

Measure Name Fencing between tracks at stations

Definition Fencing placed between tracks at stations to deter trespassers from crossing from one platform to the other.

Tags:

Incident Type	Trespass only
Location	Station only
Intervention Strategy	Engineering: technological and physical deterrents
Measure Group	Physical barriers

Description

This measure refers to the installation of fencing in the area between two or more sets of parallel tracks in a train station. This type of fencing is intended to prevent passengers on one platform from walking across the tracks to get to the other side; for example, to get to a parking lot after exiting the train. Some individuals may try to cross the tracks because it is a shorter path to their destination than walking along the safe, designated route.

Considerations for this measure include the type of fencing (e.g., chain link, paling), fence height, and fence material, all of which are based on budget and type of trespass activity occurring [1]. Mid-track fencing is typically placed between high-speed and commuter train tracks and could also be placed at a station with only one platform [2]. Although a fence is a sufficient discouragement for most rail users, there are anecdotal reports that passengers have climbed over fences to get to the opposite platform. Some railroads have applied oil or other materials to the fence to discourage individuals from trying to climb over [1]. Brightline has begun integrating fencing decorated with plants featuring vines and thorns. This has effectively deterred vandalism and cutting of the fence, proving to be a significant success in preventing trespassing [3]. Fencing may be most effective when paired with other measures such as signage or detection cameras [4].

Additional search terms: *barrier, deterrent*

Advantages

- Visibly restricts access for a known shortcut across the tracks.
 - Fencing installed entirely on railroad property allows the railroad to choose the design and look of the installation.
 - Mid-track fencing is considered relatively easy and cheap to install compared to full barriers on station platforms (see Platform Gates and Doors for more information) [2].
 - One study from Sweden indicated that suicide rates increase near high-speed trains, but decreased with the installation fences between the tracks [2].
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Drawbacks

- This type of fencing is only applicable to stations with two adjacent tracks between platforms. Individuals who intend to collide with the train may still be able to access the tracks from the opposite platform.
 - Fencing requires ongoing maintenance to ensure its safety and effectiveness.
 - Depending on how narrow the rail corridor is and the existing space between tracks, this fencing may be challenging to install. Anti-trespass panels may be an alternative [1].
 - In a study from Sweden, there was a concern due to the finding that suicides were being displaced to stations without fencing, indicating the importance of mid-track fencing at all stations along the same rail line to prevent displacement effects [2].
 - This measure's effectiveness relies on thorough examination and research to determine the locations where fencing is needed at stations, particularly due to liability issues [5].
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Notable Practices

- Consider quality of materials, maintenance required, and visibility.
 - Consider safety and operational impacts when scheduling installation on the platform [4].
 - A gate should be included in the fence design in case access is needed, such as for maintenance or in case of an emergency [1]. If gates will be unlocked during specific times, develop a plan for who is responsible for unlocking and relocking the gates and communicating when gates are unlocked.
 - Warning signs attached to the fence can help convey that the track area is restricted [1].
 - Ensure that the fence is at least 8 feet 6 inches clear from the track center and extends a least 100 feet past the platform edge in each direction [6].
 - Collecting trespassing activity information (with and without injury or fatality) can help to better understand the effectiveness of this measure.
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References

[1] RESTRAIL. (2015, January 20). [8.1 Intermediate fencing between tracks](#). Restrail Toolbox.

Description: This webpage provides information on implementing fencing between tracks at stations in Europe, including recommendations, considerations for implementation, and relevant research results.

[2] Fredin-Knutzén, J., Hadlaczký, G., Andersson, A. L., & Sokolowski, M. (2022). [A pilot study evaluating the effectiveness of preventing railway suicides by mid-track fencing, which restrict easy access to high-speed train tracks](#). *Journal of Safety Research*, 83.

Abstract: Suicides in the railway system is a serious health, societal, and transportation concern. Restriction of the access to suicide methods in the form of different physical barriers is a promising approach for suicide prevention. Method: Mid-track fencing, which is fencing placed in-between the high-speed and commuter train tracks, was installed at one out of seven stations along a train line outside of Stockholm in the years 2013/2014. The number of suicides at the intervention station was compared to six other stations used as controls, over a total period of 20 years (2002–2021). Results: Suicides at highspeed tracks occurring at stations was the major cause of death on the investigated railway line. Prior to the year 2014, the intervention and control stations displayed similar time trends in the number of suicides. After installation of the mid-track fencing in 2014, there was a 62.5% reduction in the rate of suicides occurring at the intervention station. Compared to the six other control stations, the intervention station displayed a significant reduction in the number of suicides during the years 2014–2021 (OR = 0.14, 95%CI 0.013–0.95). Suicides at the railway lines in-between stations were not increased post-intervention. However, nearby control stations showed a 162% increase in suicides after the intervention, suggesting the induction of transfer effects. Conclusion: Mid-track fences restricting access to high-speed train tracks may have a large effect on reducing the number of railway suicides at intervention stations, but may also induce an increase in suicides at nearby stations without mid-track fences. Practical applications: Partial physical barriers such as mid-track fencing is deemed to be relatively easy and cheap to install (as compared to full barriers; e.g., full height platform screen doors) and should be considered at all stations on railway lines that have high-speed trains passing by

[3] Meade, J. (2024). *Trespassing and suicide prevention efforts along the Brightline Corridor*. Presentation at the workshop for Grade Crossing Safety and Railroad Trespass Prevention. Piscataway NJ.

Presentation description: In some fenced locations along their system, Brightline has added certain flowering thorny vines to the fences to deter vandalism. Initial impression is that this has worked quite well.

[4] RESTRAIL. (2014). *Evaluation of measures, recommendations and guidelines for further implementation: Pilot test #5, [A combination of measures at Ayden Station – TCD](#)*.

Description: This document describes a pilot test of a combination of countermeasures, including fencing at platform ends, in order to prevent trespassing as part of the RESTRAIL project.

[5] Warner, J. E., Lee, D., Trueblood, A. B., Cline, J. C., Johnson, N. A., & Christjoy, A. (2022). Strategies for deterring trespassing on rail transit and commuter rail rights-of-way, volume 1: Guidebook. *Washington, D.C: The National Academies Press*.

Objective: This guidebook is intended to provide information on strategies to deter trespassing on rail transit and commuter rail exclusive and semi-exclusive rights-of-way, including within station areas outside designated pedestrian crossings. In general, trespassing is accessing rail transit and commuter rail restricted areas without permission or proper authorization, intentionally or unintentionally. The guidebook documents the extent of trespassing in the United States; existing decision-making guidance that agencies can utilize; causes, consequences, and risks associated with trespassing; mitigation countermeasures to reduce trespassing risks; and tools that agencies can utilize to identify possible mitigation strategies for a particular trespassing problem or concern.

[6] Caltrain. (2011). *[Caltrain Design Criteria \(2nd ed.\)](#)*. Caltrain.

Description: This document establishes the minimum standards for planning, design, construction, and maintenance of Peninsula Corridor Joint Powers Board facilities. This document is based on industry standards and accepted practices for Commuter/Class 1 railroads and applicable regulatory requirements.
Note: This document was updated in 2024.

Additional Resources

Webpage describing different types of fencing by the [Federal Highway Administration](#).

Related Measures

- Anti-trespass panels
- Identify funding opportunities
- Incident cost estimation
- Platform gates and doors
- Platform fencing