

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the matter of )  
 )  
Request of Global Tower LLC for Waiver of )  
47 C.F.R. § 17.47(b) )

**MEMORANDUM OPINION AND ORDER**

**Adopted: November 12, 2008**

**Released: November 12, 2008**

By the Acting Chief, Wireless Telecommunications Bureau:

**I. INTRODUCTION**

1. This *Memorandum Opinion and Order* addresses the request of Global Tower LLC (“Global Tower”) for waiver of Section 17.47(b) of the Commission’s Rules, 47 C.F.R. § 17.47(b). Section 17.47(b) provides that the owner of any antenna structure that is registered with the Commission and has been assigned lighting specifications pursuant to Part 17 “[s]hall inspect at intervals not to exceed 3 months all automatic or mechanical control devices, indicators, and alarm systems associated with the antenna structure lighting to insure that such apparatus is functioning properly.”<sup>1</sup> Global Tower LLC owns or manages more than 3,000 towers, and of these, 1,283 are towers subject to the quarterly inspection requirement.

2. Global Tower argues that the quarterly inspections of antenna monitoring systems mandated by Section 17.47(b) of the Rules have been rendered unnecessary because of technological advancements associated with the particular monitoring system that it employs -- the Flash Technology Tower Monitoring System (“FTTMS”). Global Tower asks the Commission to waive the rule to permit annual inspections instead for its antenna structures that currently use this system, or that may use this system in the future. Of the 1,283 towers that Global Tower owns or manages that are subject to the quarterly inspection requirement, 1,153 towers currently employ FTTMS. For the reasons set forth below, we grant Global Tower its request for relief.

**II. BACKGROUND**

3. On May 15, 2007, the Commission released an order granting to the American Tower Corporation (“ATC”) and to Global Signal, Inc. (“GSI”) waivers of Section 17.47(b) of the Rules to allow annual, rather than quarterly, inspection of towers monitored by specified, technologically advanced monitoring systems.<sup>2</sup> On October 15, 2007, the Wireless

<sup>1</sup> 47 C.F.R. § 17.47(b).

<sup>2</sup> In the Matter of Requests of American Tower Corporation and Global Signal, Inc., to Waive Section 17.47(b) of the Commission’s Rules, WT Docket No. 05-326, *Memorandum Opinion and Order*, 22 FCC Rcd 9743 (2007) (*ATC/GSI Waiver Order*).

Telecommunications Bureau (“Bureau”) released an Order granting to Optasite Towers L.L.C. (“Optasite”) a similar waiver of Section 17.47(b) for its towers that are monitored using the same technology (the Eagle Monitoring System) as ATC.<sup>3</sup> On December 27, 2007, similar relief was granted to Crown Castle USA Inc. (“Crown Castle”) based on its use of technologies (the Opto 22B3000 and Simple Com Tools Com 3000 Monitoring Systems) that compare favorably with the Eagle Monitoring System.<sup>4</sup> Global Tower filed its instant waiver request on March 27, 2008, seeking the same relief granted to ATC, GSI, Optasite, and Crown Castle.<sup>5</sup> Global Tower asserts in its petition that the FTTMS is similar in quality and robustness to the systems employed by ATC and Optasite (Eagle), GSI (Hark), and Crown Castle (Opto 22B3000 and Simple Com Tools Com 3000).<sup>6</sup> Global Tower attaches to its petition exhibits describing relevant features of the FTTMS.<sup>7</sup> Global Tower further supports its petition through the September 11, 2008 response to a request for additional information by the Wireless Telecommunications Bureau.<sup>8</sup>

### III. DISCUSSION

4. Section 1.925 of the Commission’s Rules provides that, with respect to wireless telecommunications services, the Commission may grant a request for waiver if it is shown that: “(i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.”<sup>9</sup> As discussed below, we grant a waiver to Global Tower because we find that application of the quarterly inspection requirements of Section 17.47(b) to the towers in question is not necessary to serve the underlying purposes of the rule, and grant of the waiver is in the public interest. Based on the evidence presented, strict application of the rule to Global Tower would be unduly burdensome and contrary to the public interest.

5. Global Tower describes the FTTMS as safe, reliable, and representing the latest

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<sup>3</sup> Petition of Optasite Towers L.L.C. for Waiver of Section 17.47(b) of the Commission’s Rules, *Memorandum Opinion and Order*, 22 FCC Rcd 18456 (WTB 2007) (*Optasite Waiver Order*).

