FCC Paragraph Number	FCC Paragraph Text
1	Antonna structures shall be painted throughout their beight with alternate
1	hands of aviation surface orange and white terminating with aviation
1	surface orange hands at both top and bottom. The width of the hands
1	shall be equal and approximately and powerth the height of the structure
1	shall be equal and approximately one-sevenin me neight of the structure,
1	provided however, that the bands shall not be more than 50.46 meters (100 leet) nor
1	less than .46 meters (1 1/2 leet) in width. All towers shall be cleaned of repainted
1	as onen as necessary to maintain good visibility.
10	On levels at approximately four-fifths, three-fifths, two-fifths and
10	one-fifth of the overall height of the tower one similar flashing
10	300 m/m electric code beacon shall be installed in such position within the
10	tower proper that the structural members will not impair the visibility
10	of this beacon from aircraft at any normal angle of approach. In the
10	event these beacons cannot be installed in a manner to insure unobstructed
10	visibility of the beacons from aircraft at any normal angle of approach,
10	there shall be installed two such beacons at each level. Each beacon shall
10	be mounted on the outside of diagonally opposite corners or opposite sides
10	of the tower at the prescribed height.
10.1	On levels at approximately eight elevenths, six elevenths, four elevenths
10.1	and two elevenths of the overall height of the tower one similar
10.1	flashing 300 m/m electric code beacon shall be installed in such position
10.1	within the tower proper that the structural members will not impair the
10.1	visibility of this boacon from aircraft at any normal angle of approach
10.1	In the event these become cannot be installed in a manner to insure
10.1	In the event these beacons cannot be installed in a manner to insule
10.1	of enpressed, there shall be installed two such because at each level
10.1	or approach, there shall be installed two such beacons at each level.
10.1	Each beacon shall be mounted on the outside of diagonally opposite
10.1	corners or opposite sides of the tower at the prescribed height.
10.2	On levels at approximately five-sixths, two-thirds, one-half, one-third and
10.2	one-sixth of the overall height of the tower one similar flashing 300 m/m
10.2	electric code beacon shall be installed in such position within the tower
10.2	proper that the structural members will not impair the visibility of this
10.2	beacon from aircraft at any normal angle of approach. In the event these
10.2	beacons cannot be installed in a manner to insure unobstructed visibility
10.2	of the beacons from aircraft at any normal angle of approach, there shall
10.2	be installed two such beacons at each level. Each beacon shall be mounted
10.2	on the outside of diagonally opposite corners or opposite sides of the
10.2	tower at the prescribed height.
10.3	On levels at approximately ten-thirteenths, eight-thirteenths, six
10.3	thirteenths, four-thirteenths and two-thirteenths of the overall height of
10.3	the tower one similar flashing 300 m/m electric code beacon shall be
10.3	installed in such position within the tower proper that the structural
10.3	members will not impair the visibility of this beacon from aircraft at any
10.3	normal angle of approach. In the event these beacons cannot be
10.3	installed in a manner to insure unohetructed visibility of the beacons
10.3	from aircraft at any normal angle of approach, there shall be installed
10.3	two such beacons at each level. Each beacon shall be mounted on the
10.3	outside of diagonally opposite corners or opposite sides of the tower at
10.3	the prescribed beight
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10.4	On levels at approximately six-sevenths, five-sevenths, four-sevenths,
10.4	three-sevenths, two-sevenths and one-seventh of the overall height of the

