

Record Format for Middle-Mile and Internet Backhaul Connection Points

Field Name	Description	Data Type	Field Length	Example
Provider Identification Data				
ProvName	Provider Name	Text	200	ABC Co.
DBAName	“Doing-business-as” name	Text	200	Superfone, Inc.
FRN	Provider FCC Registration Number	Text	10	0008402202
Ownership	Is the facility owned (0) or leased (1)?	Short Integer	2	0
Broadband Technology Information				
BHCapacity	Upstream capacity of the serving facility <i>(see MiddleMile BH Capacity)</i>	Short Integer	2	6
BHType	Type of upstream transport facility <i>(see Backhaul Type table)</i>	Short Integer	2	3
Location Information				
Latitude	Latitude of the Middle Mile Connection Point. Give at least 5 decimal points to ensure accuracy <i>(value must be within 32.5 to 42)</i>	Double		37.75001
Longitude	Longitude of the Middle Mile Connection Point. Give at least 5 decimal points to ensure accuracy <i>(value must be within -114.13 to -124.40)</i>	Double		-122.68001
ElevFeet	Elevation relative to grade to the nearest foot (positive integers indicate above grade, negative below grade).	Short Integer		-10
StateAbbr	State Abbreviation	Text	2	CA
FullFIPSID	Current block identifier; a concatenation of Census 2010 state Federal Information Processing Standards (FIPS) code, Census 2010 county FIPS code, Census 2010 census tract code, and Census 2010 tabulation block number.	Text	16	060750160001015
Middle-Mile Questions				
ServLoc	Service/Locations : Is your ability to provide faster service or service to more locations currently limited by middle-mile transport capacity? Yes (1) No (0)	Text	1	1
Augment	Augmentation : Do you anticipate the need to augment middle-mile transport capacity in the next 12 months at this location? Yes (1) No (0)	Text	1	0

Field Name	Description	Data Type	Field Length	Example
Sufficient	<p>If you anticipate the need for augmentation, is sufficient middle-mile transport capacity available for augmentation at this location? Yes (1) No (0)</p> <p>If you don't need to augment leave question blank.</p>	Text	1	0

Middle Mile BH Capacity Codes
(Use in BHCcapacity field)

Code	Interconnection Data Rate
1	Multiple T1s and less than 40 mbps
2	Greater than 40 mbps and less than 150 mbps
3	Greater than 150 mpbs and less than 600 mbps
4	Greater than or equal to 600 mbps and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps
6	Greater than or equal to 10 gbps

Backhaul Type Codes
(Use in BHType field)

Code	Name
1	Fiber
2	Copper
3	Hybrid fiber Coax (HFC)
4	Wireless

**Record Format for Availability Area Data for each Provider – Use Only in
Connection with Wireless Services not Provided to a Specific Address**

Field Name	Description	Date Type	Field Length	Example
Provider Identification Data				
ProvName	Provider Name	Text	200	ABC Co.
DBAName	“Doing-business-as” name	Text	200	Superfone, Inc.
FRN	Provider FCC Registration Number <i>(ONLY numbers no other characters)</i>	Text	10	0008402202
Broadband Technology and Speed Data				
TransTech	Category of technology for the provision of service (see Technology of Transmission table)	Short Integer	2	10
Spectrum	Spectrum used to provide service (see Spectrum Used table)	Short Integer	2	1
MaxAdDown	Speed tier code for the maximum advertised downstream speed available (see Download Speed Tier table) <i>Note: Value must be equal or greater than MaxAdvUp speed</i>	Text	2	3
MaxAdUp	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available (see Upload Speed Tier table) <i>Note: Value must be equal or less than MaxAdvDown speed</i>	Text	2	2

Field Name	Description	Date Type	Field Length	Example
TypicDown	Speed tier code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Download Speed Tier table) <i>Note: Value must be equal or greater than TypicUp speed</i>	Text	2	7
TypicUp	Speed tier code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Upload Speed Tier table) <i>Note: Value must be equal or less than TypicDown speed</i>	Text	2	6
StateAbbr	State Abbreviation	Text	2	CA

Technology of Transmission Codes
(Use in TransTech field)

Code	Description
10	Asymmetric xDSL
20	Symmetric xDSL
30	Other Copper Wireline
40	Cable Modem – DOCSIS 3.0
41	Cable Modem – Other
50	Optical Carrier/Fiber to the End User
60	Satellite
70	Terrestrial Fixed Wireless - Unlicensed
71	Terrestrial Fixed Wireless - Licensed
80	Terrestrial Mobile Wireless
90	Electric Power Line
0	All Other

