

Referred to Public Works &  
Sustainability 2/18/20

RESOLUTION NO. 2020-14

Bullock, Kepple, Litten, Neff, O'Malley, Rader,  
BY: Shachner

A RESOLUTION to take effect immediately provided it receives the affirmative vote of at least two thirds of the members of Council, or otherwise to take effect and be in force after the earliest period allowed by law, authorizing the Mayor, Director of Public Works or Law Director to enter into agreements necessary to allow the Ohio Director of Transportation to complete the upgrade of guardrails on Clifton Blvd. near Lake Road in the City of Lakewood.

WHEREAS, the State has identified the need for the described project: Upgrade guardrail end treatment on Clifton Blvd (US -6) near Lake Road in the City of Lakewood. this work is part of a larger ODOT project to upgrade guardrail end treatments on National Highway System routes within Cuyahoga and Lake counties; and

WHEREAS, as set forth in Section 2.12 of the Third Amended Charter of the City of Lakewood, this Council by a vote of at least two thirds of its members determines that this resolution is an emergency measure and that it shall take effect immediately, and that it is necessary for the immediate preservation of the public property, health, and safety and to provide for the usual daily operation of municipal departments, in that this project should be authorized for the 2020 construction season; now, therefore

BE IT RESOLVED BY THE CITY OF LAKEWOOD, OHIO:

Section 1. Being in the public interest, the City of Lakewood hereby gives consent to the Ohio Director of Transportation to complete the above described project.

Section 2. The City of Lakewood shall cooperate with the Director of Transportation in the above described project as follows:

The entire cost and expense of the construction will be provided by the Ohio Department of Transportation. No financial participation will be required by the City of Lakewood.

The City of Lakewood agrees to pay one hundred percent (100%) of the cost of those features requested by Lakewood which are determined by the State and Federal Highway Administration to be unnecessary for the Project.

Section 3. Lakewood agrees to acquire and/or make available to ODOT, in accordance with current State and Federal regulation, all necessary right-of-way required for the described Project. Lakewood also understand that right-of-way costs include eligible utility costs. Lakewood agrees to be responsible for all utility accommodations, relocation, and

reimbursement an agrees that all such accommodations, relocations, and reimbursements shall comply with the current provisions of 23 CFR 645 and the ODOT Utility Manual.

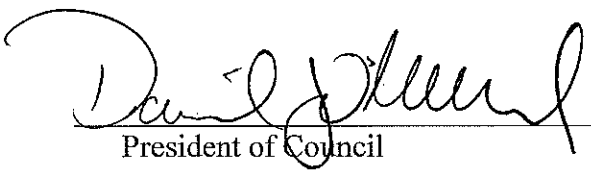
Section 4. Upon completion of the described Project, and unless otherwise agreed, Lakewood shall: (1) provide adequate maintenance for the described Project in accordance with all applicable State and Federal law including; but not limited to, Title 23, USC, Section 116; (2) provide ample financial provisions as necessary, for the maintenance of the described Project; (3) maintain the right-of-way, keeping it free of obstructions; and (4) hold said right-of-way inviolate for public highway purposes.

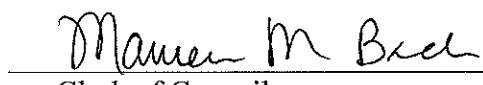
Section 5. The Mayor, Public Works Director or the Law Director is hereby empowered on behalf of Lakewood to enter into agreements with the Director of Transportation necessary to complete the above described project.

Section 6. It is found and determined that all formal actions of this Council concerning and relating to the passage of this resolution were passed in an open meeting of this Council and that all deliberations of this Council and any of its committees that resulted in such actions were in meetings open to the public and in compliance with legal requirements.

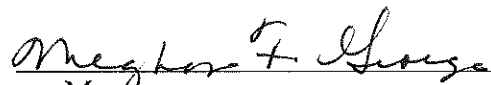
Section 7. This resolution is hereby declared to be an emergency measure necessary for the immediate preservation of the public peace, property, health, safety and welfare in the City and for the usual daily operation of the City for the reasons set forth and defined in the preamble to this resolution, and provided it receives the affirmative vote of at least two thirds of the members of Council, this resolution shall take effect and be in force immediately upon its adoption by the Council and approval by the Mayor, or otherwise it shall take effect and be in force after the earliest period allowed by law.

Adopted: 3/2/2020

  
\_\_\_\_\_  
President of Council

  
\_\_\_\_\_  
Clerk of Council

Approved: 3/3/2020

  
\_\_\_\_\_  
Mayor

**Exhibit A**

(To be provided)



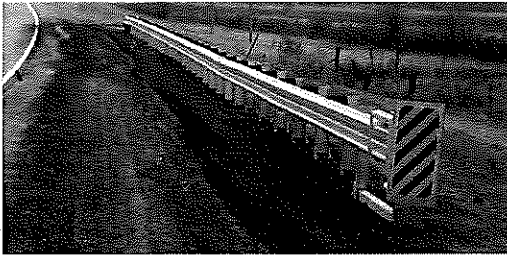
**Characteristics:**

- Flared terminal – installed on a parabolic curve with a 4' offset.
- No impact head.
- Uses standard w-beam rail elements.
- Strut between the steel tube foundation for the two end posts act together to resist cable loads.
- Comprised of wooden posts only.

