288 N 65 lbs Side 170 N 38 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

#### Mounting & Downtilting:

Side

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket kit #26799999

The downtilt bracket kit includes the mounting bracket kit.

# Electrical specifications

Frequency Range	1850-1990 MHz
Impedance	50Ω
3) Connector	NE, E-DIN
1) VSWR	≤1.4:1
Polarization	Slant ± 45°
1) Isolation Between Ports	< -30 dB
1) Gain	18.5 dBi
2) Power Rating	250 W
1) Half Power Angle	
H-Plane	63°
E-Plane	7°
1) Electrical Downtilt	0°
1) Null Fill	5%

Patented Dipole Design: U.S. Patent No. 6,597,324 B2

**Direct Ground** 

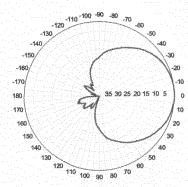
Lightning Protection

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

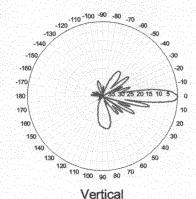
# BXA-185063/8CF

When ordering, replace "\_\_\_" with connector type.

## Radiation-pattern<sup>1)</sup>

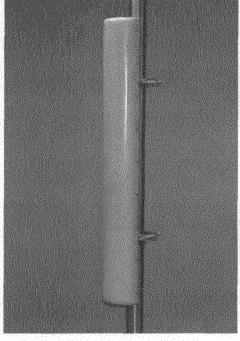


Horizontal



Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.





Amphenol Antel's **Exclusive 3T (True Transmission Line** Technology) Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Every Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

1850-1990 MHz



<sup>1)</sup> Typical Values

<sup>&</sup>lt;sup>2)</sup> Power Rating limited by connector only. <sup>3)</sup> NE indicates an elongated N Connector. E-DIN indicates an elongated DIN Connector.

<sup>\*)</sup> The antenna weight listed above does not include the bracket weight

## Mechanical specifications

	Length	1200	mm	47.2	in
	Width	167	mm	6.6	in
	Depth	148	mm	5.8	in
)	Weight	4.1	kg	9.0	lbs
	Wind Area				

2.15 ft<sup>2</sup>  $0.200 \text{ m}^2$ Front Side 0.178 m<sup>2</sup> 1.91 ft<sup>2</sup>

Rated Wind Velocity (Safety factor 2.0)

>548 km/hr >341 mph

Wind load @ 100 mph (161 km/hr)

Front 299 N 67.2 lbs Side 267 N 60.0 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

#### Mounting & Downtilting:

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket kit #26799999

The downtilt bracket kit includes the mounting bracket kit.

# **Electrical specifications**

Frequency Range	1850-1990 MHz
Impedance	50Ω
3) Connector	NE, E-DIN
1) VSWR	≤1.4;1
Polarization	Vertical
1) Gain	18 dBi
2) Power Rating	250 W
1) Half Power Angle	
H-Plane	63°
E-Plane	8°
1) Electrical Downtilt	0°
<sup>1)</sup> Null Fill	10-20%

Lightning Protection

<sup>3)</sup>NE indicates an elongated N Connector

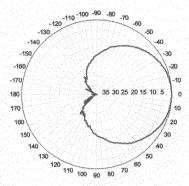
E-DIN indicates an elongated DIN Connector. \*)The antenna weight listed above does not include the bracket weight.

#### Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

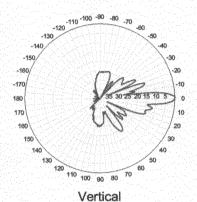
# LPA-185063/8CF

When ordering, replace "\_\_\_" with connector type.

## Radiation-pattern<sup>1)</sup>

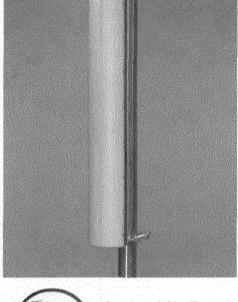


Horizontal



Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.





Amphenol Antel's **Exclusive 3T (True Transmission Line** Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Every Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

1850-1990 MHz



**Direct Ground** 

<sup>&</sup>lt;sup>1)</sup>Typical Values <sup>2)</sup>Power Rating limited by connector only.



# 844G65VTZASX

Directed Dipole. No Screen Antenna

DECIBEL®
Base Station Antennas

- Field adjustable electrical downtilt, featuring linear phase shifter, no wheels or gears
- Excellent azimuth pattern shaping, 15-20% reduction in cell-to-cell overlap
- Outstanding first upper side lobe suppression
- Air dielectric feed system, no screws, rivets, welds or solder in RF element feed path

## ELECTRICAL

Frequency (MHz):	806 - 896	897 - 940
Polarization:	Vertical	Vertical
Gain (dBd/dBi):	13/15.1	13/15.1
Azimuth BW (Deg.):	65	65
Elevation BW (Deg.):	16	16
Beam Tilt (Deg.):	0-16	0-16
USLS* (dB):	>15	>15
Front-To-Back Ratio* (dB):	40	40
VSWR:	<1.4:1	<1.5:1
PIM3 @ 2 x 20w (dBc):	-150	-150
Max. Input Power (Watts):	500	500
Impedance (Ohms):	50	50
Lightning Protection:	DC Ground	DC Ground

## MECHANICAL

38		ig												NAME:	-					an.	**	
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. **		. 23	* * *											*	+ stee	. 7	١.	1		~	54	7/

Dimensions (LxWxD): 1,232 x 318 x 216 mm (48.5 x 12.5 x 8.5 in)

Max. Wind Area: 0.13 m² (1.4 ft²)

Max. Wind Load (@ 100 mph): 631.6 N (142 lbf)

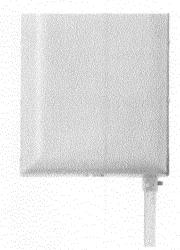
Max. Wind Speed: 241 km/h (150 mph)

Hardware Material : Galvanized Steel
Connector Type : 7-16 DIN - Female

Color: (1, Back)
Light Gray
Standard Mounting Hardware: DP380

Standard Mounting Hardware : DB380 Standard Downtilt

Mounting Hardware : DB5083



Andrew Corporation 2601 Telecom Parkway Richardson, Texas U.S.A 75082-3521 Tel: 214.631.0310 Fax: 214.631.4706 Toll Free Tel: 1.800.676.5342 Fax: 1.800.229.4706

www.andrew.com

5/4/2005 dbtech@andrew.com

\* - Indicates Typical