10.4	tower one similar flashing 300 m/m electric code beacon shall be installed
10.4	in such position within the tower proper that the structural members will
10.4	not impair the visibility of this beacon from aircraft at any normal angle
10.4	of approach. In the event these beacons cannot be installed in a manner to
10.4	insure unobstructed visibility of the beacons from aircraft at any normal
10.4	angle of approach, there shall be installed two such beacons at each level.
10.4	Each beacon shall be mounted on the outside of diagonally opposite corners
10.4	or opposite sides of the tower at the prescribed height.
11	At the approximate midpoint of the overall height of the tower, there
11	shall be installed at least two 116- or 125-watt lamps (A21/TS) enclosed in
11	aviation red obstruction light globes. Each light shall be mounted so as
11	to insure unobstructed visibility of at least one light at each level from
11	aircraft at any normal angle of approach.
12	On levels at approximately two-thirds and one-third of the overall height
12	of the tower, there shall be installed at least two 116- or 125-watt lamps
12	(A21/TS) enclosed in aviation red obstruction light globes. Each light
12	shall be mounted so as to insure unobstructed visibility of at least one
12	light at each level from aircraft at any normal angle of approach.
13 13 13 13	On levels at approximately three-fourths and one-fourth of the overall height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.
14 14 14 14	On levels at approximately four-fifths, three-fifths and one-fifth of the overall height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.
15 15 15 16 16 16	On levels at approximately five-sixths, one-half, and one-sixth of the overall height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure. On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the overall height of the tower, at least two 116- or or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light
16	globes shall be installed on each outside corner of the structure.
17	On levels at approximately seven-eighths, five-eighths, three-eighths and
17	one-eighth of the overall height of the tower, at least two 116- or
17	125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes
17	shall be installed on each outside corner of the structure.
18 18 18 18	On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the overall height of the tower, at least two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes shall be installed on each outside corner of the structure.
19	On levels at approximately nine-tenths, seven-tenths, one-half,
19	three-tenths and one-tenth of the overall height of the tower, at least
19	two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction
19	light globes shall be installed on each outside corner of the structure.
19.1 19.1	On levels at approximately ten-elevenths, nine-elevenths, seven-elevenths, five-elevenths, three-elevenths and one-eleventh of the overall height of

19.1 19.1 19.1	the tower, at least two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes shall be installed on each outside corner of the structure.
19.2 19.2 19.2 19.2 19.2	On levels at approximately eleven-twelfths, three-fourths, seven-twelfths, five-twelfths, one-fourth and one-twelfth of the overall height of the tower, at least two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes shall be installed on each outside corner of structure.
19.3 19.3 19.3 19.3 19.3	On levels at approximately twelve-thirteenths, eleven-thirteenths, nine-thirteenths, seven-thirteenths, five-thirteenths, three-thirteenths and one-thirteenth of the overall height of the tower, at least two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes shall be installed on each outside corner of the structure.
19.4 19.4 19.4 19.4 19.4	On levels at approximately thirteen-fourteenths, eleven-fourteenths, nine-fourteenths, one-half, five-fourteenths, three-fourteenths and one-fourteenth of the overall height of the tower, at least two 116- or 125-watt lamps (A21/TS) enclosed in an aviation red obstruction light globes shall be installed on each outside corner of the structure.
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	There shall be installed at the top of the tower at least two 116- or 125-watt lamps (A21/TS) enclosed in aviation red obstruction light globes. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any normal angle of approach. A light sensitive control device or an astronomic dial clock and time switch may be used to control the obstruction lighting in lieu of manual control. When a light sensitive device is used it should be adjusted so that the lights will be turned on at a north sky light intensity level of about thirty-five foot candles and turned off at a north sky light intensity level of about fifty-eight foot candles.
20 20	All lighting shall be exhibited from sunset to sunrise unless otherwise specified.
21 21 21 21 21	All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.
22 22 22 22 22 22 22 22 22 22 22 22 22	During construction of an antenna structure, for which obstruction lighting is required, at least two 116- or 125-watt lamps (A21/TS) enclosed in aviation red obstruction light globes, shall be installed at the uppermost point of the structure. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any normal angle of approach. In lieu of the above temporary warning lights, the permanent obstruction lighting fixtures may be installed and operated at each required level as each such level is exceeded in height during construction.
23 23	Dual Lighting. Use aviation red obstruction lights for nighttime and high or medium intensity flashing white obstruction lights for daytime and