Spectrum Used Codes
(Use in Spectrum field)

Code	Description
1	is Cellular spectrum (824-849 MHz; 862-869) used to provide service
2	is 700 MHz spectrum (698-758 MHz; 775-788 MHz; 805-806 MHz) used to provide service
3	is Broadband Personal Communications Services spectrum (1850-1915 MHz; 1930-1995) used to provide service
4	is Advanced Wireless Services spectrum (1710-1755 MHz; 2100-2155) used to provide service
5	is Broadband Radio Service/Educational Broadband Service spectrum (2496-2690 MHz) used to provide service
6	is Unlicensed (including broadcast television “white spaces”) spectrum used to provide service
7	Specialized Mobile Radio Service (SMR) (817-824 MHz; 862-869 MHz; 896-901 MHz; 935-940 MHz)
8	Wireless Communications Service (WCS) spectrum (2305-2320 MHz; 2345-2360 MHz), 3650-3700 MHz
9	Satellite (L-band, Big LEO, Little LEO, 2 GHz)

Download Speed Tier Codes
(Use in MaxAdvDown, TypicDown fields)

Code	Description
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 50 mbps
9	Greater than or equal to 50 mbps and less than 100 mbps
10	Greater than or equal to 100 mbps and less than 1 gbps
11	Greater than or equal to 1 gbps

Upload Speed Tier Codes
(Use in MaxAdvUp, TypicUp fields)

Code	Description
2	Greater than 200 kbps and less than 768 kbps
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 50 mbps
9	Greater than or equal to 50 mbps and less than 100 mbps
10	Greater than or equal to 100 mbps and less than 1 gbps
11	Greater than or equal to 1 gbps

Record Format for Wireless Antenna Locations

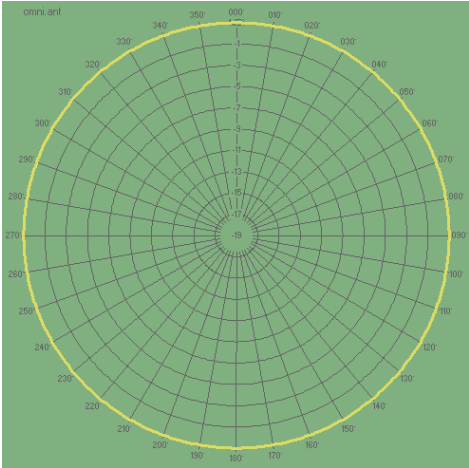
Field	Description	Data Type	Field Length	Example
Provider Identification Data				
ProvName	Provider Name	Text	200	ABC Co.
DBAName	“Doing-business-as” name	Text	200	Superfone, Inc.
FRN	Provider FCC Registration Number <i>(ONLY numbers no other characters)</i>	Text	10	0008402202
Antenna Location Data	Must be completed for each individual physical tower/ antenna.			
Latitude	Latitude of the transmitter. Give at least 5 decimal points to ensure accuracy <i>(value must be within 32.5 to 42)</i>	Double		37.750
Longitude	Longitude of the transmitter. Give at least 5 decimal points to ensure accuracy <i>(value must be within -114.13 to -124.40)</i>	Double		-122.680
EquipElev	The towers transmitter elevation above ground in meters.	Double		2000
Frequency	The transmitter’s frequency range in MHz for example 2400 - 2600. If only one value is given that value will be used as the minimum and maximum frequency.	Text	20	2400 - 2600
Output	The transmitter’s power in Watts or DBM, specify which one is used	Text	13	5-300
Threshold	uV (microvolts) <i>“A receiver threshold is the minimum value or set of values that must be exceeded before a receiver is allowed to use or access a wireless network. In this case it is the minimum microvolts that a receiver must receive before it can connect to the wireless network.”</i>	Double		1500
Gain	Give the transmitter’s gain in dBi	Double		40 / 45