<sup>4</sup> In the Matter of Crown Castle USA Inc. Request for Waiver of 47 C.F.R. § 17.47(b), *Memorandum Opinion and Order*, 22 FCC Rcd 21881 (WTB 2007) (*Crown Castle Waiver Order*).

<sup>5</sup> In the Matter of Request of Global Tower LLC for Waiver of 47 C.F.R. § 17.47(b), Request for Waiver, filed March 27, 2008 (*Global Tower Waiver Request*).

<sup>6</sup> *Id.* at 4-5.

<sup>7</sup> *Id.* at Exhibits A, B.

<sup>8</sup> See Letter from Craig E. Gilmore and J. Wade Lindsay, Wilkinson Barker Knauer, LLP and Frederick H. Kleber, Senior Vice President, Operations, Global Tower LLC, to Jeffrey S. Steinberg, Deputy Chief, Spectrum and Competition Policy Division, Wireless Telecommunications Bureau (September 11, 2008) (*Global Tower Supplement*). This additional information was provided in response to a request by the Wireless Telecommunications Bureau’s Spectrum and Competition Policy Division. See Letter from Jeffrey S. Steinberg, Deputy Chief, Spectrum and Competition Policy Division, Wireless Telecommunications Bureau, to Bryan N. Tramont and Craig E. Gilmore, Wilkinson Barker Knauer, LLP (August 19, 2008).

<sup>9</sup> 47 C.F.R. § 1.925(b)(3).

technology in automatic control devices.<sup>10</sup> Global Tower states that its system employs sophisticated, self-diagnostic functions that are sufficiently robust so as to make unnecessary quarterly inspections to ensure that the control devices, indicators, and alarm systems on the towers are operating properly. Specifically, Global Tower maintains that the FTTMS provides the functional equivalent of a continuous inspection of control devices on all towers it monitors, and as a result, users of the FTTMS are alerted to actual and potential problems immediately in many instances, or at most within 24 hours.<sup>11</sup> In support of these contentions, Global Tower describes the following features of the FTTMS:

(1) *Alarm notification.* The monitoring system installed at the tower site is equipped with software that contacts the Global Tower Network Operations Call (“NOC”) center for every type of alarm condition.<sup>12</sup> Global Tower categorizes these alarm conditions as “major alarms” (beacon/strobe failure, beacon/strobe communication failure, filter failure, low flash energy, consecutive missed flashes, photo cell failure, power failure, and site communication failure) and “minor alarms” (AC power failure, DC power failure, side marker failure).<sup>13</sup> These alarms are captured and archived within the FTTMS database, which has an automatic escalation protocol within the Global Tower NOC center to ensure that proper diagnostics are conducted within a 30 minute window.<sup>14</sup> Within this time frame, the NOC center contacts the site from which the alarm originated and performs full system diagnostics to identify the nature of the lighting failure and to determine if a Notice to Airmen (“NOTAM”) <sup>15</sup> should be issued.<sup>16</sup> The information provided to the NOC center via these system diagnostics is, for the purposes of determining if a NOTAM is required, identical to that which would be obtained during an on-site inspection.<sup>17</sup> If the issuance of a NOTAM is required, the proper FAA Flight Service Station (“FSS”) is notified, and a NOTAM is noted in the FTTMS database using the number provided orally by the FSS.<sup>18</sup> Global Tower is also notified by email of the alarm condition and the NOTAM, if any.<sup>19</sup> A repair technician is then dispatched to further diagnose the alarm condition and repair the site as needed. All alarm points are then tested and validated as functional by NOC center technicians. Typically the NOC center will wait a pre-determined period to ensure the alarm does not

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<sup>10</sup> *Global Tower Waiver Request* at 1, 5; *Global Tower Supplement*, at 1.

<sup>11</sup> *Global Tower Waiver Request* at 7-8; *See also Global Tower Supplement*, at 3-4 (confirming that this function is performed at all towers monitored by the FTTMS, notwithstanding certain differences in technology).

<sup>12</sup> *Global Tower Waiver Request, Exhibit A* at 4.

<sup>13</sup> *Id.* at 2-3.

<sup>14</sup> *Id.* at 4.