23	twilight as prescribed above.
3	There shall be installed at the top of the structure one 300 m/m electric
3	code beacon equipped with two 620- or 700-watt lamps (PS-40, Code
3	Beacon type) both lams to burn simultaneously and equipped with aviation
2	red color (ype), both amps to burn similar equipped with aviation
3	red color inters. Where a rod or other construction of not more than 6.10 meters
3	(20 feet) in neight and incapable of supporting this beacon is mounted on top
3	of the structure and it is determined that this additional construction
3	does not permit unobstructed visibility of the code beacon from aircraft
3	at any normal angle of approach, there shall be installed two such
3	beacons positioned so as to insure unobstructed visibility of at least
3	one of the beacons from aircraft at any normal angle of approach. The
3	beacons shall be equipped with a flashing mechanism producing not more than
3	40 flashes per minute nor less than 12 flashes per minute with a period
3	of darkness equal to approximately one-half of the luminous period.
4	At approximately one-half of the overall height of the tower one similar
4	flashing 300 m/m electric code beacon shall be installed in such position
4	within the tower proper that the structural members will not impair the
1	visibility of this beacon from air states and normal and of annoach
4	In the quant this beacon more than and an any more than any to achieve the
4	in the event this beacon cannot be instaned in a manner to
4	insure unobstructed visionity of it from an crart at any normal angle
4	of approach, there shall be installed two such beacons. Each beacon shall
4	be mounted on the outside of the tower at the prescribed height.
5	At approximately two-fifths of the overall height of the tower one
5	similar flashing 300 m/m electric code beacon shall be installed in such
5	position within the tower proper that the structural members will not
5	impair the visibility of this beacon from aircraft at any normal angle of
5	approach. In the event this beacon cannot be installed in a manner to
5	insure unobstructed visibility of it from aircraft at any normal angle of
5	approach there shall be installed two such beacons. Each beacon shall be
5	mounted on the outside of diagonally opposite corners or opposite sides
5	of the tower at the prescribed height.
6	On levels at approximately two-thirds and one-third of the overall height
6	of the tower one similar flashing 300 m/m electric code beacon shall be
6	installed in such position within the tower proper that the structural
6	mistalied in such position within the tower proper that the structural
0	members will not impair the visibility of this beacon norm and at at any
6	normal angle of approach. In the event these beacons cannot be installed
6	in a manner to insure unobstructed visibility of the beacons from aircraft
6	at any normal angle of approach, there shall be installed two such beacons
6	at each level. Each beacon shall be mounted on the outside of diagonally
6	opposite corners or opposite sides of the tower at the prescribed height.
7	On levels at approximately four-sevenths and two-sevenths of the overall
7	height of the tower one similar flashing 300 m/m electric code beacon shall
7	be installed in such position within the tower proper that the structural
7	members will not impair the visibility of this beacon from aircraft at any
7	normal angle of approach. In the event these beacons cannot be installed
7	in a manner to insure unobstructed visibility of the beacons from aircraft
7	at any normal angle of approach, there shall be installed two such beacons
7	at each lovel. Each beacon shall be mounted on the outside of disconsilier
י 7	at each level. Each beacon shall be mounted on the proceribed bainby
I	opposite corners or opposite sides of the tower at the prescribed height.
8	On levels at approximately three-fourths, one-half and one-fourth of the
ŏ	overall neight of the tower one similar flashing 300 m/m electric code

beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

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On levels at approximately two-thirds, four-ninths and two-ninths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach. In the event these shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

There shall be installed at the top of the antenna structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-865, Medium Intensity Obstruction Lighting Systems. This light shall be mounted on the highest point of the structure. If the antenna or other appurtenance at its highest point is incapable of supporting the omnidirectional light, one or more such lights shall be installed on a suitable adjacent support with the lights mounted not more than 6.10 meters (20 feet) below the tip of the appurtenance. The light shall be positioned so as to permit unobstructed viewing of at least one light from aircraft at any normal angle of approach. The light unit(s) shall emit a beam with a peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight, and approximately 2,000 candelas at night.

There shall be installed at the top and mid-levels of the antenna structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-865, Medium Intensity Obstruction Lighting Systems. This light shall be mounted on the highest point of the structure. If the antenna or other appurtenance at its highest point is incapable of supporting the omnidirectional light, one or more such lights shall be installed on a suitable adjacent support with the lights mounted not more than 6.10 meters (20 feet) below the tip of the appurtenance. The lights shall be positioned so as to permit unobstructed viewing of at least one light from the aircraft at any normal angle of approach. The light unit(s) shall emit a beam with a peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight, and approximately 2,000 candelas at night.

There shall be installed at the top, 1/3 and 2/3 levels of the antenna structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-865, Medium Intensity Obstruction Lighting Systems. This light shall be mounted on the highest point of the structure. If the antenna or other appurtenance at its highest point is incapable of supporting the omnidirectional light, one or more such lights shall be installed on a suitable adjacent support with the lights mounted not more than 6.10 meters (20 feet) below the tip of the appurtenance. The lights shall be positioned so as to permit unobstructed viewing of at least one light

A3	from the aircraft at any normal angle of approach. The light unit(s) shall
A3	emit a beam with a peak intensity around its periphery of approximately
A3	20,000 candelas during daytime and twilight, and approximately 2,000
A3	candelas at night.