Field	Description	Data Type	Field Length	Example
Direction	Give the azimuth range that the transmitter covers. Using 0/360 degrees as true north give a minimum and a maximum degree that the transmitter broadcasts to in order to create a range. If the transmitter covers 360 degrees put 0 - 360. If the transmitter does not cover 360 degrees make it clear as to what it does cover for example 90 – 180 degrees. A single value or a direction (north, south, east, or west) is not a valid range and will not be propagated.	Text	50	30 – 60 and 90-120
Angle	The angle the transmitter is pointing. 90 degrees is straight up, 0 degrees is horizontal and negative 90 degrees is straight down. Angle does not apply to “omni” antenna types.	Text	10	90
EquipType	Equipment type – make and model number of transmitting equipment.	Text	50	GT-5527 Digital MMDS Broadband transmitter
EquipStat	Equipment Status – licensed or unlicensed.	Text	50	Licensed
ReceivElev	Average receiving equipment elevation in feet from ground.	Double		2000
AntType	Antenna/transmitter pattern - (omni, cardio, corner, dipole, ellipse, yagi) (see Wireless Propagation Antenna Patterns)	Text	50	Yagi
TransTech	Category of technology for the provision of service (see Technology of Transmission table)	Short Integer	2	10
Spectrum	Spectrum used to provide service (see Spectrum Used table)	Short Integer	2	1
MaxAdvDown	Speed tier code for the maximum advertised downstream speed available (see Download Speed Tier table)	Text	2	3
MaxAdvUp	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available	Text	2	1

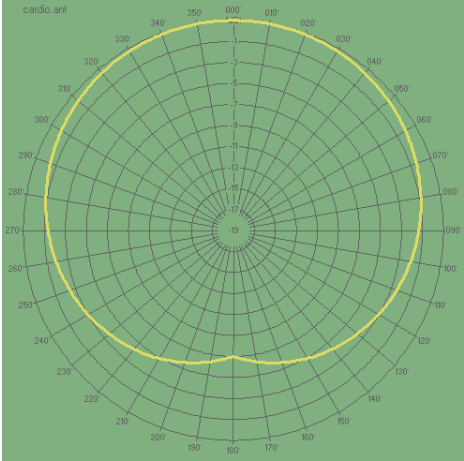
Field	Description	Data Type	Field Length	Example
	(see Upload Speed Tier table)			
TypicDown	Speed tier code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed (above) can achieve consistently during expected periods of heavy network usage (see Download Speed Tier table)	Text	2	7
TypicUp	Speed tier code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed (above) can achieve consistently during expected periods of heavy network usage (see Upload Speed Tier table)	Text	2	2
StateAbbr	State Abbreviation	Text	2	CA

