

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

In the matter of
TowerSentry LLC Request for Waiver of
47 C.F.R. § 17.47(b)
and
Joint Petition of Diamond Communications LLC
and Diamond Towers LLC for Waiver of
47 C.F.R. § 17.47(b)

MEMORANDUM OPINION AND ORDER

Adopted: August 6, 2009

Released: August 7, 2009

By the Acting Chief, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. This Memorandum Opinion and Order addresses the requests of both TowerSentry LLC ("TowerSentry") and joint petitioners Diamond Communications LLC and Diamond Towers LLC ("Diamond") 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." TowerSentry is an independent tower light monitoring company that monitors 610 antenna structures and other towers throughout the United States on behalf of a variety of clients. Diamond owns 150 antenna structures subject to the quarterly inspection requirement that are monitored by TowerSentry.

2. Both TowerSentry and Diamond argue 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 systems that they employ -- the TowerSentry Monitoring Systems ("TSMS"). TowerSentry and Diamond ask the Commission to waive the rule and instead permit annual inspections of all the antenna structures monitored with these systems. For the reasons set forth below, we grant Diamond its request for relief. In addition, while we do not grant TowerSentry a waiver on behalf of its clients, we establish an expedited process by which other

1 47 C.F.R. § 17.47(b).

2 In the Matter of TowerSentry LLC Request for Waiver of 47 C.F.R. § 17.47(b), Request for Waiver, filed February 28, 2008 (TowerSentry Waiver Request) at 3.

3 In the Matter of Joint Petition of Diamond Communications LLC and Diamond Towers LLC for Waiver of 47 C.F.R. § 17.47(b), Request for Waiver, filed April 2, 2008 (Diamond Waiver Request) at 3.

4 TowerSentry is not subject to 47 C.F.R. § 17.47(b). See para. 5, infra.

users of the TSMS may request and obtain waivers of their obligation to perform quarterly inspections under Section 17.47(b).

## II. BACKGROUND

3. On May 15, 2007, the Commission granted 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>5</sup> On October 15, 2007, the Wireless Telecommunications Bureau (“Bureau”) granted 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>6</sup> Subsequently, similar relief was granted to Crown Castle USA Inc. (“Crown Castle”) and Global Tower LLC (“Global Tower”) based on their use of technologies that compare favorably with the Eagle Monitoring System.<sup>7</sup>

4. TowerSentry filed its instant waiver request on February 28, 2008, and Diamond filed its joint petition on April 2, 2008. Both TowerSentry, on behalf of its clients, and Diamond, on its own behalf, seek the same relief granted to ATC, GSI, Optasite, and Crown Castle. TowerSentry asserts in its petition that the TSMS are similar in quality and robustness to the systems employed by ATC (Eagle) and GSI (HARK),<sup>8</sup> attaching to its petition exhibits describing relevant features of the TSMS.<sup>9</sup> TowerSentry further supports its petition through its June 17, 2008, April 29, 2009, and July 21, 2009 responses to requests for additional information by the Wireless Telecommunications Bureau.<sup>10</sup> Diamond also asserts in its petition that the TSMS are similar in quality and robustness to the Eagle and HARK systems,<sup>11</sup> and as support incorporates the TowerSentry waiver request by reference.<sup>12</sup> We will consider both the TowerSentry and Diamond waiver requests jointly in this Order.

## III. DISCUSSION

5. 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

---

<sup>5</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*).

<sup>6</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>7</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*); In the Matter of Request of Global Tower LLC for Waiver of 47 C.F.R. § 17.47(b), *Memorandum Opinion and Order*, 23 FCC Rcd 16531 (WTB 2008) (*Global Tower Waiver Order*).

<sup>8</sup> *TowerSentry Waiver Request* at 2.

<sup>9</sup> *Id.* at Exhibits 1, 1(a).

<sup>10</sup> Letter from Timothy R. Obitts, Gammon & Grange, P.C., to Marlene H. Dortch, Secretary, Federal Communications Commission (June 17, 2008) (*TowerSentry Supplement I*); Letter from Timothy R. Obitts, Gammon & Grange, P.C., to Marlene H. Dortch, Secretary, Federal Communications Commission (April 29, 2009) (*TowerSentry Supplement II*); Letter from Timothy R. Obitts, Gammon & Grange, P.C., to Marlene H. Dortch, Secretary, Federal Communications Commission (July 21, 2009) (*TowerSentry Supplement III*).

