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September 1, 2016

City of San Leandro, CA

**GROUNDS FOR APPEAL:**

**YRC Reddaway @ 2371 Polvorosa Dr (AP #79A-541-44)  
Electric Guard Dog Security Fence System**

Following are the details related to the Grounds for an Appeal for Electric Guard Dog™ to install an 8-foot tall low voltage security fence in order for us to protect the employees' lives and the property of YRC Reddaway located at 2371 Polvorosa Drive, San Leandro. YRC Reddaway is very concerned for the safety of their employees, product/equipment and trying to survive in this increasingly challenging economic environment.

Electric Guard Dog is filing appeal to Section 4-1682 Fences, Walls, and Hedges of the Zoning Code. Specifically, **B. Commercial, Professional and Industrial Districts / 2. Minimum standards for fences along street frontages. ...of equally high quality "visually transparent" style.**

The code referenced above does not strictly prohibit electrified fences and the material is consistent with being visually transparent in style. As referenced in CA State CC 835, 4.C., the San Leandro code does not prohibit the installation and operation of an electrified security fence. CC835 was unanimously passed through the Senate and supported with a detailed analysis. These documents are included for reference.

Electric Guard Dog owns and maintains the security fence for all of its locations throughout the United States. Our experience has shown that most of the time, these ordinances were written to prohibit agriculture fences from encroaching into the city. We believe that SECURITY electric fencing should be categorized differently than agricultural fencing.

Our company, Electric Guard Dog, LLC, installs perimeter security systems for non-residential locations to provide both theft protection and, more importantly, safety for employees entering the property outside of normal business hours. The Electric Guard Dog system will not create a safety hazard for police, fire, or tenants and adjacent properties. Our national experience going back to 1991 with more than 3,500 systems in operation is that professional thieves are too easily able to circumvent our security system when it is less than 10' in height. When there is a substantial difference in height between our system and the perimeter fence thieves are physically deterred and do not victimize our clients.

## CIVIL CODE

### SECTION 829-835

829. The owner of land in fee has the right to the surface and to everything permanently situated beneath or above it.

[830.] Section Eight Hundred and Thirty. Except where the grant under which the land is held indicates a different intent, the owner of the upland, when it borders on tide water, takes to ordinary high-water mark; when it borders upon a navigable lake or stream, where there is no tide, the owner takes to the edge of the lake or stream, at low-water mark; when it borders upon any other water, the owner takes to the middle of the lake or stream.

831. An owner of land bounded by a road or street is presumed to own to the center of the way, but the contrary may be shown.

832. Each coterminous owner is entitled to the lateral and subjacent support which his land receives from the adjoining land, subject to the right of the owner of the adjoining land to make proper and usual excavations on the same for purposes of construction or improvement, under the following conditions:

1. Any owner of land or his lessee intending to make or to permit an excavation shall give reasonable notice to the owner or owners of adjoining lands and of buildings or other structures, stating the depth to which such excavation is intended to be made, and when the excavating will begin.

2. In making any excavation, ordinary care and skill shall be used, and reasonable precautions taken to sustain the adjoining land as such, without regard to any building or other structure which may be thereon, and there shall be no liability for damage done to any such building or other structure by reason of the excavation, except as otherwise provided or allowed by law.

3. If at any time it appears that the excavation is to be of a greater depth than are the walls or foundations of any adjoining building or other structure, and is to be so close as to endanger the building or other structure in any way, then the owner of the building or other structure must be allowed at least 30 days, if he so desires, in which to take measures to protect the same from any damage, or in which to extend the foundations thereof, and he must be given for the same purposes reasonable license to enter on the land on which the excavation is to be or is being made.

4. If the excavation is intended to be or is deeper than the standard depth of foundations, which depth is defined to be a depth of nine feet below the adjacent curb level, at the point where the joint property line intersects the curb and if on the land of the coterminous owner there is any building or other structure the wall or foundation of which goes to standard depth or deeper then the owner of the land on which the excavation is being made shall, if given the necessary license to enter on the adjoining land, protect the said adjoining land and any such building or other structure

thereon without cost to the owner thereof, from any damage by reason of the excavation, and shall be liable to the owner of such property for any such damage, excepting only for minor settlement cracks in buildings or other structures.

833. Trees whose trunks stand wholly upon the land of one owner belong exclusively to him, although their roots grow into the land of another.

834. Trees whose trunks stand partly on the land of two or more coterminous owners, belong to them in common.

835. (a) As used in this chapter, "electrified security fence" means any fence, other than an electrified fence described in Section 17151 of the Food and Agricultural Code, that meets the following requirements:

(1) The fence is powered by an electrical energizer with both of the following output characteristics:

(A) The impulse repetition rate does not exceed 1 hertz (hz).

(B) The impulse duration does not exceed 10 milliseconds, or 10/10000 of a second.

(2) The fence is used to protect and secure commercial or industrial property.

(b) An owner of real property may install and operate an electrified security fence on his or her property subject to all of the following:

(1) The property is not located in a residential zone.

