Load Rating Report Component – Vehicle Analysis Template

Guidance and Examples

Include the following on the BrR Vehicle Analysis Template component of the Load Rating Report:

- Vehicle Summary (Analysis Template)
- Vehicle Properties (Advanced Settings)
    - *Hint – cannot adjust size of this window; may have to adjust column widths to fit in one screenshot*
    - *Note – this will need to be updated for LRFR if EV live load factor is changed*
- Any non-standard library vehicle definitions
    - For ASR/LFR
        - Use standard definitions for all vehicles
        - No additional screenshots necessary, please note that standard vehicle definitions were used for all vehicles
    - For LRFR
        - Use modified contact area for EVs
        - Include screenshots of agency defined vehicles (i.e. EVs, Adjacent Type 3-3)

GENERAL NOTES:

- MDT Vehicle Analysis Templates and MDT Agency-Defined Vehicles (*BrR .xml files)* are available for download from MDT's Load Rating Website
- Please ensure that tr the template attached to the load rating report is the actual template used in the rating
- Only the analysis template that's applicable to rating methodology used needs to be attached to the report. For mixed material/mixed code bridges, please include both.
- Contact MDT's Load Rating Engineer for guidance on incorporating additional templates (e.g. BrR bug workarounds)

Example Vehicle Template for LFR/ASR Analysis

Analysis Settings:

Vehicle Summary:

- Rating Vehicles
  - LRFR
  - LFD/ASD
    - Inventory
      - EV2
      - EV3
      - HS 20-44
      - SU4
      - SU5
      - SU6
      - SU7
      - Type 3
      - Type 3-3
      - Type 3S2
    - Operating
      - EV2
      - EV3
      - HS 20-44
      - SU4
      - SU5
      - SU6
      - SU7
      - Type 3
      - Type 3-3
      - Type 3S2
    - Legal Operating
    - Permit Inventory
    - Permit Operating

Advanced Settings:

Vehicle Properties

Vehicle	Tandem Train	Scale Factor	Impact	Single Lane Loade	Lega Pair	Override	Legal Live Load	Frequency	Loading Condition	Override	Permit Live Load
EV2	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
EV3	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
HS 20-44	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
SU4	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
SU5	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
SU6	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
SU7	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
Type 3	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
Type 3-3	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	
Type 3S2	☐	1		☐	☐	☐		Single Trip	Mixed with traffic	☐	

Permit lane load: kip/ft Adjacent vehicle live load factor:

☐ Exclude permit lane load from permit vehicle location

Standard library definitions used for all vehicles

Example Vehicle Template for LRFR Analysis

Analysis Settings:

Vehicle Summary:

- Rating Vehicles
  - LRFR
    - Design Load Rating
      - Inventory
        - HL-93 (US)
      - Operating
        - HL-93 (US)
      - Fatigue
        - LRFD Fatigue Truck (US)
    - Legal Load Rating
      - Routine
        - Lane-Type Legal Load
        - Type 3
        - Type 3-3
        - Type 3S2
      - Specialized Hauling
        - SU4
        - SU5
        - SU6
        - SU7
        - EV2m (Single Lane)
        - EV3m (Single Lane)
    - Permit Load Rating
      - EV2m (Multi-Lane)
        - Adjacent Vehicle
          - Adjacent Type 3-3
      - EV3m (Multi-Lane)
        - Adjacent Vehicle
          - Adjacent Type 3-3

Advanced Settings:

Vehicle Properties

Vehicle	Tandem Train	Scale Factor	Impact	Single Lane Loade	Lega Pair	Override	Legal Live Load	Frequency	Loading Condition	Override	Permit Live Load
HL-93 (US)	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
Lane-Type Legal Load	☐	1		☐	☑	☐		Single Trip	Mixed with traffi	☐	
LRFD Fatigue Truck (US)	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
SU4	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
SU5	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
SU6	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
SU7	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
Type 3	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
Type 3-3	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
Type 3S2	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☐	
EV2m (Multi-Lane)	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☑	1.3
EV2m (Single Lane)	☐	1		☑	☐	☑	1.3	Single Trip	Mixed with traffi	☐	
EV3m (Multi-Lane)	☐	1		☐	☐	☐		Single Trip	Mixed with traffi	☑	1.3
EV3m (Single Lane)	☐	1		☑	☐	☑	1.3	Single Trip	Mixed with traffi	☐	

Permit lane load: kip/ft Adjacent vehicle live load factor: 1.300

☐ Exclude permit lane load from permit vehicle location

*****EVs and Adjacent Type 3-3 are Agency Defined vehicles – see next page***

Standard library definitions used for all other vehicles

Example Vehicle Template for LRFR Analysis – Agency Defined Vehicles