NOTE: The non-crashworthy BCT has no ground strut and only two weakened posts.

**Energy Absorbing Terminals**

- Used for single runs of strong post guardrail
- Redirection begins beyond the third post

**Extruder Terminal ET-2000 Plus – Type E**

<http://www.highwayguardrail.com/products/etplus.html>

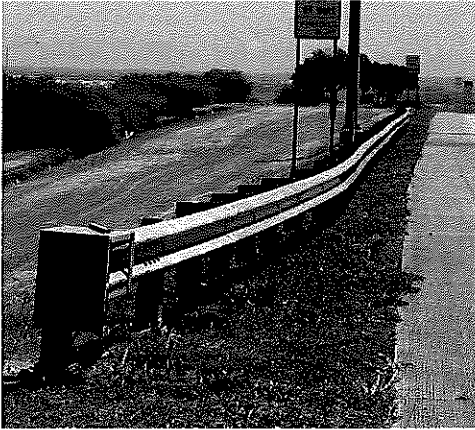
**Test Level:** NCHRP 350: TL-2 and TL-3

**Characteristics:**

- Tangent terminal.
- Rectangular impact front face (Extruder head).
- Rectangular holes in 1<sup>st</sup> rail support the tabs of the cable anchor bracket.
- Steel HBA and SYTP and wood post options are available.
- SYTP Retrofit in tube sleeve option available.
- End of W-beam rail with offset of 0' to 2'-0".



## Flared Energy Absorbing Terminal (FLEAT) – Type B



<http://roadsystems.com/fleat.htm>

**Test Level:** NCHRP 350: TL-2 and TL-3

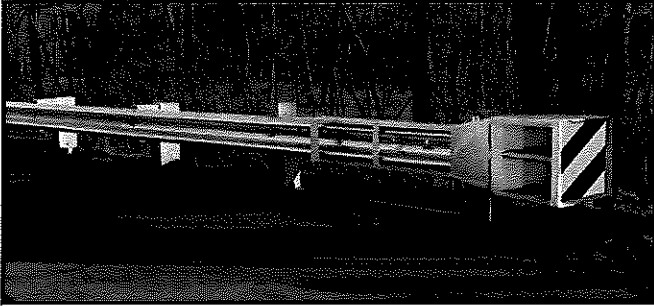
### **Characteristics:**

- Flared terminal.
- Rectangular impact front face, with steel tube on top.
- Rail has 5 slots (1/2" x 4" long) on both the top and bottom corrugations of the w-beam section.
- There may be 3 additional (1/2"x4" long) slots in the valley of the rail which makes it interchangeable with the SKT system.
- Breakaway steel end posts #1 and #2, standard steel guardrail posts #3 and beyond.
- Cable anchor bracket is fully seated on the shoulder portion of the cable anchor bolts.
- All hinge steel post, plug weld steel posts, or wood posts available.
- End of W-beam rail with offset of 2'-6" to 4'-0".





## Sequential Kinking Terminal (SKT-350) – Type E



<http://roadsystems.com/skt.html>

**Test Level:** NCHRP 350: TL-2 and TL-3

### **Characteristics:**

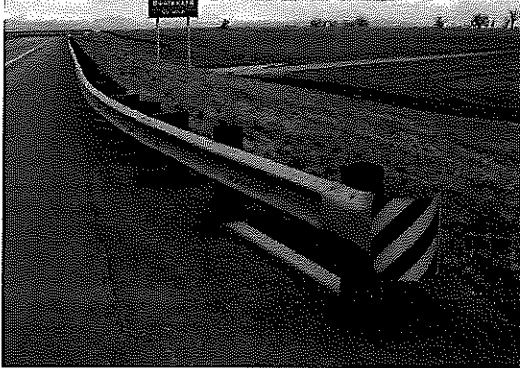
- Tangent terminal.
- Square impact front face.
- Has a feeder chute (channel section that surrounds the rail) which gets wider at the downstream end.
- Breakaway steel end posts #1 and #2 and standard steel guardrail posts #3 and beyond.
- Rail has 3 (1/2" x 4" long) slots in the valley of the rail.
- There may be 5 additional slots (1/2" x 4" long) on both the top and bottom corrugations of the w-beam section, which makes it interchangeable with the FLEAT system.
- Cable anchor bracket is fully seated on the shoulder portion of the cable anchor bolts.
- All hinge steel post, plug weld steel posts, or wood posts available.
- End of W-beam rail with offset of 0' to 2'-0".



## Non-Energy Absorbing Terminals

- Used for single runs of strong post w-beam guardrail.
- Redirection begins beyond the third post.

### Slotted Rail Terminal (SRT-350) – Type B



<http://www.highwayguardrail.com/products/et-srt350.html>

**Test Level:** NCHRP 350: TL-3

#### **Characteristics:**

- Flared terminal.
- No impact head.
- Longitudinal slots on w-beam rail element.
- Strut and cable anchor bracket between posts #1 and #2 act together to resist the cable loads.
- Slot Guards on downstream end of slots.
- Steel and wood post options available.
- Parabolic flare on wood post option.
- Straight line flare on all SYTP steel post and HBA steel/wood post option.
- Should be installed at locations where sufficient runout area exists behind and downstream of the terminal.
- End of w-beam rail with offset of 4'-0"
- Wood post option has 3'-0" to 4'-0" offsets.