(2) The fence meets the 2006 international standards and specifications of the International Electrotechnical Commission for electric fence energizers in "International Standard IEC 60335, Part 2-76."

(3) The fence is identified by prominently placed warning signs that are legible from both sides of the fence. At a minimum, the warning signs shall meet all of the following criteria:

(A) The warning signs are placed at each gate and access point, and at intervals along the fence not exceeding 30 feet.

(B) The warning signs are adjacent to any other signs relating to chemical, radiological, or biological hazards.

(C) The warning signs are marked with a written warning or a commonly recognized symbol for shock, a written warning or a commonly recognized symbol to warn people with pacemakers, and a written warning or commonly recognized symbol about the danger of touching the fence in wet conditions.

(4) The height of the fence does not exceed 10 feet and is located behind a perimeter fence that is not less than 6 feet in height.

(c) An owner of real property shall not install and operate an electrified security fence where a local ordinance prohibits that installation and operation. If a local ordinance allows the installation and operation of an electrified security fence, the installation and operation of the fence shall meet the requirements of that ordinance and the requirements of subdivision (b).

SENATE THIRD READING  
SB 582 (Hall)  
As Amended August 17, 2015  
Majority vote

SENATE VOTE: 38-0

Committee	Votes	Ayes	Noes
Judiciary	10-0	Mark Stone, Weber, Wagner, Alejo, Chau, Chiu, Gallagher, Cristina Garcia, Maienschein, Thurmond	

**SUMMARY:** Allows a property owner to install an electrified security fence on his or her real property that is located in a non-residential zone as long as the fence meets certain specified requirements. Specifically, **this bill:**

- 1) Defines an electrified security fence as any fence, other than an electrified fence described in the Food and Agricultural Code Section 17151, that is used to protect and secure commercial property, and is powered by an electrical energizer with the following output characteristics: a) the impulse repetition rate shall not exceed 1 hertz; and b) the impulse duration shall not exceed 10 milliseconds, or 10/10000/seconds.
- 2) Requires an electrified security fence to be identified by prominently displayed warning signs that are legible from both sides of the fence and, at a minimum, placed at each gate and access point, at intervals along the fence not exceeding 30 feet, and adjacent to any other signs on the fence relating to chemical, radiological, or biological hazards.
- 3) Requires, in the event that a local ordinance allows the installation and operation of an electrified security fence, an owner of real property with an electrified security fence to comply with the installation and operation requirements of that local ordinance, as well as the requirements set forth above.

**EXISTING LAW:**

- 1) States that the Legislature finds and declares that improperly designed and installed electrified fences have caused injuries and in some instances have resulted in the deaths of persons, particularly children, coming into contact with the conductive elements thereof and that in order to prevent further such accidents, it is the intent of the Legislature to provide for the study and development and enforcement of safety standards for electrified fences.
- 2) Provides that "electrified fence" means any fence and appurtenant devices, including, but not limited to, fences and devices used in animal control, and including, but not limited to, a fence consisting of a single strand of wire supported by posts or other fixtures, which has an electrical charge or is connected to a source of electrical current and which is so designed or placed that a person or animal coming into contact with the conductive element of the fence receives an electrical shock.

- 3) Prohibits the sale or installation of electrified fences in California, unless the electric current is limited and regulated by an electrical controller that meets or exceeds the standards or specifications of the National Electrical Code of the National Fire Protection Association, the New Zealand Standards Institute, the Standards Association of Australia, or the Underwriters Laboratories for intermittent type electric fence or electrified fence controllers.
- 4) Provides that cities and counties may regulate the installation and use of electrified fences, as long as local ordinances are consistent with state law.
- 5) Provides that local jurisdictions have the authority to make and enforce ordinances that protect the public health, safety, morals, and general welfare within its boundaries.

**FISCAL EFFECT:** None

**COMMENTS:** Electrified security fences are designed to protect commercial and industrial property. These fences are generally constructed of metal with attached wires that run along the width of the fence, carrying pulses of electric current to deter potential trespassers. Most electrified security fences are rigged with an alarm system to signal the property owner or the security company when the fence is touched. These fences are designed to provide a physical and psychological deterrent to potential intruders.

Existing law prohibits the sale or installation of electrified fences in California, unless the electrical current is limited and regulated by an electrical controller that meets or exceeds the standards or specifications for intermittent type electric fence or electrified fence controllers of the National Electrical Code of the National Fire Protection Association, the New Zealand Standards Institute, the Standards Association of Australia, or Underwriters Laboratories. Existing law regarding electrified fences is in the Food and Agricultural Code and was clearly written to address electrified fences that are designed to contain livestock, which use a much higher voltage than what is allowed for and used by electrified security fences. Furthermore, the Food and Agricultural Code provisions, last amended in 1979, are so outdated that two of the four standards in the relevant code section are no longer in effect, and the remaining standards are inapplicable to electrified security fences.

Some municipalities have their own zoning and permitting ordinances that specifically allow electrified security fences, despite the fact that such ordinances may conflict with the provisions of the Food and Agricultural Code, but many others do not. As a result, municipalities across the state are unsure what state laws, if any, apply to electrified security fences.

