Fundamentals of Non-Lethal Electric Fence Installation

This guide outlines the essential steps and components for proper electric fence installation to ensure functionality, durability, and safety

1. Fence Height and Wire Configuration:

- A standard electric fence is typically 8 feet high, consisting of 25 strands of 12½-gauge high-strain wire, tensioned at approximately 50 foot-pounds.
- For a 10 ft high fence, 30 strands of wire are required.

2. Corner Posts and Anchoring:

- Corner posts must be securely anchored and braced to prevent them from being pulled over under tension.
- When installing an electric fence inside a chain-link fence, the chain-link structure can support the angle brackets for the electric fence strands. In such cases, ensure the chain-link corners are properly braced to handle the additional load.

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3. Freestanding Fence Post Requirements:

- Use posts with a minimum diameter of 3 inches.
- Place a 2-inch stay at a 45° angle to the strain post, positioned two-thirds to three-quarters up the post length.
- Adjust post installation based on soil conditions for stability.

4. Spacing and Placement of Strain Posts:

- Strain posts should be placed no more than 300 feet apart.
- Install strain posts where the fence changes direction from a straight line.

5. Angle Strain Brackets:

- Attach angle strain brackets to the corner and strain posts using brace bands or weld them securely.

6. Aligning Intermediate Posts:

- Once corner and strain posts are set, stretch the bottom wire between them to ensure intermediate posts are aligned in a straight line.

7. Intermediate Post Spacing:

- Space intermediate posts at 10-foot intervals.

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8. Securing Fence Strands:

- Secure each strand to the tension bracket with an S-hook and jumbo insulator at one end.
- Use a tensioner and spring hook at the opposite end.

9. Completing the Wire Array:

- Continue securing the strands around the perimeter.
- Connect strands in a series loop, following the fence's zone configuration.

10. High-Voltage and Ground Grid Connection:

- Interlace high-voltage loops with a grounding grid throughout the fence.
- Refer to the provided diagram for detailed connections.

11. Top and Return Strands:

- The top strand carries the live current (hot).
- The second-from-bottom strand returns the hot to the energizer.

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12. Gate Contact Connections:

- For sliding gates, fit gate contacts to ensure continuity of the electric circuit when closed.
- For swing gates, use under-gate cable (UGC) coils to connect the gate strands to the series loop.

13. Earthing/Grounding System:

- A robust grounding system is critical for effective operation.
- Install ground rods spaced 300 to 500 feet apart, connected to the fence's earth grid.
- At least three ground rods should be installed at the energizer, spaced 3 feet apart and connected to the energizer's ground terminal.

14. Warning Signs:

- Warning signs shall be placed on the fence at 30-foot intervals and at every gate.

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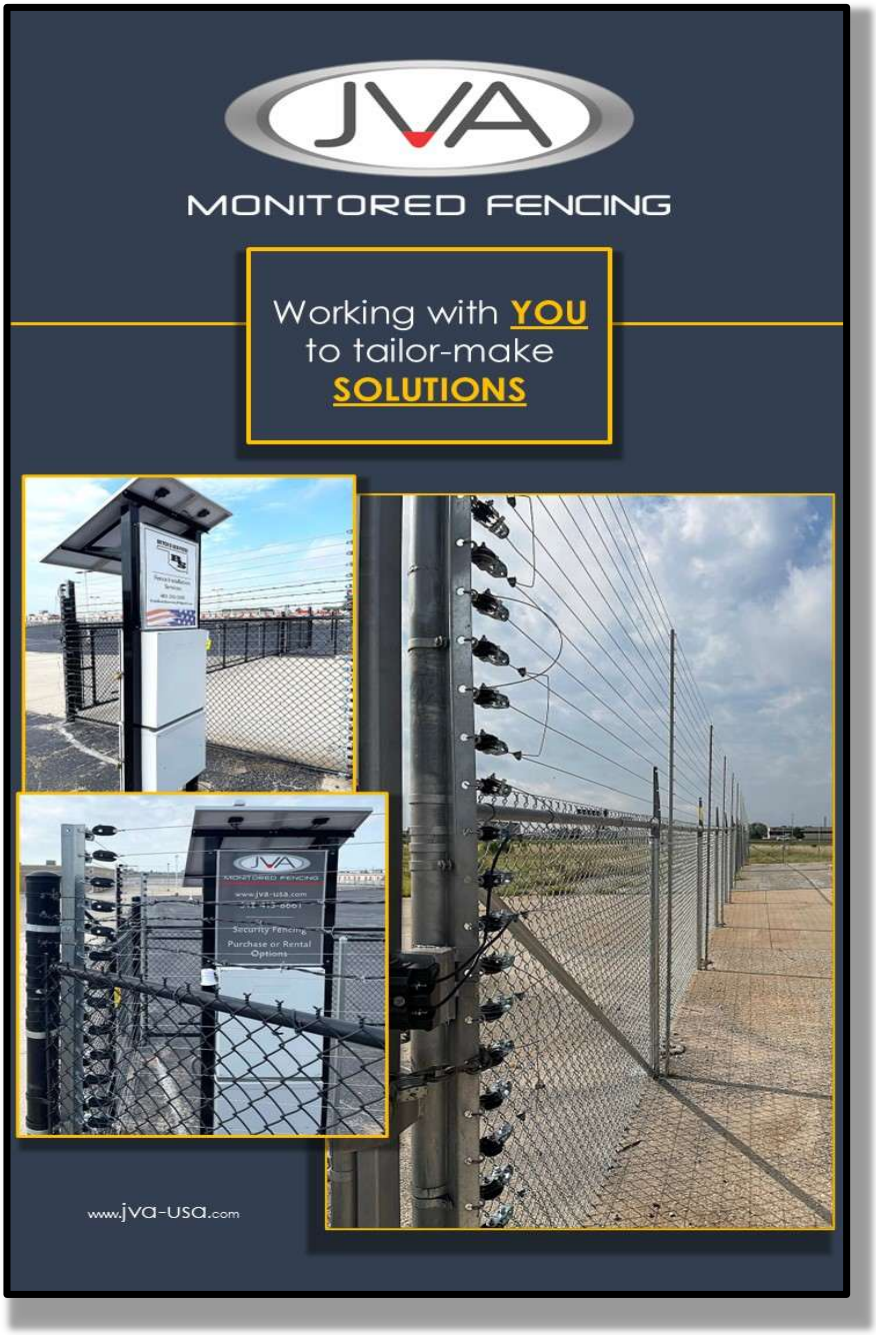

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