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There shall be installed at the top, 1/4, 1/2, and 3/4 levels of the antenna structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-865, Medium Intensity Obstruction Lighting Systems. This light shall be mounted on the highest point of the structure. If the antenna or other appurtenance at its highest point is incapable of supporting the omnidirectional light, one or more such lights shall be installed on a suitable adjacent support with the lights mounted not more than 6.10 meters (20 feet) below the tip of the appurtenance. The lights shall be positioned so as to permit unobstructed viewing of at least one light from the aircraft at any normal angle of approach. The light unit(s) shall emit a beam with a peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight, and approximately 2,000 candelas at night.

A5 There shall be installed at the top, 1/5, 2/5, 3/5, 4/5 levels of the A5 antenna structure a white capacitor discharge omnidirectional light which A5 conforms to FAA/DOD Specification L-865, Medium Intensity Obstruction A5 Lighting Systems. This light shall be mounted on the highest point of the A5 structure. If the antenna or other appurtenance at its highest point is A5 incapable of supporting the omnidirectional light, one or more such lights A5 shall be installed on a suitable adjacent support with the lights mounted A5 not more than 6.10 meters (20 feet) below the tip of the appurtenance. The lights shall be positioned so as to permit unobstructed viewing of at least one light A5 from the aircraft at any normal angle of approach. The light unit(s) shall A5 emit a beam with a peak intensity around its periphery of approximately A5 A5 20,000 candelas during daytime and twilight, and approximately 2,000 candelas at night. A5

There shall be installed at the top, 1/6, 1/3, 1/2, 2/3 and 5/6 levels of the antenna structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-865, Medium Intensity Obstruction Lighting Systems. This light shall be mounted on the highest point of the structure. If the antenna or other appurtenance at its highest point is incapable of supporting the omnidirectional light, one or more such lights shall be installed on a suitable adjacent support with the lights mounted not more than 6.10 meters (20 feet) below the tip of the appurtenance. The lights shall be positioned so as to permit unobstructed viewing of at least one light from the aircraft at any normal angle of approach. The light unit(s) shall emit a beam with a peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight, and approximately 2,000 candelas at night.

There shall be installed at the top of the skeletal or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

At the approximate one-half level of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be two degrees (2°).

At the approximate one-third and two-thirds levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be two degrees (2°) at the one-third level and one degree (1°) at the two-thirds level.

At the approximate one-fourth, one-half and three-fourths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-fourth level, two degrees (2°) at the one-half level and one degree (1°) at the three-fourths level.

At the approximate one-fifth, two-fifths, three-fifths and four-fifths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000

F F F F F	candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-fifth level, two degrees (2°) at the two-fifths level, one degree (1°) at the three-fifths level and zero degrees (0°) at the four-fifths level.
G G G G G G G G G G G G G G G G G G G	At the approximate one-sixth, one-third, one-half, two-thirds and five-sixths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 2,000 candelas at night. The light units shall be mounted in a manner to insure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-sixth level, two degrees (2°) at the one-third level, two degrees (2°) at the one-half level, one degree (1°) at the two-thirds level and zero degrees (0°) at the five-sixths level.
H H H H H H H H H H H H H	All high and medium intensity lights shall be synchronized to flash simultanously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows: 1. Day to Twilight: Shall not occur before the illumination drops to 60 footcandles, but shall occur before it drops below 30 footcandles. 2. Twilight to Night: Shall not occur before the illumination drops to 5 footcandles, but shall occur before it drops to 2 footcandles. 3. Night to Day: The intensity changes listed in 1. and 2. above shall be reversed in transitioning from the night to day modes.
 	During construction of an antenna structure for which high or medium intensity lighting is required, at least two lights shall be installed at the uppermost part of the structure. In addition, at each level where permanent obstruction lighting will be required, two similar lights shall be installed. Each temporary light shall consist of at least 1,500 candelas (peak effective intensity), synchronized to flash simultaneously at 40 pulses per minute. Temporary lights shall be operated continuously, except for periods of actual construction, until the permanent obstruction lights have been installed and placed in operation. Lights shall be positioned to insure unobstructed viewing from aircraft at any normal angle of approach. If practical, the permanent obstruction lights may be installed at each level as the structure progresses. NOTE: If battery operated, the batteries should be replaced or recharged at regular intervals to preclude failure during operation.
J J J	Antenna structures shall be equipped with: 1. High intensity lighting for daytime use and red lighting for nighttime use as specified in FCC Form 715; or 2. High intensity lighting, 24 hours a day, which conforms to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems.