

Walk-in Slide: AU 2014 Social Media Feed

1. Click on the link below, this will open your web browser

<http://aucache.autodesk.com/social/visualization.html>

2. Use “Extended Display” to project the website on screen if you plan to work on your computer. Use “Duplicate” to display same image on screen and computer.

Analyzing Vehicle Movements with Vehicle Tracking 2015

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Class summary

This hands-on lab will teach attendees how to utilize Vehicle Tracking software's swept-path tools and use them within a 3D environment in AutoCAD Civil 3D.

Focus will be on dynamic workflows to speed up and add modeling intelligence to both transportation and site design.

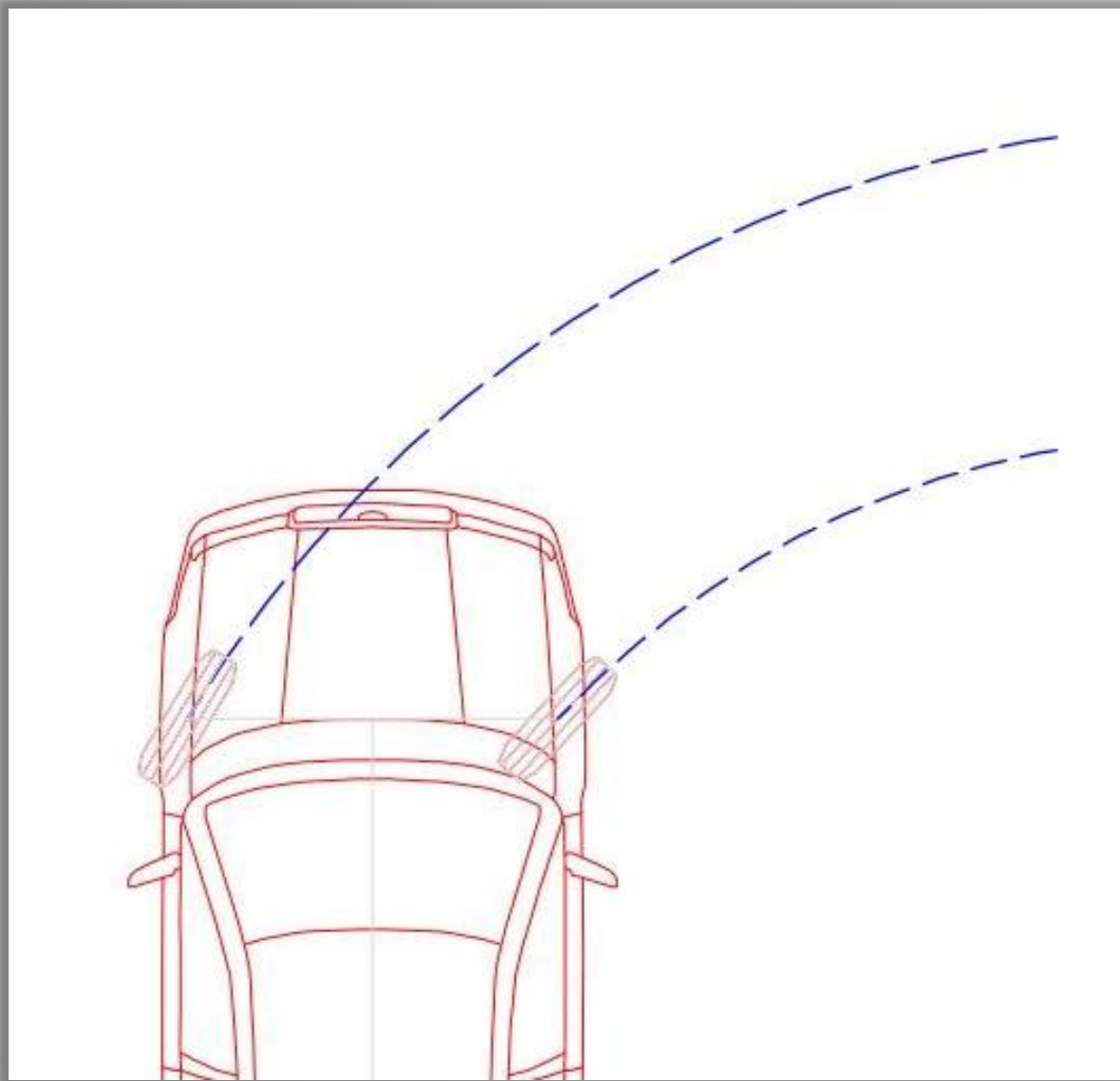
Key learning objectives

At the end of this class, you will be able to:

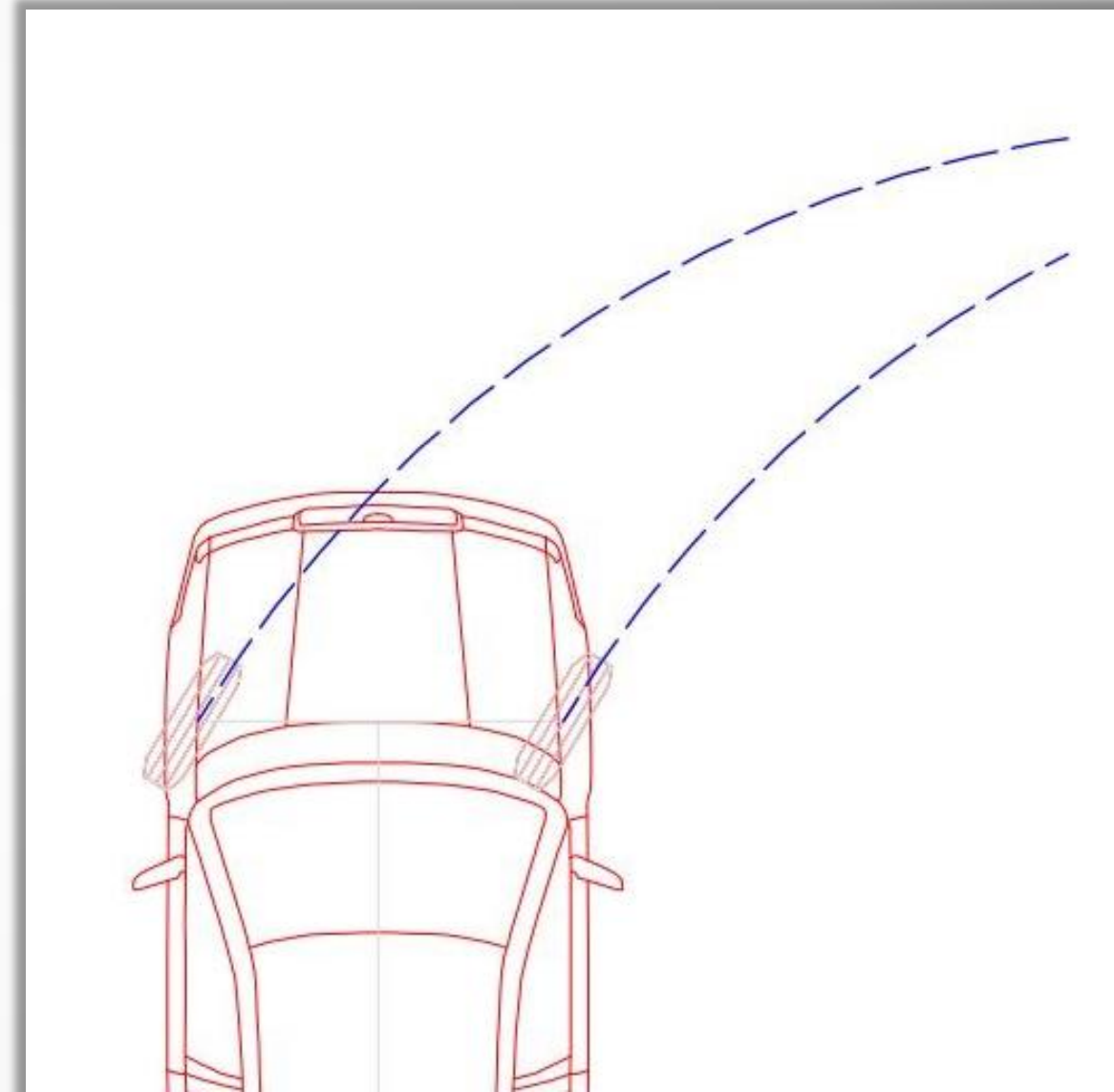
- Understand Vehicle Tracking's different drive modes
- Edit, analyze and visualize vehicle paths
- Utilize a dynamic workflow for swept path analysis
- Create custom vehicles and share them with others

Basic swept path theory

Basic swept path theory



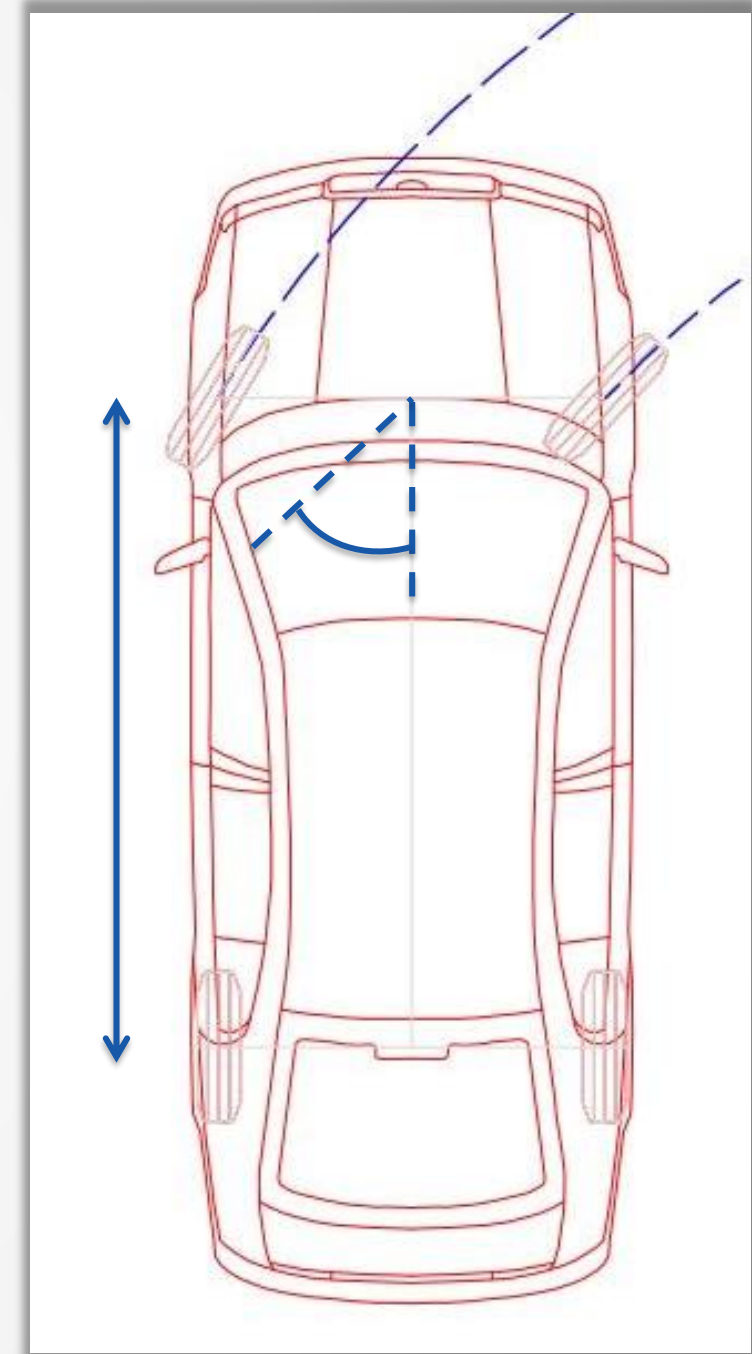
Ackerman Steering Geometry



Non-Ackerman Geometry

Critical vehicle parameters

- Turning circle
 - Curb to curb or wall to wall?
- Steering angle
 - How much the steer wheels rotate
- Wheelbase
 - How far between the front and back axles