<sup>11</sup> *Diamond Waiver Request* at 1-3, 5.

<sup>12</sup> *Id.* at 6.

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>13</sup> As discussed below, we grant a waiver to Diamond 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 Diamond would be unduly burdensome and contrary to the public interest. Because TowerSentry is a tower monitoring company, and not an “owner of any antenna structure,” it is not subject to Section 17.47(b) of the Commission’s Rules. We do not find that it would serve the public interest to grant to TowerSentry a waiver of that rule on behalf of its unspecified current and future customers. Instead, we extend relief to TowerSentry’s customers by establishing an expedited waiver process as described below.

6. TowerSentry, and by reference Diamond, describe the TSMS as highly accurate, reliable, and having characteristics similar to the systems used by parties that were previously granted waivers (Eagle and HARK).<sup>14</sup> TowerSentry 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, TowerSentry maintains that the TSMS provide the functional equivalent of a continuous inspection of control devices on all towers it monitors, and as a result, users of the TSMS are alerted to actual and potential problems within minutes or at most within 24 hours.<sup>15</sup> In support of these contentions, TowerSentry describes the following features of its TSMS:

(1) *Alarm notification.* The Dual Mode Controller (“DMCr”) installed at the tower site receives alarms from the light controller, which contacts the TowerSentry Network Operations Center (“NOC”) for every type of alarm condition.<sup>16</sup> TowerSentry categorizes these alarm conditions as “major alarms” (beacon/strobe failure, beacon/strobe communication failure, photo cell failure, AC power failure, and site communication failure) and “minor alarms” (sidelight/marker failure, intermittent failures).<sup>17</sup> These alarms are captured and archived within the DMCr and are sent to the TowerSentry NOC, which has an automatic escalation protocol to ensure that proper actions are conducted within a 30 minute window.<sup>18</sup> TowerSentry Monitoring Systems automatically provide a restoration report if the problem corrects itself. If a problem remains, a Notice to Airmen (“NOTAM”)<sup>19</sup> is filed in a timely manner with the proper FAA Flight Service Station (“FSS”) or designated authority (Lockheed Martin), and the NOTAM is noted in the TSMS database using the number provided orally by the FSS, along with the time issued and the initials

---

<sup>13</sup> 47 C.F.R. § 1.925(b)(3).

<sup>14</sup> *TowerSentry Waiver Request* at 2-3.

<sup>15</sup> *Id.* at 3.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*; see also *TowerSentry Supplement II* at 1-3 (providing further information on alarms under the TSMS); *TowerSentry Supplement III* at 1-2 (clarifying how intermittent strobe failure alarm effectively checks for low flash energy).

<sup>18</sup> *TowerSentry Waiver Request* at 3.

<sup>19</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.

of the attendant. Additionally, all telephone conversations are recorded with a time/date stamp and archived.<sup>20</sup>

(2) *24-hour polling.* The TSMS are programmed to automatically send a Daily Test Signal every 24 hours. This event is in addition to tower event signals that are generated at different times of the day.<sup>21</sup> The purpose of the Daily Test Signal is to provide an extra source of confirmation that the unit is on-line and to alert TowerSentry to any malfunctions of the lighting system and/or communication link.<sup>22</sup> In the event that a tower is non-responsive, a TowerSentry technician sends an electronic “request for test signal” to the tower site. If active, the site will respond and the technician can then perform a diagnostic test on the unit. If the unit does not respond, the technician then sends a command to the unit to “wake up,” thus resetting the radio. If the “wake up” request fails, the tower owner is notified that the system is off-line. A NOTAM is put into effect to protect pilots in the area, and the tower owner dispatches a technician to troubleshoot and correct the problem as soon as possible. The tower owner is also advised of his responsibility to have the tower lights checked visually at least once every 24 hours until the repairs are made.<sup>23</sup>

