Memorandum

TO: Massachusetts Systems Contractors Association

FROM: David L. Fine, Esq.
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DATE: March 21, 2017

RE: Systems Licensing

Introduction

The Massachusetts Systems Contractors Association, Inc. ("MSCA") is a trade association of companies engaged in the business of installing, repairing, and maintaining Electronic Systems, including Fire Alarm, Security, Access Control, Surveillance Video, Intrusion and Burglary Detection, and many other Systems including Telephone, Data, Sound and Video. Members also perform a wide variety of related services, including monitoring, distribution, and manufacturing work relating to Electronic Systems (hereinafter collectively referred to as the "Work").

One of the benefits of MSCA is that the association keeps its members informed on industry regulations. As it pertains to these regulations, there is an important issue that is troubling MSCA members. Many if not all state regulations were enacted decades ago, when systems were comprised of equipment and devices that communicated primarily through wires and cables conducting electricity. Since then, the industry has trended toward wireless systems. Currently, a majority of security and/or fire alarm systems contain wireless elements. Many of the systems are entirely 100% wireless. In addition, most modern systems utilize data networks and software, which can be downloaded, programmed, and supported remotely, offsite. As a result of this new technology, the variety of services that are regularly performed by MSCA members has expanded exponentially. With respect to many if not most categories of service, performed either onsite or remotely, there is no need for the individual or company performing the Work to install, repair, or maintain wiring or cabling whatsoever.

MSCA has requested an analysis and opinion concerning the application of the current regulatory framework against the Work that is by its nature, wireless, and/or elements of the Work that do not concern the installation, repair or maintenance of hardwired systems.

Background

Broadly, the regulatory scheme in the Commonwealth requires the following of companies and individuals performing the Work:

- Electrical license: A company engaged in the Work must have a licensee with at least a Class C (systems contractor) license serve as a qualifying officer. An individual engaged in the Work must hold at least a Class D (systems technician) license. The authority to oversee and enforce this requirement is vested with the Massachusetts State Board of Examiners of Electricians (the "Board").

- Public safety license: An individual or company engaged in the Work (other than fire safety) must obtain a license from the Department of Public Safety, a so-called "S" license." Every individual employed by an "S" license holder must obtain a certificate of clearance prior to engaging in the Work. The authority to oversee and enforce this requirement is vested with the Department of Public Safety ("DPS").

- Wire permit: Where the Work involves installation of electrical wiring or fixtures, an individual or company engaged in the Work must furnish notice to the inspector of wires for the municipality where the Work is being performed, and must file for a permit to perform the Work. The authority to oversee and enforce this requirement is vested with the inspectors of wires, and ultimately the Board.

Regulatory Framework

1. M.G.L. c. 141, § 1 contains several pertinent definitions, as follows:

> "Fire warning system," an inherently power limited system of wires, conduits, apparatus, devices, fixtures or other appliances installed and interconnected electrically or electronically for the detection of heat, smoke, or products of combustion, or for the transmission of signals or audible alarms.
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> "Inherently power limited system," a system requiring no overcurrent protection due to design and construction.
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> "Security system," an inherently power limited system of wires, conduits, apparatus, devices, fixtures, or other appliances installed and interconnected electrically or electronically to permit access control, proprietary signaling, surveillance and the detection of burglary, intrusion, holdup, or other conditions requiring response or the transmission of signals or audible alarms.
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> "System," a fire warning, security or other inherently power limited system, wire, conduit or device which conducts or consumes electricity and is electrically or electronically activated.
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> "Systems contractor," a person, firm or corporation having a regular place of business who, by the employment of systems technicians or apprentices, performs the work of installing, repairing or maintaining wires, conduits, apparatus, devices, fixtures or other appliances used for systems; provided, however, that no systems technician so employed shall have more than one apprentice under his supervision; and provided, further, that not more than one such apprentice shall be employed for each systems technician.

