

Quick-Build Toolkit

Part 2: About the Inventory of Quick-Build Safety Improvements

2026

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About the inventory

The inventory identifies quick-build street safety improvements that can be implemented within 18 months of project initiation for less than $250,000, and are easier to modify or remove than permanent or long-term transportation infrastructure improvements. Denver Regional Council of Governments staff categorized the safety treatments as either "proven" or “likely” based on the quality of the study or studies that found a safety benefit, and included the citations to support the designations in the “References” tab.

- **Proven safety treatments** are either Federal Highway Administration Proven Safety Countermeasures as of 2025 or have a positive crash reduction factor and three stars or more from the Crash Modification Factors Clearinghouse. The Crash Modification Factors Clearinghouse assigns a star rating of up to five stars to indicate the quality or confidence of a crash reduction or crash modification factor, considering the study design, sample size, statistical methodology and statistical significance.

- **Likely safety treatments** have a positive crash reduction factor with fewer than three stars from the Crash Modification Factors Clearinghouse, or are not in the Clearinghouse but agencies have reported success with using them to improve safety.

How to use the inventory

Filter tool

Use the drop-down menus in the “Filter tool” tab to filter the inventory of quick-build safety treatments based on the type of crash you wish to address and the project

location type. The table in the tab will auto-populate with applicable treatments based on your selected filters. Review the treatments to see which may be suitable for your project or study location.

When thinking about what treatments to recommend or pursue for a particular project, or to include in your agency's customized Quick-Build Toolkit (refer to the “How to customize the inventory” section), consider the following:

1. Is your agency focused on proven safety treatments with high crash reduction potential or interested in trying out more innovative ("likely") treatments?

2. What materials do you already have in stock, or what can be easily procured?

3. If you are purchasing new materials, do you have storage capacity for when they are not in use?

4. Do you have in-house crews or a contractor in place to design and install the improvements?

5. Is there internal support for the improvement type? If consensus or support is lacking, consider pursuing a different improvement or implementing the improvement as a pilot project to evaluate feasibility and impact.

Redundancy is critical to the Safe Systems approach, so plan to use more than one treatment to enhance safety at a given location.

Inventory of improvements

The “Inventory of improvements” tab provides the complete inventory of quick-build safety treatments and populates the filter tool. For details on how to customize the information in the inventory, refer to the “How to customize the inventory” section.

Data dictionary

The “Data dictionary” tab defines the crash reduction potential, crash type addressed and applicable location terms assigned to each treatment in the “Inventory of improvements” tab. In addition, the terms defined in the data dictionary populate the drop-down menus in the filter tool.

References

The “References” tab provides the references for the citations that accompany each treatment’s crash reduction potential descriptions in the “Inventory of improvements” and “Filter tool” tabs. If available, the associated “CMF ID” from the Crash Modification Factors Clearinghouse is provided next to each reference.

How to customize the inventory

DRCOG staff created the inventory as an Excel file to facilitate customization by transportation agencies. **You are encouraged to download and make edits to the inventory** to better reflect your agency's resources, unique practices or policies, priorities, or context. For example, you could remove treatments that are not feasible or appropriate for your agency or add additional factors to the "Factors that may hinder feasibility for quick-build" column. The process for making many of these customizations is described in the following section.

Add or remove safety treatments

To add or remove safety treatments in the inventory, insert or delete rows in the table in the “Inventory of improvements” tab. When adding new treatments, insert the new row within the table rather than at the end or beginning of the table; and, when filling in the "Crash type addressed" and "Applicable locations for quick-build" fields, copy and paste the category terms from the “Data dictionary” tab to ensure the new treatment is recognized by the filter tool. If the text in these fields does not match the category options in the data dictionary exactly, the treatment will not appear in the filter tool

Change a safety treatment’s information

You may want to add additional factors to the "Factors that may hinder feasibility for quick-build" field for a treatment, or update a treatment’s “Crash reduction potential” field based on a new study. All changes to a treatment’s information must be made in the “Inventory of improvements” tab, not the “Filter tool” tab. If making changes to the text in the "Crash type addressed" and "Applicable locations for quick-build" fields, the text must match the category options in the data dictionary exactly, or the treatment will not appear in the filter tool.

Change the crash type or applicable locations filter categories

To customize the crash type or applicable location categories in the filter tool, you must first edit the values in Column A of the "Crash type" or "Applicable locations for quick-build" tables in the data dictionary. Avoid adding new rows at the end of the tables, as they may not be captured in the filter tool.

Once you have revised the "Crash type" or "Applicable locations" values in the data dictionary, manually update the values in columns C and D in the “Inventory of improvements” tab to match the new categories. The spelling of the categories in columns C and D must match the categories in the data dictionary exactly, or the filter tool will not work correctly.

Finally, navigate to the “Filter tool” tab and check the drop-down menus to verify that the categories have been updated and that the tool is properly filtering the treatments in the “Inventory of improvements” tab.



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