(3) *Manual contact.* The TSMS allow for TowerSentry technicians to contact the tower site directly, check radio signal strength, reset the strobe system, generate alarms, and clear false alarms. This function enables these personnel to confirm the operational status of a tower lighting system at any time.<sup>24</sup>

7. The TSMS employ a Network Operations Center (“NOC”) that is staffed with trained personnel capable of responding to alarms 24 hours per day, 365 days per year.<sup>25</sup> The NOC has the ability to communicate during sustained power outages and, significantly, the TSMS also include a backup NOC in the event of a catastrophic failure at the primary NOC. In the event of such a failure, the TSMS have specific procedures to follow.<sup>26</sup> Although the primary and secondary NOCs are located in relatively close proximity to one another (Lakeland and Kissimmee, Florida respectively), if both the primary and secondary NOCs are threatened by the same catastrophic event, TowerSentry also has a mobile monitoring center that will be moved to a safe location in a nearby major city and will be made ready to assume the functions of the NOC.<sup>27</sup> In addition, the NOC has the ability to failover to propane-powered generators and thus can run for an extended period without commercial electric power.<sup>28</sup> Further, within the NOC, there is a fail-safe (dead man) alarm that sounds if the NOC goes off line.<sup>29</sup> The TSMS also include a three-tiered back-up system that automatically takes over in the event of server failures.<sup>30</sup> In addition, the DMCr tri-mode monitoring unit is capable of providing redundant communication channels between the site and the NOC, as well as remote capabilities that allow the NOC

---

<sup>20</sup> *TowerSentry Waiver Request* at 3-4.

<sup>21</sup> *Id.* at 4; *TowerSentry Supplement I* at 2.

<sup>22</sup> *TowerSentry Supplement I* at 2.

<sup>23</sup> *Id.*

<sup>24</sup> *TowerSentry Waiver Request* at 4.

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

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

<sup>27</sup> *TowerSentry Supplement I* at 1; *TowerSentry Supplement II* at 3.

<sup>28</sup> *TowerSentry Waiver Request* at 5-6.

<sup>29</sup> *TowerSentry Waiver Request*, Exhibit 1 at 2.

<sup>30</sup> *Id.* at 5.

to query the site, measure radio signal strength, change tower light modes, generate alarms/failures, and completely reset a tower light system.<sup>31</sup> Diamond, through its use of the TSMS, “has the capability to remotely inspect its tower lights, communicate with the tower at will, and receive event and failure notifications automatically in real time.”<sup>32</sup> In the event of a strobe or beacon failure, “Diamond receives an immediate fax, email or telephone notification from TowerSentry.”<sup>33</sup>

8. The technology that the TSMS employ is similar to that exhibited by the monitoring systems employed by ATC, GSI, Optasite, Crown Castle, and Global Tower, which were each 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;<sup>34</sup> timely reporting of potential problems;<sup>35</sup> continuously staffed response centers;<sup>36</sup> 24-hour polling of both lighting and communications systems;<sup>37</sup> on demand interrogation capabilities;<sup>38</sup> backup response centers;<sup>39</sup> and essentially uninterrupted communications between the response center and the towers during power outages.<sup>40</sup>

9. TowerSentry and Diamond both state that, particularly for towers in remote locations, quarterly inspection imposes a substantial and unnecessary resource burden. TowerSentry estimates that its clients spent over \$500,000 in 2007 conducting 1,818 quarterly inspections.<sup>41</sup> Diamond states that it performed approximately 370 quarterly site inspections in 2007 and with recent growth expected to total at least 600 site visits in 2008, at a cost of over \$50,000 and 1,500 person-hours.<sup>42</sup> Further, TowerSentry and Diamond both assert that during these quarterly site inspections, on-site inspectors have not discovered a single NOTAM-worthy event.<sup>43</sup>

10. For the reasons cited by the Commission in the *ATC/GSI Waiver Order*, and by the Bureau in subsequent orders, we conclude, based upon the uncontested evidence submitted in the record by TowerSentry and Diamond, that the *TowerSentry Waiver Request* and the *Diamond Waiver Request* establish that quarterly inspections are unnecessary for those towers monitored by the TSMS.<sup>44</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>45</sup> We

---

<sup>31</sup> *Id.* at 6.