"Systems technician," a person qualified to do the work of installing, repairing or maintaining wires, conduits, apparatus, devices, fixtures or other appliances used for systems.

2. M.G.L. c. 141, § 1A states, in relevant part: No person, firm or corporation shall enter into, engage in, or work at the business or occupation of installing wires, conduits, apparatus, devices, fixtures, or other appliances for carrying or using electricity for light, heat, power, fire warning or security system purposes, unless such person, firm or corporation shall be licensed by the state examiners of electricians in accordance with this chapter and, with respect to security systems, unless such person, firm or corporation shall also be licensed by the commissioner of public safety in accordance with the provisions of sections fifty-seven to sixty-one, inclusive, of chapter one hundred and forty-seven.

3. M.G.L. c. 147, § 57 states, in relevant part: No person, firm or corporation shall engage in, advertise, or hold himself or itself out as being engaged in the business of installing, repairing, or offering maintenance for security systems, notwithstanding the name or title used in describing such business, unless licensed for such purpose as provided in sections fifty-eight and fifty-nine of this chapter and section three of chapter one hundred and forty-one. Whoever violates any provision of this section shall be punished by a fine of not less than two hundred nor more than one thousand dollars or by imprisonment for not more than one year, or both.

4. M.G.L. c. 143, § 3L states, in relevant part: The board of fire prevention regulations shall make and promulgate ... rules and regulations relative to the installation, repair and maintenance of electrical wiring and electrical fixtures used for light, heat and power purposes... No person shall install for hire any electrical wiring or fixtures subject to this section without first or within five days after commencing the work giving notice to the inspector of wires appointed pursuant to the provisions of section thirty-two of chapter one hundred and sixty-six. Said notice shall be given by mailing or delivering a permit application form prepared by the board, to said inspector. Any person failing to give such notice shall be punished by a fine not exceeding five hundred dollars. This section shall be enforced by the inspector of wires within his jurisdiction and the state examiners of electricians.

Issue

The nature of the Work has evolved. Security and alarm systems services historically consisted of companies and individuals installing, repairing and maintaining primarily hardwired devices and equipment, with a minority percentage of wireless devices. Now, many of these devices and equipment communicate wirelessly, through various wireless protocols, such as Z-Wave, Zigbee, Bluetooth, Wifi, and utilize internet protocol ("IP") technology. The percentage of systems that are partially or entirely wireless has grown exponentially. In 2016, one nationally recognized security systems business reviewed its year-to-date ("YTD") sales for purposes of this Memorandum, and established the following data points:

- Of all control panel models sold YTD, 54% are enabled with a wireless receiver;

- Of the wireless enabled systems, 10% are wireless only and 90% are a combination of hardwire and wireless; and

- Of total wireless points vs hardwire points, wireless accounts for 46% while hardwire accounts for 54%.

Under the current regulatory framework, companies and individuals engaged in the Work use licensed electricians to perform the Work and obtain permits from inspectors of wires. Often, however, the Work consists of installing, repairing, maintaining, monitoring, distributing, and/or manufacturing wireless systems and systems which use IP technology. As a result, MSCA members are finding themselves in an untenable position of having to find licensed electricians to provide services that are better suited for an information technology ("IT") technician.

Thus, given the nature of the Work, and when analyzed against the language in the regulatory statutes, must individuals and companies obtain electrical licenses and permits in order to engage in the Work?

Relevant Precedent

In 1985, certain trade groups challenged regulations which mandated that fire and burglar alarm systems be installed only by licensed electricians. The Massachusetts Supreme Judicial Court ("SJC") found in favor of the trade groups, affirming the judgment of the Superior Court. See, Simon v. State Examiners of Electricians, 395 Mass. 238 (1985) (hereinafter, "Simon"). In Simon, the SJC distinguished between the work of connecting the system wires with live wires that supply electricity on the one hand, and the work of installing the component parts of an alarm system on the other hand. The SJC held the latter does not require a licensed electrician, reasoning that,

> If the examiners have the authority to regulate alarm systems installers only because the system has wires that are connected to source of electricity (often by a simple wall outlet), the examiners have an equally persuasive claim of power over those who are in the business of supplying, delivering and installing such mundane items as washing machines, television, and toasters, since they, too, have wires that are connected to a source of electricity through a wall outlet. Id. at 248-249.

