

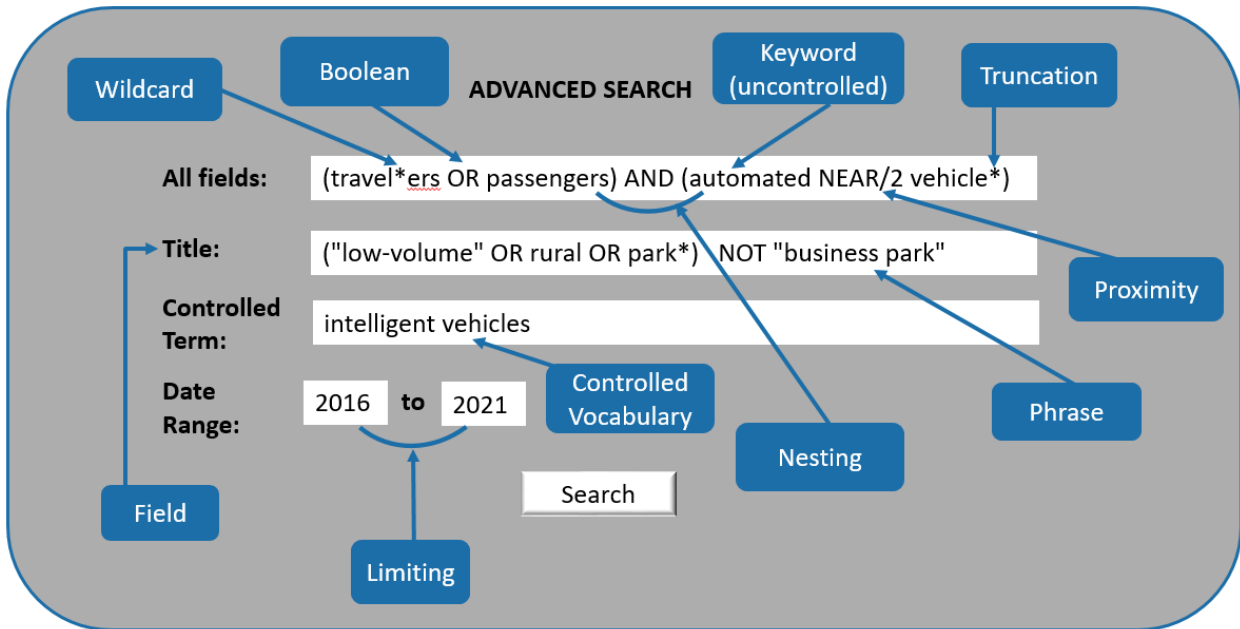
Query Techniques

Note: Query options vary by database and search engine. Look through a system's help pages to find out what techniques can be applied.

Technique	Definition	Use to...	Examples
Boolean logic	System of operators used to combine or search words or phrases.	Combine terms. Narrow or broaden search.	AND, OR, NOT, AND NOT traffic AND safety tribal OR indian
Controlled vocabulary searching	Searching using an established set of index terms.	Limit the need to search for synonyms or alternate forms. Apply preferred, related, narrower, or broader search terms.	From the <i>Transportation Research Thesaurus</i> (TRT): “footbridges” used for “foot bridges” and “pedestrian bridges”
Field searching	Selectively searching elements of records.	Focus the search and eliminate irrelevant hits.	Author, title, subject, abstract
Keyword searching	Searching using searcher-selected uncontrolled terms.	Retrieve records with specific words, new terms, jargon, or words not covered by thesaurus. Find appropriate subject headings. Find records when no controlled vocabulary is available.	smart cars [TRT uses “intelligent vehicles” as a controlled term.] coronavirus [TRT uses “COVID-19” as a controlled term.]
Limiting/ filtering	Using parameters to restrict a search.	Narrow your query or results.	Date range, language, document type
Nesting	Using sets of parentheses to embed Boolean statements.	String multiple search statements together.	(data OR statistics) AND (travelers OR visitors OR tourists)
Phrase searching	Combining words so they are interpreted as a unit, in the order typed.	Retrieve results for multiword concepts, places, or organizations.	“wildlife crossings” “climate change” “public lands”
Proximity searching	Combining words with an operator instructing the system to search for the terms within a certain distance of each other.	Search for words close together but not necessarily a phrase or in order. Increase retrieval of relevant records.	bridge NEAR/5 corrosion unmanned W3 vehicles coastal N6 infrastructure equity ~4 transportation roads AROUND(5) rural
Truncation/ stemming	Dropping characters at the end or beginning of a search term	Retrieve variant forms, especially singular/plural adjectives/nouns, and verb/nouns.	resilien* *transit flood! transport\$
Wildcard substitution	Inserting a symbol in a search term in place of one or more characters.	Retrieve variant forms, especially irregular plurals and foreign spellings.	stabili?ation wom*n behavio#r

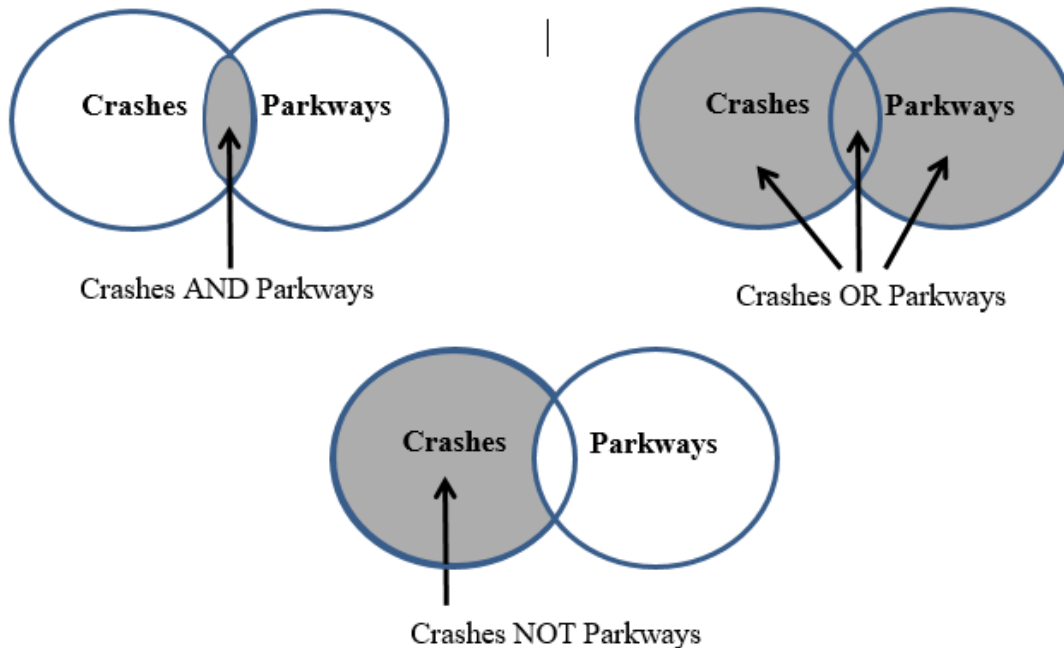


Applying Query Techniques



Source: FHWA.

Boolean Logic Example



Source: FHWA.