<sup>15</sup> Antenna structure owners “shall report immediately by telephone or telegraph to the nearest Flight Service Station or office of the Federal Aviation Administration any observed or otherwise known extinguishment or improper functioning of any top steady burning light or any flashing obstruction light, regardless of its position on the antenna structure, not corrected within 30 minutes.” 47 C.F.R. § 17.48(a). *See* FAA Circular AC-70/7460-1K, Chapter 2, Light Failure Notification.

<sup>16</sup> *Global Tower Waiver Request, Exhibit A* at 4.

<sup>17</sup> *Global Tower Waiver Request* at 8.

<sup>18</sup> *Global Tower Waiver Request, Exhibit A* at 4-5.

<sup>19</sup> *Global Tower Waiver Request* at 7.

recur before asking the proper FSS to cancel the NOTAM. Closure of the NOTAM is entered into the FTTMS database and Global Tower is then notified of the closure.<sup>20</sup>

(2) *24-hour polling.* The FTTMS is programmed to proactively initiate a connection from each monitored site once every 24 hours. The FTTMS uses both dial-up and wireless technology for communications between the tower and the NOC center. Seventy-one of Global Tower's FTTMS-enabled towers communicate with the NOC center using dial-up technology. In these cases, the FTTMS is programmed to call each and every dial-up site once every 24 hours to verify that site communications are working properly and that there are no current active alarms. The FTTMS is programmed to attempt to contact the site up to 11 times if the initial attempt fails. If contact cannot be made, the FTTMS generates an alarm and a NOC center technician attempts to contact the site manually. The remaining FTTMS-enabled towers use wireless technology for communications between the tower and the NOC center. Each site is programmed to communicate with the FTTMS every 24 hours and if that communication is not received, the FTTMS automatically attempts to communicate with the site. If contact is not made, the FTTMS generates an alarm and a NOC center technician attempts to contact the site manually. If any alarms or discrepancies are identified during these communications, the system immediately generates an alarm, triggering the NOC center personnel to perform further in-depth analysis.<sup>21</sup>

(3) *Manual contact.* The FTTMS allows for NOC center personnel to manually and remotely diagnose tower status. This function enables these personnel to contact any tower and review the operational status of the tower's lighting system at any time.<sup>22</sup>

6. The FTTMS employs a NOC center that is staffed with trained personnel capable of responding to alarms 24 hours per day, 365 days per year.<sup>23</sup> Significantly, the FTTMS includes a backup NOC center in the event of catastrophic failure at the primary NOC center, and specific procedures to follow in the event of such a catastrophic failure.<sup>24</sup> In addition, each NOC center has the ability to failover to natural gas-powered generators and thus can run for an extended period without commercial electric power.<sup>25</sup> Further, within the NOC center, the FTTMS has a fail-safe mechanism that sounds an alarm in the event the FTTMS itself malfunctions. The computer systems that gather the data from each monitored tower send an electronic "heartbeat" every five minutes to the alarm console monitored by NOC center staff. If no such "heartbeat" is received by the alarm console in a 12 minute period, an alarm is generated, thus preventing a breakdown in communication between the FTTMS servers and the alarm console from going unnoticed.<sup>26</sup>

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<sup>20</sup> *Id.*

<sup>21</sup> *Global Tower Waiver Request, Exhibit A* at 5.

<sup>22</sup> *Id.*; *Global Tower Supplement* at 5.

<sup>23</sup> *Global Tower Waiver Request* at 8.

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 9.

7. The technology that the FTTMS employs is similar to that exhibited by the monitoring systems employed by ATC, GCI, Optasite, and Crown Castle, which were granted waivers based on the efficacy of that technology. These systems are similar in that they all have a continuous and permanent two-way link between the tower site and the response center; timely reporting of potential problems; continuously staffed response centers; 24-hour polling of both lighting and communications systems; on demand interrogation capabilities; backup response centers; and essentially uninterrupted communications between the response center and the towers during power outages.<sup>27</sup>

8. Global Tower states that, particularly for towers in remote locations, quarterly inspection imposes a substantial and unnecessary resource burden. Global Tower contends that without relief it will continue to carry out 1,153 quarterly inspections totaling 4,612 site visits each year, producing no discernable benefit to its customers, air safety, or the public at large.<sup>28</sup> Global Tower states that it spends \$123,500 annually complying with the Commission's quarterly inspection requirement.<sup>29</sup> Further, Global Tower asserts that during the approximately 12,800 quarterly site inspections that it has conducted at towers monitored using the FTTMS since mid-2005, on-site inspectors have not discovered a single NOTAM-worthy event.<sup>30</sup>