The SJC concluded that the work of installing the component parts of an alarm system was not engaging in the business of installing wires, conduits, apparatus, fixtures or other appliances for carrying or using electricity "for light, heat or power purposes" and therefore did not necessitate an electrical license. Id. at 249.

In response to Simon, the legislature revised several statutes. In 1987, the legislature changed the law so that a license was required to engage in the business of installing wires, conduits, apparatus, devices, fixtures, or other appliances for carrying or using electricity "for light, heat, power, *fire warning or security system* purposes." The legislature also added a requirement that any person or company engaged in security systems work must also be licensed by the commissioner of public safety. See, M.G.L. c. 141, § 1A. Finally, the legislature added

new forms of electrical licenses, specifically for "systems contractors" and "systems technicians."

The Massachusetts courts addressed the revised statutes in July 2012. See, Carroll v. Mass. Bd. of State Examiners of Electricians, 2012 WL 3156514 (Mass. Super. Ct.) (Leibensberger, J.) (hereinafter, "Carroll"). In Carroll, solar contractors challenged the Board's authority to regulate solar installation services. The Court distinguished solar systems from alarm systems, noting the very purpose of a solar system is to provide the customer with an energy source that converts solar energy to electrical energy. Conversely, an alarm system is a product that merely uses electricity *as a source*. "A PV System is generally installed to provide electricity and is, thus, more 'electrical' in nature than the burglar and fire alarms at issue in Simon." Id. at *6.

The Court ultimately held the Board had exceeded its statutory authority by sanctioning general contractors who advertised and contracted to install solar systems. Rather, the Court pointed out that some of the work required a licensed electrician and some did not. It was incumbent on the individuals and companies performing the work to determine where that line is and to subcontract with licensed electricians or otherwise comply with the licensing requirement. Id. at *8.

In January 2013, the Massachusetts courts again found that the Board exceeded its authority, this time by affirming the efforts of several municipal wire inspectors to make contractors apply for and obtain a permit in order to install Verizon FiOS telecommunication networks. Verizon New England, Inc. v. Massachusetts Bd. of Electricians' Appeals, Norfolk Superior Court C.A. No. 11-00301 (hereinafter, "Verizon"). In her decision dated January 7, 2013, Judge Dupuis explained that "the Legislature's use of the phrase 'for light, heat [or] power purposes' in G.L. c. 143, § 3L, is one of limitation and only applies to persons who install, repair, or maintain electrical wiring or electrical fixtures that are used for light, heat, or power purposes." While acknowledging electricity is used to convert light pulses transmitted over fiber optic cables, the Court held that "telecommunications services" received by customers on the FiOS network do not constitute "light, heat, or power" under the statute, id. at p. 6, and that the authority of wire inspectors is limited to those circumstances where a person seeks to install, repair, or maintain electrical wiring and electrical fixtures used for light, heat and power purposes. Id. at pp. 8-9.

That brings us to Comcast Broadband Security, LLC v. Massachusetts Board of Electricians' Appeals, Essex Superior Court Civil Action No. 2013-0153, an administrative appeal from a decision of the Board concerning the Comcast Xfinity Home System (hereinafter, "Comcast"). Inspectors of wires from two municipalities issued cease and desist orders against Comcast Broadband Security, LLC for engaging in the installation of security systems without proper licenses and permits. Comcast appealed the cease and desist orders. The Board affirmed them in a written decision dated December 2012. Comcast filed an administrative appeal. In November 2015, the Court entered a "*Joint Stipulation and Order of Final Judgment*" annulling the Board decision and rendering the following declaration:

> The Court hereby declares, adjudges and decrees that the installation in the Commonwealth of Comcast's Xfinity Home System, in which all of the

components operate and communicate with the touch screen control panel via wireless, "plus and play" technology and which formed the basis for this appeal under M.G.L. c. 143, § 3P, does not require an electrical permit under M.G.L. c. 143, § 3L, and does not constitute a security system as defined in M.G.L. c. 141, § 1 requiring the services of a person, firm, or corporation subject to the licensing provisions of M.G.L. c. 141, § 1A.

Recommendations

Under the aforementioned statutory framework and relevant precedent, if the Work concerns the "installation, repair, or maintenance" of a hardwired system, the company or individual performing the Work must use licensed electricians to perform the Work and, for "installation," must obtain a permit from the municipal inspector of wires.

According to the logic of Comcast, there is support for the position that if the Work concerns an entirely wireless system, one "*in which all of the components operate and communicate with the touch screen control panel via wireless, 'plug and play' technology,*" it is apparent that the company or individual performing the Work need not use licensed electricians or obtain a permit. See, *Joint Stipulation and Order of Final Judgment*, dated Nov. 24, 2015 (Lang, J.).

According to the logic of Simon, Carroll and Verizon, there is support for the position that if the Work concerns a system that contains some hardwired elements and some wireless elements and/or fiber optic cabling, "*common sense dictates*" there will be some portions of the Work for which a permit and licensed electricians are required, and other portions of the Work for which they are not. As Judge Leibensberger points out in Carroll, the "*exact point*" where that line is drawn should be decided on a case-by-case basis and may be enforced through individual proceedings. See, Carroll, 2012 WL 3156514 at *8.

As it regards permitting requirements only, the enabling statute, M.G.L. c. 143, § 3L, requires that "[n]o person shall *install* for hire any electrical wiring or fixtures subject to this section without first or within five days after commencing the work giving notice to the inspector of wires." (Emphasis added) According to the logic of Simon, Carroll, Verizon and Comcast, there is support for the position that systems contractors performing services other than "installing" hardwired system elements need not obtain a permit.

For example, fire alarms, intrusion/burglar alarms, surveillance video, and access control systems all run on software and firmware. Often these systems are interfaced or integrated to work together. Both software and firmware require periodic updates and upgrades. Program settings and configurations require periodic revision. These systems operate on data networks, utilize IP technology, and in most cases, must be configured to establish secure connections outside the protected premises for alarm signaling, uploading/downloading, and diagnostic purposes, and/or for data back-up and storage purposes. Some systems require periodic Test and Inspection of processing, sensing and notification devices connected to the system. Analysis of network traffic and conflicts, bandwidth usage, and data storage utilization may be required periodically. In many cases, software programs from multiple suppliers must communicate with one another successfully, and Software Development Kits (SDK's) and Application

Programming Interfaces (API's) must be utilized, programmed, and maintained. Once the wireless or hardwired system equipment is "installed" the aforementioned service work may be performed either onsite or remotely, much of which is better suited to "IT" technicians, software programmers or other professionals who may be trained and certified in data networking, or who may be specially trained or certified by the manufacturer(s) or software supplier(s) of the System(s).

Point in fact, on December 19, 2016, the Board issued a Guidance Memo regarding the "*Licensing and permitting requirements for wireless security systems,*" in light of Comcast. In its Guidance Memo, the Board advises that a system used for security purposes is not considered a "security system" under Massachusetts law, and does not require an electrical or system license or permit, if (1) no components of the system are "hard-wired," since power is either obtained by a battery or by a standard plug inserted into a pre-existing electrical well outlet, and (2) all components of the system communicate with each other solely by means of wireless technology. See, *Guidance Memo*, dated Dec. 19, 2016.