Wireless Propagation Antenna Patterns

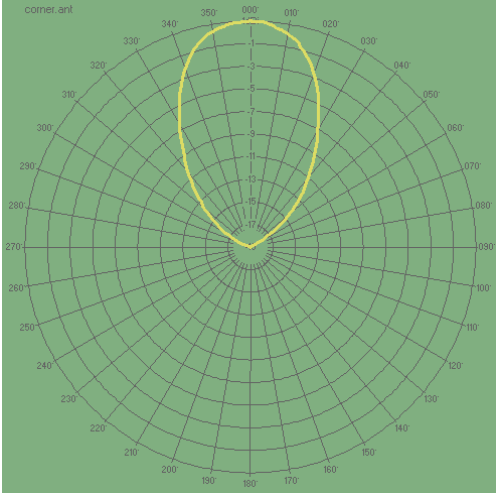
Omni



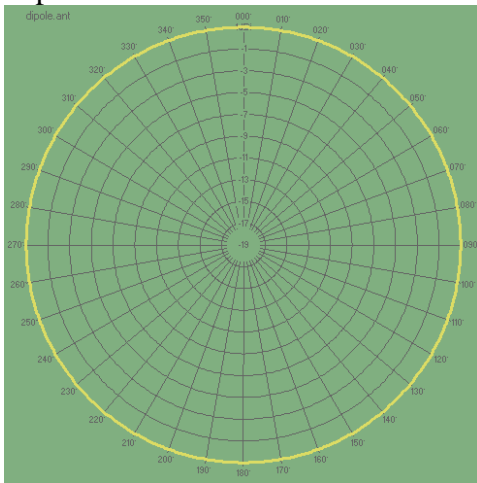
Cardio



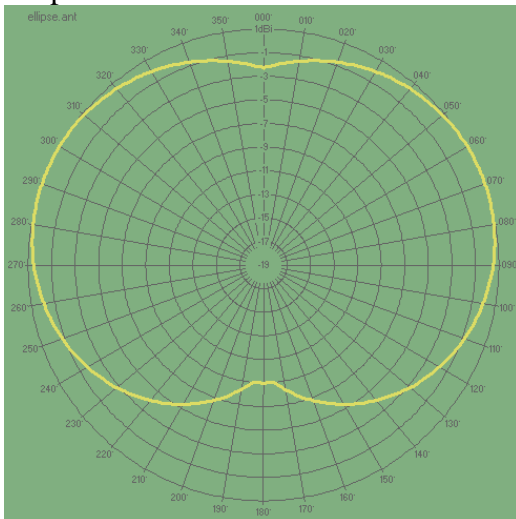
Corner



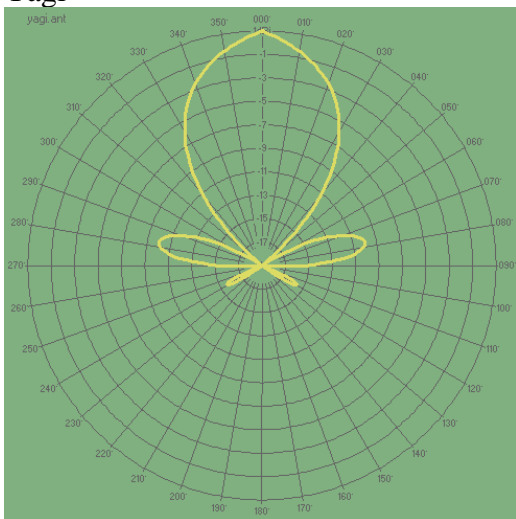
Dipole



Ellipse



Yagi



Technology of Transmission Codes
(Use in TransTech field)

Code	Description
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40	Cable Modem – DOCSIS 3.0
41	Cable Modem – Other
50	Optical Carrier/Fiber to the End User
60	Satellite
70	Terrestrial Fixed Wireless - Unlicensed
71	Terrestrial Fixed Wireless - Licensed
80	Terrestrial Mobile Wireless
90	Electric Power Line
0	All Other

Download Speed Tier Codes
(Use in MaxAdvDown, TypicDown fields)

Code	Description
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 50 mbps
9	Greater than or equal to 50 mbps and less than 100 mbps
10	Greater than or equal to 100 mbps and less than 1 gbps
11	Greater than or equal to 1 gbps

Upload Speed Tier Codes
(Use in MaxAdvUp, TypicUp fields)

Code	Description
2	Greater than 200 kbps and less than 768 kbps
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 50 mbps
9	Greater than or equal to 50 mbps and less than 100 mbps
10	Greater than or equal to 100 mbps and less than 1 gbps
11	Greater than or equal to 1 gbps

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(Use in Spectrum field)

Code	Description
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8	Wireless Communications Service (WCS) spectrum (2305-2320 MHz; 2345-2360 MHz), 3650-3700 MHz
9	Satellite (L-band, Big LEO, Little LEO, 2 GHz)

Record Format for Service Overview by County

Field Name	Description	Data Type	Field Length	Example
Provider Identification Data				
ProvName	Provider Name	Text	200	ABC Co.
DBAName	“Doing-business-as” name	Text	200	Superfone, Inc.
FRN	Provider FCC Registration Number <i>(ONLY numbers no other characters)</i>	Text	10	0008402202
County Identification Data				
GeogUnitType	Geographic Unit Type <i>(please use CO which means County)</i>	Text	4	CO
StateCountyFIPS	5-digit Federal Information Processing Standard (FIPS) Code identifying individual States and individual Counties combined. Must include leading “0” if applicable. (see State County FIPS table)	Text	5	06073
Broadband Technology and Speed Data				
TransTech	Category of technology available for the provision of service at the address (See Technology of Transmission table)	Short Integer	2	10
MaxAdDown	Speed tier code for the maximum advertised downstream speed available (See Download Speed Tier table) <i>Note: Value must be equal or greater than MaxAdvUp speed</i>	Text	2	3
MaxAdvUp	Speed tier code for the maximum advertised upstream speed that is offered with the above maximum advertised downstream speed available	Text	2	2

Field Name	Description	Data Type	Field Length	Example
	<p>(See Upload Speed Tier table)</p> <p><i>Note: Value must be equal or less than MaxAdvDown speed</i></p>			
ARPU	Average Revenue Per User Speed Offering	Double	8	500
SWNomSpeed	Subscriber-weighted nominal speed (blended average rate in kbps) refer to formula below	Double	8	2753.3
StateAbbr	State Abbreviation	Text	2	CA

Technology of Transmission Codes
(Use in TransTech field)

Code	Description
10	Asymmetric xDSL
20	Symmetric xDSL
30	Other Copper Wireline
40	Cable Modem – DOCSIS 3.0
41	Cable Modem – Other
50	Optical Carrier/Fiber to the End User
60	Satellite
70	Terrestrial Fixed Wireless - Unlicensed
71	Terrestrial Fixed Wireless - Licensed
80	Terrestrial Mobile Wireless
90	Electric Power Line
0	All Other

Download Speed Tier Codes
(Use in MaxAdvDown field)

3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 50 mbps
9	Greater than or equal to 50 mbps and less than 100 mbps
10	Greater than or equal to 100 mbps and less than 1 gbps
11	Greater than or equal to 1 gbps

Upload Speed Tier Codes
(Use in MaxAdvUp field)

2	Greater than 200 kbps and less than 768 kbps
3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	Greater than or equal to 3 mbps and less than 6 mbps
6	Greater than or equal to 6 mbps and less than 10 mbps
7	Greater than or equal to 10 mbps and less than 25 mbps
8	Greater than or equal to 25 mbps and less than 50 mbps
9	Greater than or equal to 50 mbps and less than 100 mbps
10	Greater than or equal to 100 mbps and less than 1 gbps
11	Greater than or equal to 1 gbps

Subscriber-Weighted Nominal Speed Formula
(used in SWNomSpeed field)

Here is information from the [NOFA](#) (page 52/63) on calculating Subscriber Weighted Nominal Speed.

7. A provider's subscriber-weighted nominal speed (in kbps) should be calculated as the sum of the products of the provider's advertised maximum download data transmission rate (in kbps) for each residential rate tier advertised by the provider in the county, times the average monthly number of residential subscribers receiving the advertised download transmission rate tier for the relevant reporting month (i.e., June or December, as applicable), divided by the average total number of residential subscribers for all the included data transmission rate tiers in the county for that month. This is expressed in the following formula:

$$\frac{(\text{speed tier-1 in kbps} \times \text{no. of tier-1 subscribers}) + (\text{speed tier-2 in kbps} \times \text{no. of tier-2 subscribers}) + \dots}{\text{total average monthly subscribers}}$$

For example, if the service provider offers two tiers of service with advertised maximum download speeds of 1500 kbps and 6000 kbps, calculate the product of 1500 kbps times the average monthly number of residential subscribers to the 1500 kbps speed tier plus the product of 6000 kbps times the average monthly number of residential subscribers to the 6000 kbps speed tier and divide the sum by the sum (or total) of the average monthly number of residential subscribers in both tiers.

State County FIPS Code
(Use in StateCountyFIPS field)

	GUnitName	StateCountyFIPS	GeoUnitType
1	Alameda	06001	CO
2	Alpine	06003	CO
3	Amador	06005	CO
4	Butte	06007	CO
5	Calaveras	06009	CO
6	Colusa	06011	CO
7	Contra Costa	06013	CO
8	Del Norte	06015	CO
9	El Dorado	06017	CO
10	Fresno	06019	CO
11	Glenn	06021	CO
12	Humboldt	06023	CO
13	Imperial	06025	CO
14	Inyo	06027	CO
15	Kern	06029	CO
16	Kings	06031	CO
17	Lake	06033	CO
18	Lassen	06035	CO
19	Los Angeles	06037	CO
20	Madera	06039	CO
21	Marin	06041	CO
22	Mariposa	06043	CO
23	Mendocino	06045	CO
24	Merced	06047	CO
25	Modoc	06049	CO
26	Mono	06051	CO
27	Monterey	06053	CO
28	Napa	06055	CO
29	Nevada	06057	CO
30	Orange	06059	CO
31	Placer	06061	CO
32	Plumas	06063	CO
33	Riverside	06065	CO
34	Sacramento	06067	CO
35	San Benito	06069	CO
36	San Bernardino	06071	CO
37	San Diego	06073	CO
38	San Francisco	06075	CO
39	San Joaquin	06077	CO
40	San Luis Obispo	06079	CO
41	San Mateo	06081	CO
42	Santa Barbara	06083	CO
43	Santa Clara	06085	CO
44	Santa Cruz	06087	CO

45	Shasta	06089	CO
46	Sierra	06091	CO
47	Siskiyou	06093	CO
48	Solano	06095	CO
49	Sonoma	06097	CO
50	Stanislaus	06099	CO
51	Sutter	06101	CO
52	Tehama	06103	CO
53	Trinity	06105	CO
54	Tulare	06107	CO
55	Tuolumne	06109	CO
56	Ventura	06111	CO
57	Yolo	06113	CO
58	Yuba	06115	CO