9. For the reasons cited by the Commission in the *ATC/GSI Waiver Order*, and by the Bureau in the *Optasite Waiver Order* and the *Crown Castle Waiver Order*, we conclude, based upon the uncontested evidence submitted in the record by Global Tower, that the *Global Tower Waiver Request* establishes that quarterly inspections are unnecessary for those Global Tower towers monitored by the Flash Technology Tower Monitoring System, and we therefore grant Global Tower's waiver request.<sup>31</sup> The Airspace and Rules Group of the Federal Aviation Administration has stated that it is not opposed to waivers of Section 17.47(b) "provided the applicant can demonstrate a safe and reliable automatic monitoring system with tracking mechanisms to evaluate the remote monitoring technology."<sup>32</sup> We conclude that Global Tower is operating a safe and reliable monitoring system with tracking mechanisms to evaluate the remote monitoring technology, and that features of this system provide sufficiently robust monitoring of the control devices, indicators and alarm systems so as to render quarterly inspections unnecessary. Indeed, such advanced technology provides the benefits of more rapid response where there has been a lighting failure, and thus the public interest is served with respect to aircraft safety. In addition, granting Global Tower's request for waiver will save Global Tower thousands of dollars and person hours annually that are unnecessarily spent on quarterly inspections where it has deployed this advanced technology.

#### IV. CONCLUSION

10. For the reasons discussed above, we waive Section 17.47(b) to allow Global

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<sup>27</sup> *Id.* at 4-5; *Global Tower Supplement* at 1-2.

<sup>28</sup> *Global Tower Waiver Request* at 11.

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*; *Global Tower Supplement* at 7.

<sup>31</sup> *ATC/GSI Waiver Order*, 22 FCC Rcd at 9747, 9748, ¶¶ 11, 17; *Optasite Waiver Order*, 22 FCC Rcd at 18456, ¶ 8; *Crown Castle Waiver Order*, 22 FCC Rcd at 21884, ¶ 10.

<sup>32</sup> Brief Comment of Office of Airspace and Rules, FAA, WT Docket No. 05-326, filed December 4, 2006.

Tower, for only its towers monitored by the Flash Technology Tower Monitoring System, to conduct inspections required by that section on an annual, rather than a quarterly, basis. The Flash Technology Tower Monitoring System reliably diagnoses problems, including any failures of control devices, indicators and alarm systems, within real time, and therefore renders strict application of the rule unnecessary to serve its underlying purpose. Moreover, this waiver will relieve Global Tower of the burden of performing unnecessary quarterly inspections. In addition, granting this waiver request will further encourage other tower owners to invest in similar state-of-the-art technologies so that they too will become capable of continuous monitoring of both their lighting systems and control devices.

11. We note that PCIA has filed a Petition for Rulemaking in which it requests, among other things, to amend Section 17.47(b) of the rules so as to exempt systems using NOC-based monitoring technology from the quarterly inspection requirement.<sup>33</sup> PCIA's Petition for Rulemaking was placed on Public Notice to allow interested persons to file statements opposing or supporting it.<sup>34</sup> This petition is currently pending before the Commission, and the waiver that we grant today is subject to any rule changes that the Commission may promulgate in that proceeding.

#### V. ORDERING CLAUSE

12. Pursuant to Sections 4(i), 303(q), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(q), 303(r), and pursuant to Sections 0.131, 0.331, and 1.925 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331, 1.925, the Request for Waiver filed on March 27, 2008 by Global Tower LLC IS GRANTED.

FEDERAL COMMUNICATIONS COMMISSION

James D. Schlichting  
Acting Chief, Wireless Telecommunications Bureau

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<sup>33</sup> Petition for Rulemaking, RM-11349, In the Matter of Amendments to Modernize and Clarify Part 17 of the Commission's Rules Concerning Construction, Marking and Lighting of Antenna Structures, filed by PCIA – The Wireless Infrastructure Association on September 12, 2006.

<sup>34</sup> Consumer & Governmental Affairs Bureau Reference Information Center Petition for Rulemakings Filed, *Public Notice*, Report No. 2794 (rel. October 30, 2006). Comments were due on November 29, 2006.