

Measure Name	Removal of obstructions to increase visibility
Definition	Removal of obstructions to increase the line of sight for both pedestrians and railroad personnel.

Tags

Incident Type	Both trespass and suicide
Location	Right-of-way only
Intervention Strategy	Engineering: technological and physical deterrents
Measure Group	Detection and lighting

Description

This measure seeks to remove obstructions along the railroad right-of-way (ROW) that could interfere with visibility. This can be achieved by cutting vegetation and relocating signage and other wayside equipment, such as signal bungalows. This allows pedestrians to see the approaching train sooner and avoid getting struck, while also increasing the visibility of the ROW from the engineer’s perspective, thereby making trespassers more visible.

This measure is best suited for high-priority areas, including areas near stations, crossings (specifically passive crossings), and high-speed corridors. As of 2024, there are no research studies that investigated the effectiveness of removing vegetation or relocating signage and other wayside equipment in reducing the number of railroad trespass casualties. However, railroads are required to control the vegetation on railroad property as required under federal regulations [1].

Additional search terms: *environment, landscape, landscaping, obstruction, sightline, view*

Advantages

- Vegetation removal is relatively low cost, although it requires periodic maintenance.
- This measure improves the visibility of railroad signs and signals along the railroad ROW and at crossings [1].
- Improves visibility of both train engineers and pedestrians, which can increase safety at grade crossings, especially passive crossings.
- Vegetation removal can reduce the risk of trackside fires [1].
- Vegetation removal may reduce illegal dumping of trash on the ROW.
- Vegetation removal can improve accessibility for railroad crews when performing wayside duties [1].
- Vegetation removal can improve railroad employees’ ability to visually inspect moving equipment from their normal duty stations [1].

Drawbacks

- Vegetation removal could reduce the effectiveness of landscaping treatments in preventing trespassing. In this case, consider using an alternative barrier [2].
 - Vegetation removal could decrease privacy and increase noise pollution for communities adjacent to railroad tracks.
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Notable Practices

- Consider safety and operational impacts when scheduling removal of obstructions on the railroad ROW.
 - It is important to gain community approval and acceptance of vegetation removal by communicating the reasons that removal is needed. Communications should not highlight the railroad as a means for suicide [2].
 - Treating cut stumps and stubble with herbicide can help prevent new shoots from emerging around the base of cut plants (i.e., suckering) and resprouting. Herbicides are most effective when sprayed before the weeds start to grow, generally in the early spring.
 - Consider the weather conditions when spraying herbicide, as rain can reduce the effectiveness of the herbicide [3].
 - Ensure that any chemicals used for vegetation management are environmentally safe and do not hurt humans or animals. Review federal and state environmental laws, including from the Environmental Protection Agency, to make sure that selected chemicals meet the requirements.
 - When applying herbicide applications over a bridge, ensure that they are not sprayed on neighboring properties and do not spill into the water below [3].
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References

[1] [Track Safety Standards - Vegetation](#) 49 C.F.R. § 213.37 (1996).

Description: Link to the electronic Code of Federal Regulations (CFRs).

[2] RESTRAIL. (2019, July 17). [10.1 Removal of vegetation to increase visibility](#). Restrail Toolbox.

Description: This webpage provides information on removing vegetation along the right-of-way to increase visibility in Europe, including recommendations, considerations for implementation, and relevant research results.

[3] Progressive Railroading. (2008, February). [Vegetation management: Railroads are pulling out all the stops](#). *Progressive Railroading*.

Description: Article providing information on managing vegetation along the right-of-way.

Additional Resources

Federal Railroad Administration. (2013). [Compilation of State Laws and Regulations Affecting Highway-Rail Grade Crossings](#) 6th edition.

Description: This document provides an up-to-date look at the various state laws and regulations concerning the regulation of highway-rail grade crossings and driver behavior at all highway-rail grade crossings.

Related Measures

- CCTV and other detection systems
- Identify funding opportunities
- Incident cost estimation
- Lighting at hotspots
- Risk assessment using forward facing CCTV
- Unmanned Aircraft System (UAS) for detection