<sup>32</sup> *Diamond Waiver Request* at 5.

<sup>33</sup> *Id.*

<sup>34</sup> *TowerSentry Waiver Request*, Exhibit 1 at 6.

<sup>35</sup> *Id.* at 2-4; *TowerSentry Supplement I* at 2.

<sup>36</sup> *TowerSentry Waiver Request* at 4.

<sup>37</sup> *Id.* at 4; *TowerSentry Supplement I* at 2.

<sup>38</sup> *TowerSentry Waiver Request* at 6-7.

<sup>39</sup> *Id.* at 4; *TowerSentry Waiver Request*, Exhibit 1 at 4-5; *TowerSentry Supplement I* at 1.

<sup>40</sup> *TowerSentry Waiver Request* at 3-4, Exhibit 1 at 2-3.

<sup>41</sup> *TowerSentry Waiver Request* at 2.

<sup>42</sup> *Diamond Waiver Request* at 3-4.

<sup>43</sup> *TowerSentry Waiver Request* at 2; *Diamond Waiver Request* at 4.

<sup>44</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, ¶ 9; *Global Tower Waiver Order*, 23 FCC Rcd at 16531, ¶ 9.

<sup>45</sup> Brief Comment of Office of Airspace and Rules, FAA, WT Docket No. 05-326, filed December 4, 2006.



conclude that TowerSentry 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 waivers to tower owners using the TowerSentry Monitoring System will save them hundreds of thousands of dollars annually that are unnecessarily spent on quarterly inspections where they have deployed this advanced technology.

11. We therefore grant Diamond's waiver request. For other tower owners using the TowerSentry Monitoring Systems, we will grant, in an expedited manner, waivers upon submission and review of a streamlined petition attesting that they use the TowerSentry Monitoring Systems as described herein. Specifically, any waiver applicant shall submit a certification that: (1) its towers are monitored by the TowerSentry Monitoring Systems under the process described in this order; and (2) it maintains a facility to receive notifications of failures from TowerSentry, which will enable the tower owner to carry out its responsibilities under Part 17 of the Commission's rules. The certification shall be signed, under penalty of perjury, by a company officer (or partner, sole proprietor or similar person able to act on behalf of the tower owner) with knowledge of the underlying facts. To ensure timely processing, waiver requests should also be e-mailed to [part17@fcc.gov](mailto:part17@fcc.gov).

#### IV. CONCLUSION

12. For the reasons discussed above, we waive Section 17.47(b) to allow Diamond to conduct inspections required by that section, for its antenna structures monitored by the TowerSentry Monitoring Systems, on an annual rather than a quarterly basis. We further establish an expedited process for TowerSentry's other customers to obtain similar waivers. The TowerSentry Monitoring Systems reliably diagnose problems, including any failures of control devices, indicators and alarm systems, within real time, and therefore render strict application of the rule unnecessary to serve its underlying purpose. Moreover, our action will relieve both Diamond and potentially TowerSentry's other clients of the burden of performing unnecessary quarterly inspections. In addition, granting Diamond's waiver, as well as implementing an expedited waiver process for other tower owners that employ the TowerSentry Monitoring Systems, will further encourage tower owners to invest in state-of-the-art technologies so that they too will become capable of continuous monitoring of both their lighting systems and control devices.

13. 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>46</sup> PCIA's Petition for Rulemaking was placed on Public Notice to allow interested persons to file statements opposing or supporting it.<sup>47</sup> This petition is currently pending before the Commission, and the waiver that we grant today, as well as any future waivers granted under the expedited process, are subject to any rule changes that the Commission may promulgate in that proceeding.

#### V. ORDERING CLAUSE

14. IT IS THEREFORE ORDERED, 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

---

<sup>46</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>47</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.

0.131, 0.331, and 1.925 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331, 1.925, that the Request for Waiver filed by Diamond IS GRANTED.

15. IT IS FURTHER ORDERED, 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, that the Request for Waiver filed by TowerSentry IS DENIED.

FEDERAL COMMUNICATIONS COMMISSION

James D. Schlichting  
Acting Chief, Wireless Telecommunications Bureau