This bill establishes standards for the installation and operation of electrified security fences, which outline the zoning, voltage, signage warnings, physical barrier clearance, and access requirements that are appropriate for electrified security fences. This bill does not impede local jurisdictions' authority to allow, prohibit or restrict the installation and operation of electrified security fences within their boundaries. However, this bill does require that if a local ordinance allows the installation and operation of an electrified security fence, the installation and operation must meet the ordinance requirements, as well as the requirements contained in this bill. Also, if a jurisdiction does not have an ordinance in place to prohibit or limit the installation and operation of an electrified security fence, this bill would allow for the installation and operation of such a fence.

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UNFINISHED BUSINESS

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Bill No: SB 582  
Author: Hall (D)  
Amended: 8/17/15  
Vote: 21

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SENATE JUDICIARY COMMITTEE: 7-0, 5/12/15

AYES: Jackson, Moorlach, Anderson, Hertzberg, Leno, Monning, Wieckowski

SENATE FLOOR: 38-0, 5/22/15

AYES: Allen, Anderson, Bates, Beall, Berryhill, Block, Cannella, De León, Gaines, Galgiani, Hall, Hancock, Hernandez, Hertzberg, Hill, Hueso, Huff, Jackson, Lara, Leno, Leyva, Liu, McGuire, Mendoza, Mitchell, Monning, Moorlach, Morrell, Nguyen, Nielsen, Pan, Pavley, Roth, Runner, Stone, Vidak, Wieckowski, Wolk

NO VOTE RECORDED: Fuller

ASSEMBLY FLOOR: 79-0, 8/20/15 - See last page for vote

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**SUBJECT:** Electrified fences

**SOURCE:** Electric Guard Dog, Inc.

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**DIGEST:** This bill authorizes an owner of real property to install and operate an electrified fence on his or her property if the property is not in a residential zone, the fence meets specified requirements, and a local ordinance does not prohibit its installation and operation.

*Assembly Amendments* specify additional requirements for authorized electrified fences, including minimum standards for warning signs, fence placement, and operating characteristics.

**ANALYSIS:**

Existing law:

- 1) Provides that no electrified fences shall be offered for sale, sold, installed, or used in this state, or otherwise connected to a source of electrical current, unless the electrical current is limited and regulated by an electrical controller which meets or exceeds the standards or specifications of the National Electrical Code of the National Fire Protection Association, the New Zealand Standards Institute, the Standards Association of Australia, or the Underwriters Laboratories for intermittent type electric fence or electrified fence controllers. (Food & Agr. Code Sec. 17152.)
- 2) Provides that existing provisions of the Food and Agricultural Code pertaining to electric fences shall not be construed to preclude regulation of electrified fences by cities and counties, including, but not limited to, requiring the installation or use of electrified fences under permit, except that such regulation shall not permit the installation or use of electrified fences which do not conform to the requirements of existing law. (Food & Agr. Code Sec. 17153.)

This bill:

- 1) States that an owner of real property may install and operate an electrified security fence on his or her property, provided the property is not located in a residential zone, and provided the fence meets the 2006 international standards and specifications of the International Electrotechnical Commission for electric fence energizers in "International Standard IEC 60335, Part 2-76."
- 2) Specifies that the height of an electrified security fence may not exceed 10 feet, and that the fence must be located behind a perimeter fence that is not less than six feet in height.
- 3) Requires an electrified security fence to be identified by prominently placed warning signs that are legible from both sides of the fence, and specifies, at a minimum, that the warning signs shall meet all of the following criteria:
  - The warning signs are placed at each gate and access point, and at intervals along the fence not exceeding 30 feet;
  - The warning signs are adjacent to any other signs relating to chemical, radiological, or biological hazards; and
  - The warning signs are marked with a written warning or a commonly recognized symbol for shock, a written warning or a commonly recognized symbol to warn people with pacemakers, and a written warning or

commonly recognized symbol about the danger of touching the fence in wet conditions.

- 4) Defines “electrified security fence” to mean any fence, except as specified, that meets the following requirements:
  - The fence is powered by an electrical energizer where the impulse repetition rate does not exceed one hertz and the impulse duration does not exceed 10 milliseconds; and
  - The fence is used to protect and secure commercial or industrial property.
- 5) Provides that an owner of real property shall not install and operate an electric fence where a local ordinance prohibits that installation and operation. If a local ordinance allows the installation and operation of an electric fence, the installation and operation of the electric fence shall meet the requirements of the ordinance, as well as the requirements listed above.
- 6) Makes other technical and conforming changes to existing law.

## **Background**

Generally speaking, an electric fence is a fence that has an electrical charge that is designed or placed so that a person or animal coming into contact with the fence receives an electric shock. It operates by sending a high voltage pulse of electricity at regular intervals through conductive materials in the fence. Unlike other physical boundaries like barbed wire or razor wire, commercial electric fences do not physically harm things that come into contact with them. Electric fences do not cause physical harm to animals or people because the length of electric shock delivered by the fence is very brief. According to one scholar:

“[e]ven when the voltage is high, when the current flows for only a very short duration we cannot be electrocuted. . . . A large enough current can cause ventricular fibrillation,” during which “the pumping action of the heart ceases and death occurs within minutes unless treated. In the United States, approximately 1000 deaths per year occur in accidents that involve cord-connected appliances in kitchens, bathrooms, and other wet locations . . . shock durations longer than 1 second are the most dangerous . . . [e]lectric security fences have taken advantage of this fact by shortening their shock duration to an even shorter duration of about 0.0003 seconds . . . electric fences are safe and do not lead to ventricular fibrillation due to the short 0.0003 second shock



duration. (John Webster, *Safety of Electric Security Fences*, University of Wisconsin - Madison, <<http://intelligentfencing.com/schematics/Safety/Safety%20of%20electric%20security%20fences.pdf> [as of May 8, 2015].)

The sale of electric fences is currently prohibited in California unless the electrical current is limited and regulated by an electrical controller that meets or exceeds specified standards. (Food & Agr. Code Sec. 17152.) This bill further codifies that a property owner may install and operate an electrified fence if: (1) the property is not in a residential zone; (2) the fence meets requirements specified in designated international standards, and (3) the fence is marked at regular intervals with warning signs. This bill specifies that an owner would not be permitted to install and operate an electric fence where a local ordinance prohibits its installation and operation, and would require the electric fence to be secured behind a perimeter fence.

## Comments

According to the author:

Many California-based companies that are in the cargo transportation, inventory storage and containment shipping business have, at any given time, millions of dollars worth of products and service-related equipment on their premises. Storage is often held overnight for several days or weeks awaiting transport. The primary protection of valuable goods and equipment is a security fence, designed to prevent criminal trespass and theft. The installation of an electric security fence in a jurisdiction is subject to permitting and approval. Current state law on the use and installation of an electric security fence in non-agricultural zones is vague. There is no consensus among local jurisdictions whether or not they can allow the installation of electric security fences.

SB 582 provides clear guidelines for the installation of electric security fences, based on international standards ensuring their safe and reliable installation in non-residential zones. Existing international standards require the installation of a perimeter fence at least six feet tall separating the public from the electrified fence. Additionally, to ensure the safety of the public, warning signs must be visibly posted in at least two languages (English and Spanish) and access for emergency responders must be available. This bill helps the permitting process in local ordinances by clarifying state law, and regulating the use and installation of an electric security fence in non-residential zones.

**FISCAL EFFECT:** Appropriation: No Fiscal Com.: No Local: No

**SUPPORT:** (Verified 8/21/15)

Electric Guard Dog, Inc. (source)  
ABF Freight System, Inc  
Copart, Inc  
Old Dominion Freight  
SA Recycling, LLC  
SAIA Freight, LTL  
Westward Liberty  
YRC Freight Worldwide

**OPPOSITION:** (Verified 8/21/15)

None received

**ASSEMBLY FLOOR:** 79-0, 8/20/15

**AYES:** Achadjian, Alejo, Travis Allen, Baker, Bigelow, Bloom, Bonilla, Bonta, Brough, Brown, Burke, Calderon, Campos, Chang, Chau, Chávez, Chiu, Cooley, Cooper, Dababneh, Dahle, Daly, Dodd, Eggman, Frazier, Beth Gaines, Gallagher, Cristina Garcia, Eduardo Garcia, Gatto, Gipson, Gomez, Gonzalez, Gordon, Gray, Grove, Hadley, Harper, Roger Hernández, Holden, Irwin, Jones, Jones-Sawyer, Kim, Lackey, Levine, Linder, Lopez, Low, Maienschein, Mathis, Mayes, McCarty, Medina, Melendez, Mullin, Nazarian, Obernolte, O'Donnell, Olsen, Patterson, Perea, Quirk, Rendon, Ridley-Thomas, Rodriguez, Salas, Santiago, Steinorth, Mark Stone, Thurmond, Ting, Wagner, Waldron, Weber, Wilk, Williams, Wood, Atkins

**NO VOTE RECORDED:** Chu

Prepared by: Tobias Halvarson / JUD. / (916) 651-4113  
8/21/15 13:20:15

\*\*\*\* **END** \*\*\*\*

**SENATE JUDICIARY COMMITTEE**  
**Senator Hannah-Beth Jackson, Chair**  
**2015-2016 Regular Session**

SB 582 (Hall)  
Version: April 7, 2015  
Hearing Date: May 12, 2015  
Fiscal: No  
Urgency: No  
TH;jt

**SUBJECT**

Electrified Fences

**DESCRIPTION**

This bill would authorize an owner of real property to install and operate an electrified fence on his or her property if the property is not in a residential zone, the fence meets specified requirements, and a local ordinance does not prohibit its installation and operation.

**BACKGROUND**

Generally speaking, an electric fence is a fence that has an electrical charge that is designed or placed so that a person or animal coming into contact with the fence receives an electric shock. It operates by sending a high voltage pulse of electricity at regular intervals through conductive materials in the fence. Unlike other physical boundaries like barbed wire or razor wire, commercial electric fences do not physically harm things that come into contact with them. Electric fences do not cause physical harm to animals or people because the length of electric shock delivered by the fence is very brief. According to one scholar:

“[e]ven when the voltage is high, when the current flows for only a very short duration we cannot be electrocuted. . . . A large enough current can cause ventricular fibrillation,” during which “the pumping action of the heart ceases and death occurs within minutes unless treated. In the United States, approximately 1000 deaths per year occur in accidents that involve cord-connected appliances in kitchens, bathrooms, and other wet locations . . . shock durations longer than 1 second are the most dangerous . . . [e]lectric security fences have taken advantage of this fact by shortening their shock duration to an even shorter duration of about 0.0003 seconds . . . electric fences are safe and do not lead to ventricular fibrillation due to the short 0.0003 second shock duration. (John Webster, *Safety of Electric Security Fences*, University of Wisconsin - Madison, <<http://intelligentfencing.com/>

schematics/Safety/Safety%20of%20electric%20security%20fences.pdf> [as of May 8, 2015].)

The sale of electric fences is currently prohibited in California unless the electrical current is limited and regulated by an electrical controller that meets or exceeds specified standards. (Food & Agr. Code Sec. 17152.)

This bill would further codify that a property owner may install and operate an electrified fence if: (1) the property is not in a residential zone; and (2) the fence meets requirements specified by the International Electrotechnical Commission for electric fence energizers. This bill would specify that an owner would not be allowed to install and operate a fence where a local ordinance prohibits that installation and operation.

#### **CHANGES TO EXISTING LAW**

Existing law provides that no electrified fences shall be offered for sale, sold, installed, or used in this state, or otherwise connected to a source of electrical current, unless the electrical current is limited and regulated by an electrical controller which meets or exceeds the standards or specifications of the National Electrical Code of the National Fire Protection Association, the New Zealand Standards Institute, the Standards Association of Australia, or the Underwriters Laboratories for intermittent type electric fence or electrified fence controllers. (Food & Agr. Code Sec. 17152.)

Existing law provides that existing provisions of the Food and Agricultural Code pertaining to electric fences shall not be construed to preclude regulation of electrified fences by cities and counties, including, but not limited to, requiring the installation or use of electrified fences under permit, except that such regulation shall not permit the installation or use of electrified fences which do not conform to the requirements of this chapter. (Food & Agr. Code Sec. 17153.)

This bill would provide that an owner of real property may install and operate an electrified fence on his or her property consistent with all of the following: (1) the property is not located in a residential zone; and (2) the fence meets the requirements specified by the International Electrotechnical Commission for electric fence energizers in "International Standard 60335-2-76."

This bill would further provide that an owner of real property shall not install and operate an electric fence where a local ordinance prohibits that installation and operation. If a local ordinance allows the installation and operation of an electric fence, the installation and operation of the electric fence shall meet the requirements of the ordinance, as well as the requirements listed above.

## COMMENT

### 1. Stated need for the bill

According to the author:

Many California-based companies that are in the cargo transportation, inventory storage and containment shipping business have, at any given time, millions of dollars worth of products and service-related equipment on their premises. Storage is often held overnight for several days or weeks awaiting transport. The primary protection of valuable goods and equipment is a security fence, designed to prevent criminal trespass and theft. The installation of an electric security fence in a jurisdiction is subject to permitting and approval. Current state law on the use and installation of an electric security fence in non-agricultural zones is vague. There is no consensus among local jurisdictions whether or not they can allow the installation of electric security fences.

SB 582 provides clear guidelines for the installation of electric security fences, based on international standards [e]nsuring [their] safe and reliable installation in non-residential zones. Existing international standards require the installation of a perimeter fence at least six feet tall separating the public from the electrified fence. Additionally, to [e]nsure the safety of the public, warning signs must be visibly posted in at least two languages (English and Spanish) and access for emergency responders must be available. This bill helps the permitting process in local ordinances by clarifying state law, and regulating the use and installation of an electric security fence in non-residential zones.

### 2. Ensuring Safety and Local Control

Existing law imposes certain safety standards for the installation and use of electric fences by prohibiting their sale or installation unless the fence's electrical current is limited and regulated by an electrical controller which meets or exceeds the standards or specifications of the National Electrical Code of the National Fire Protection Association, the New Zealand Standards Institute, the Standards Association of Australia, or the Underwriters Laboratories for intermittent type electric fence or electrified fence controllers. (Food & Agr. Code Sec. 17152.) This bill would clarify that electric fences may be installed and used in non-agricultural settings provided they also conform to the requirements specified by the International Electrotechnical Commission for electric fence energizers in "International Standard 60335-2-76."

As in existing law, this bill preserves the authority of local agencies to regulate the installation or use of electric fences within their jurisdictions, provided such regulations meet the safety requirements established in state law. This bill would specify that local agencies may regulate or prohibit by ordinance the installation and operation of electric

fences within their jurisdictions. However, this bill would prohibit outright the use or operation of electric fences in residential zones. Allowing local agencies to maintain control over the installation and use of electric fences empowers those jurisdictions to weigh such issues as whether or not electric fence use should be permitted in mixed use zones adjacent to residential areas, or whether they should be permitted in areas near to where children play or other areas with high pedestrian traffic.

Despite their non-lethality, coming into contact with an electric fence is unpleasant. In order to protect individuals from unintentionally coming into contact with an electric fence, International Standard IEC 60335-2-76 contains provisions specifying the size and placement of warning signs. To ensure that warning signs are appropriately placed on electric fence installations governed by this bill, the author offers the following amendment that would codify part of the IEC's warning sign standard:

Author's Amendment:

On page 2, between lines 7 and 8, insert: "(3) The fence is identified by prominently placed warning signs that are legible from both sides of the fence. At a minimum, warning signs shall be placed at each gate and access point, at intervals along the fence not exceeding 10 meters, and adjacent to any other signs relating to chemical, radiological, or biological hazards."

Support: ABF Freight System, Inc.; Copart, Inc.; Old Dominion Freight Line, Inc.; SA Recycling LLC; SAIA LTL Freight; YRC Worldwide, Inc.

Opposition: None Known

HISTORY

Source: Electric Guard Dog, Inc.

Related Pending Legislation: None Known

Prior Legislation: None Known

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Date of Hearing: July 14, 2015

ASSEMBLY COMMITTEE ON JUDICIARY  
Mark Stone, Chair  
SB 582 (Hall) – As Amended May 19, 2015

As Proposed to be Amended

SENATE VOTE: 38-0

SUBJECT: ELECTRIFIED SECURITY FENCES

**KEY ISSUE:** SHOULD THE STATE ALLOW PROPERTY OWNERS TO INSTALL AND OPERATE ELECTRIFIED SECURITY FENCES ON REAL PROPERTY IN NON-RESIDENTIAL ZONES AS LONG AS THE FENCES MEET SPECIFIED ELECTRICAL STANDARDS, HEIGHT LIMITS, AND WARNING REQUIREMENTS AND ARE NOT PROHIBITED BY LOCAL ORDINANCE?

**SYNOPSIS**

*This bill, as proposed to be amended, seeks to allow the installation and operation of electrified security fences in all non-residential zones of the state, as long as the fences meet specified electrical standards, height requirements, and are posted with adequate warning signs and are not prohibited by local ordinance. Existing law provides that the sale or installation of electrified fences is prohibited in California, unless the electrical current is limited and regulated by an electrical controller that meets or exceeds the standards or specifications for intermittent type electric fence or electrified fence controllers of the National Electrical Code of the National Fire Protection Association, the New Zealand Standards Institute, the Standards Association of Australia, or Underwriters Laboratories. There is currently no state law regarding the specific installation and operation of electrified security fences. Existing law regarding electrified fences is in the Food and Agricultural Code and was clearly written to address electrified fences that are designed to contain livestock, which use a much higher voltage than what is allowed for and used by electrified security fences. Furthermore, the Food and Agricultural Code provisions, last amended in 1979, are so outdated that two of the four standards in the relevant code section are no longer in effect, and the remaining standards are inapplicable to electrified security fences.*

*Some municipalities have their own zoning and permitting ordinances that specifically allow electrified security fences, despite the fact that such ordinances may conflict with the provisions of the Food and Agricultural Code, but many others do not. As a result, municipalities across the state are unsure what state laws, if any, apply to electrified security fences. This bill establishes standards for the installation and operation of electrified security fences, which outline the zoning, voltage, signage warnings, physical barrier clearance, and access requirements that are appropriate for electrified security fences. This bill does not impede local jurisdictions' authority to allow, prohibit or restrict the installation and operation of electrified security fences within their boundaries. However, the bill does require that if a local ordinance allows the installation and operation of an electrified security fence, the installation and operation must meet the ordinance requirements, as well as the requirements contained in this bill. Also, if a jurisdiction does not have an ordinance in place to prohibit or limit the installation and operation of an electrified security fence, this bill would allow for the installation and operation of such a fence. This bill, which passed the Senate by a vote of 38-0,*

*is sponsored by a supplier of electrified security fences, supported by several large-equipment businesses and freight companies, and has no opposition.*

**SUMMARY:** Allows a property owner to install an electrified security fence on his or her real property that is located in a non-residential zone as long as the fence meets certain specified requirements. Specifically, **this bill:**

- 1) Defines an electrified security fence as any fence, other than an electrified fence described in Section 17151 of the Food and Agricultural Code, that is used to protect and secure commercial property, and is powered by an electrical energizer with the following output characteristics: (a) the impulse repetition rate shall not exceed 1 hertz (hz); and (b) the impulse duration shall not exceed 0.0003 or 0.8 times per second.
- 2) Allows an owner of real property to install and operate an electrified security fence on his or her property as long as the real property is located in a non-residential zone and the electrified security fence meets specified requirements.
- 3) Prohibits an owner of real property from installing and operating an electrified security fence where a local ordinance prohibits that installation and operation.
- 4) Requires an electrified security fence to be identified by prominently displayed warning signs that are legible from both sides of the fence, and at a minimum placed at each gate and access point, and at intervals along the fence not exceeding 30 feet, and adjacent to any other signs on the fence relating to chemical, radiological, or biological hazards.
- 5) Requires, in the event that a local ordinance allows the installation and operation of an electrified security fence, an owner of real property with an electrified security fence to comply with the installation and operation requirements of that local ordinance, as well as the requirements set forth above in #1-4.

**EXISTING LAW:**

- 1) States that the Legislature finds and declares that improperly designed and installed electrified fences have caused injuries and in some instances have resulted in the deaths of persons, particularly children, coming into contact with the conductive elements thereof. In order to prevent further such accidents, it is the intent of the Legislature to provide for the study and development and enforcement of safety standards for electrified fences. (Food & Agricultural Code 17150. Unless stated otherwise, all further statutory references are to that code.)
- 2) Provides that, "electrified fence" means any fence and appurtenant devices, including, but not limited to, fences and devices used in animal control, and including, but not limited to, a fence consisting of a single strand of wire supported by posts or other fixtures, which has an electrical charge or is connected to a source of electrical current and which is so designed or placed that a person or animal coming into contact with the conductive element of the fence receives an electrical shock. (Section 17151.)
- 3) Provides that the sale or installation of electrified fences is prohibited in California, unless the electric current is limited and regulated by an electrical controller that meets or exceeds the standards or specifications of the National Electrical Code of the National Fire Protection



Association, the New Zealand Standards Institute, the Standards Association of Australia, or the Underwriters Laboratories for intermittent type electric fence or electrified fence controllers. (Section 17152.)

- 4) Provides that state law pertaining to electrified fences shall not be construed to preclude regulation of electrified fences by cities and counties, including, but not limited to, requiring the installation or use of electrified fences under permit, except that such regulation shall not permit the installation or use of electrified fences which do not conform to existing state law. (Section 17153.)
- 5) Provides that local jurisdictions have the authority to make and enforce ordinances that protect the public health, safety, morals, and general welfare within its boundaries. (Cal. Const., art. XI, Section 11.)

**FISCAL EFFECT:** As currently in print this bill is keyed non-fiscal.

**COMMENTS:** Electrified security fences are designed to serve as a non-lethal security measure for the perimeter of real property. These fences are generally constructed of metal with attached wires that run along the width of the fence, carrying pulses of electric current that provide an unpleasant, yet non-lethal shock to deter potential trespassers. Most electrified security fences are rigged with an alarm system that is setup to signal the property owner or the security company when the fence is being tampered with. These fences are designed to provide a physical and psychological deterrent to potential intruders, and generally have visible warning signs that provide alerts of existing hazards about which the security fence owner or property owner are required to warn others. Currently, most electrified security fences in the U.S. are used in industrial and commercial zones to protect property located within the perimeter of the fence, such as in an equipment yard or commercial storage facility.

According to the author:

Current state law on the use and installation of an electric security fence in non-agricultural zones is vague. There is no consensus among local jurisdictions whether or not they can allow the installation of electric security fences. The problem stems from the fact that there is no American standard or guidelines for the installation of electrified fences specifically directed to municipalities. Municipalities across the state sometimes default to the current law regarding electrified fences in the Agricultural Code and claim that it is not clear that electrified fences can be installed outside of Agricultural zones. SB 582 will resolve this issue by providing clear guidelines for the installation of electric security fences, based on international standards insuring [their] safe and reliable installation in non-residential zones.

**Zoning Authority Belongs to Local Governments.** The California Constitution grants a local jurisdiction the power to make and enforce ordinances that affect all local, police, sanitary and other regulations within its boundaries. (Cal. Const., art. XI, Section 11.) According to a 1925 California Supreme Court case, “[A]ny zoning regulation is a valid exercise of the police power which is necessary to subserve the ends for which the police power exists, namely, the promotion of the public health, safety, morals, and general welfare.” (*Miller v. Board of Public Works* (1925) 195 Cal. 477, 481.)

individual interest. (5 Cal. Jur. Constitution Law, Section 94.) The Legislature has the authority to specify the task to be accomplished, but may leave the actual task of setting standards, drafting regulations, and other tasks to those who are more knowledgeable or capable of accomplishing the task. It is very common for the Legislature to authorize a study, or to require the implementation of certain standards, and then to delegate the authority for providing the study or creating standards to a body, commission, state department or other body with the required expertise. The provisions of this bill propose to have a standard adopted by the IEC be the standard for electrification of security fences. Based upon the fact that the IEC is an international commission, comprised of industry professionals, state government officials, and scholars in the field of electrotechnology, delegating to the Commission's standards for electric fence energizers seems an appropriate delegation of legislative authority. Also, this bill is not a permanent delegation of authority to the IEC (i.e. whenever the IEC standard is updated it would become the new law of the state) because the standard is specified as the IEC adopted in 2006 and therefore frozen in time.

***Author's Amendments.*** As currently in print, the bill provides that its provisions apply to electrified fences, but makes no effort to distinguish them from the electrified fences which are described in the Food and Agricultural Code. To avoid confusion regarding various types of electrified fencing that may be obtained in the market place, the author proposes amendments to clarify that this bill's provisions are intended to apply to electrified *security* fences and provides a definition of such fences. This will help to distinguish electrified security fences which are designed for commercial security purposes to protect items such as large equipment and inventory, from the electrified fences that are defined in the Food and Agricultural Code and are designed for animal containment and rural environments. Also, because electrified security fences have been determined to be non-lethal under normal, dry conditions, but, according to a study published by professors at the University at Wisconsin and mentioned earlier in this analysis, unsafe when exposed to an electrical current under wet conditions, the author proposes an amendment to address this concern by requiring the inclusion of a warning sign or symbol to this effect on electrified security fences installed in the state. Further, based on the advice and warnings of the American Heart Association for persons with pace makers and the possible interference of the device's function by close proximity to an electric fence, the author proposes an amendment to warn of this possibility by requiring the inclusion of a warning sign or symbol to this effect on electrified security fences installed in the state.

***ARGUMENTS IN SUPPORT:*** According to the sponsor, Electric Guard Dog:

Many California-based companies that are in the cargo transportation, inventory storage and containment shipping business have, at any given time, millions of dollars' worth of products and service-related equipment on their premises. Storage is often held overnight for several days or weeks awaiting transport.

The primary protection of valuable goods and equipment is a security fence, designed to prevent criminal trespass and theft. The installation of an electric security fence by the local jurisdiction is subject to permitting and approval.

This bill helps the permitting process in local ordinances by clarifying state law, and regulating the use and installation of an electric [security] fence in non-residential zones.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

Electric Guard Dog, Inc. (sponsor)  
ABF Freight System, Inc.  
Copart, Inc.  
Old Dominion Freight Line, Inc.  
SA Recycling, LLC  
SAIA LTL Freight  
Westward Liberty  
YRC Worldwide, Inc.

**Opposition**

None on file

**Analysis Prepared by:** Khadijah Hargett / JUD. / (916) 319-2334

## SB 582 (Hall) mock up

Add Civil Code Section 835.

(a) As used in this chapter, "electrified security fence" means any fence, other than an electrified fence described in Section 17151 of the Food and Agricultural Code, that meets the following requirements:

- 1) The fence is powered by an electrical energizer with the following output characteristics: (A) the impulse repetition rate does not exceed 1 hertz (hz); and (B) The impulse duration shall not exceed 0.0003, or a rate of 0.8 times per second.
- 2) The fence is used to protect and secure commercial property.

(b) Subject to subdivision (b), an ~~An~~ owner of real property may install and operate an electrified security fence on his or her property consistent with subject to all of the following:

- (1) The property is not located in a residential zone.
  - (2) The fence meets the requirements specified by 2006 international standards and specifications of the International Electrotechnical Commission for electric fence energizers in "International Standard IEC 60335, Part 2-76."
  - (3) The fence is identified by prominently placed warning signs that are legible from both sides of the fence. At a minimum, the warning signs shall meet the following criteria:
- (A) The warning signs are placed at each gate and access point, and at intervals along the fence not exceeding ~~10 meters and adjacent~~ 30 feet.
- (B) The warning signs are adjacent to any other signs relating to chemical, radiological, or biological hazards
- (C) The warning signs are marked with an international symbol for shock, the international symbol warning people with pacemakers that they should avoid contact with the fence, and a warning or symbol about the danger of touching the fence in wet conditions.

(4) The height of the fence does not exceed ten feet and is located behind a perimeter fence that is at least six feet in height.

~~(b) (c)~~ (c) An owner of real property shall not install and operate an electric electrified security fence where a local ordinance prohibits that installation and operation. If a local ordinance allows the installation and operation of an electric electrified security fence, the installation and operation of the fence shall meet the requirements of that ordinance and the requirements of paragraphs (1) and (2) to (3), ~~inclusive~~, of subdivision ~~(a)~~ (b).

Amend Food and Agricultural Code Section 17151 as follows:

17151. (a) As used in this chapter, "electrified fence" means any fence and appurtenant devices, including, but not limited to, fences and devices used in animal control, and including, but not limited to, a fence consisting of a single strand of wire supported by posts or other fixtures, which has an electrical charge or is connected to a source of electrical current and which is so

designed or placed that a person or animal coming into contact with the conductive element of the fence receives an electrical shock.

**(b) For purposes of this chapter, "electrified fence" does not include an electrified security fence described in Section 835 of the Civil Code.**

**Amend Food and Agricultural Code Section 17152 as follows:**

17152. No electrified fences shall be offered for sale, sold, installed, or used in this state, or otherwise connected to a source of electrical current, unless the electrical current is limited and regulated by an electrical controller which meets or exceeds the standards or specifications of the National Electrical Code of the National Fire Protection Association, **international standards of the International Electrotechnical Commission**, ~~the New Zealand Standards Institute, the Standards Association of Australia,~~ or the Underwriters Laboratories for intermittent type electric fence or electrified fence controllers.