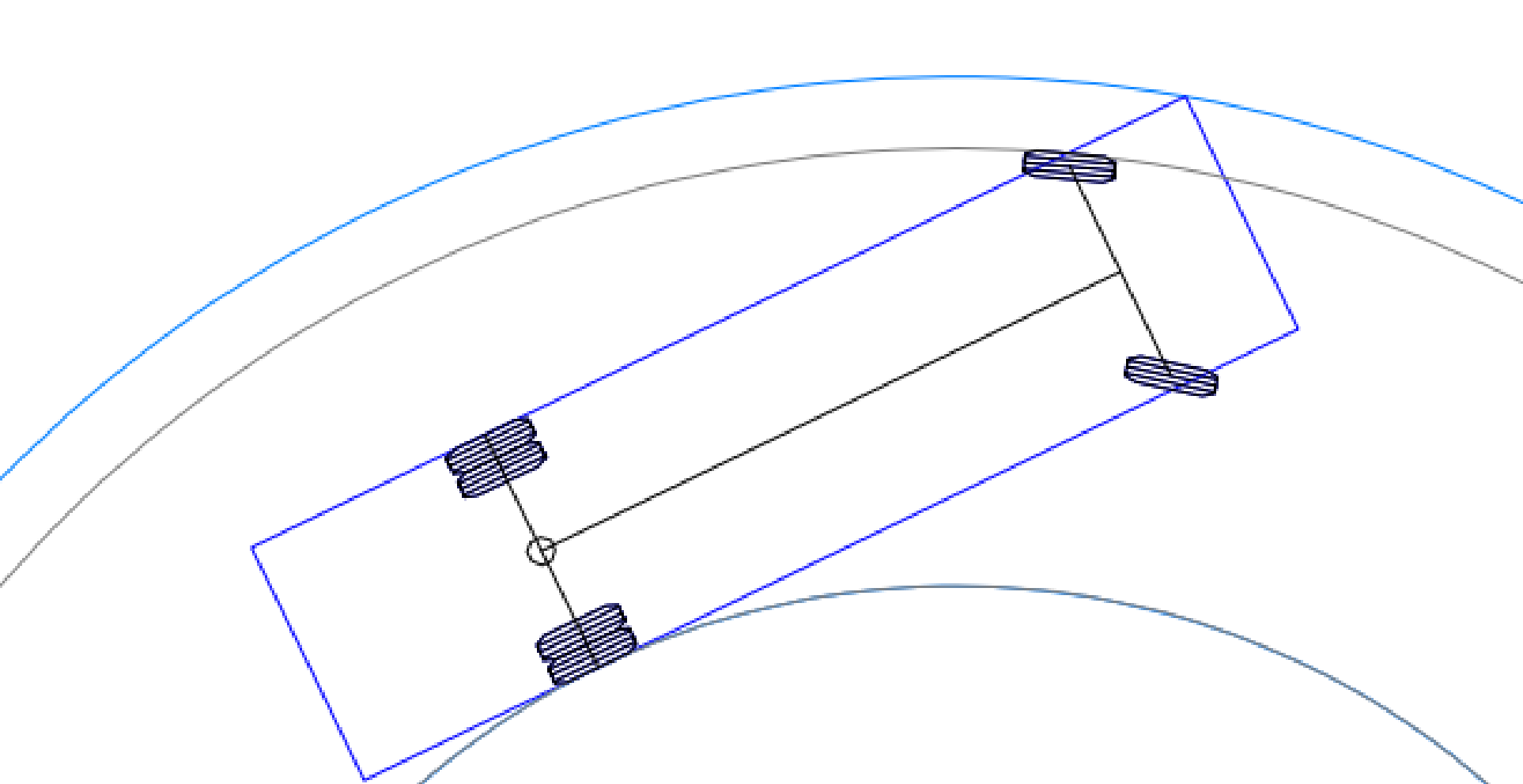


Transitions

- Lock to lock time
 - How long it would take a driver to turn
 - Average 4 seconds for a PCE
- Speed dependencies
 - Faster speeds = smaller steering input
 - Steering wheel or joystick!

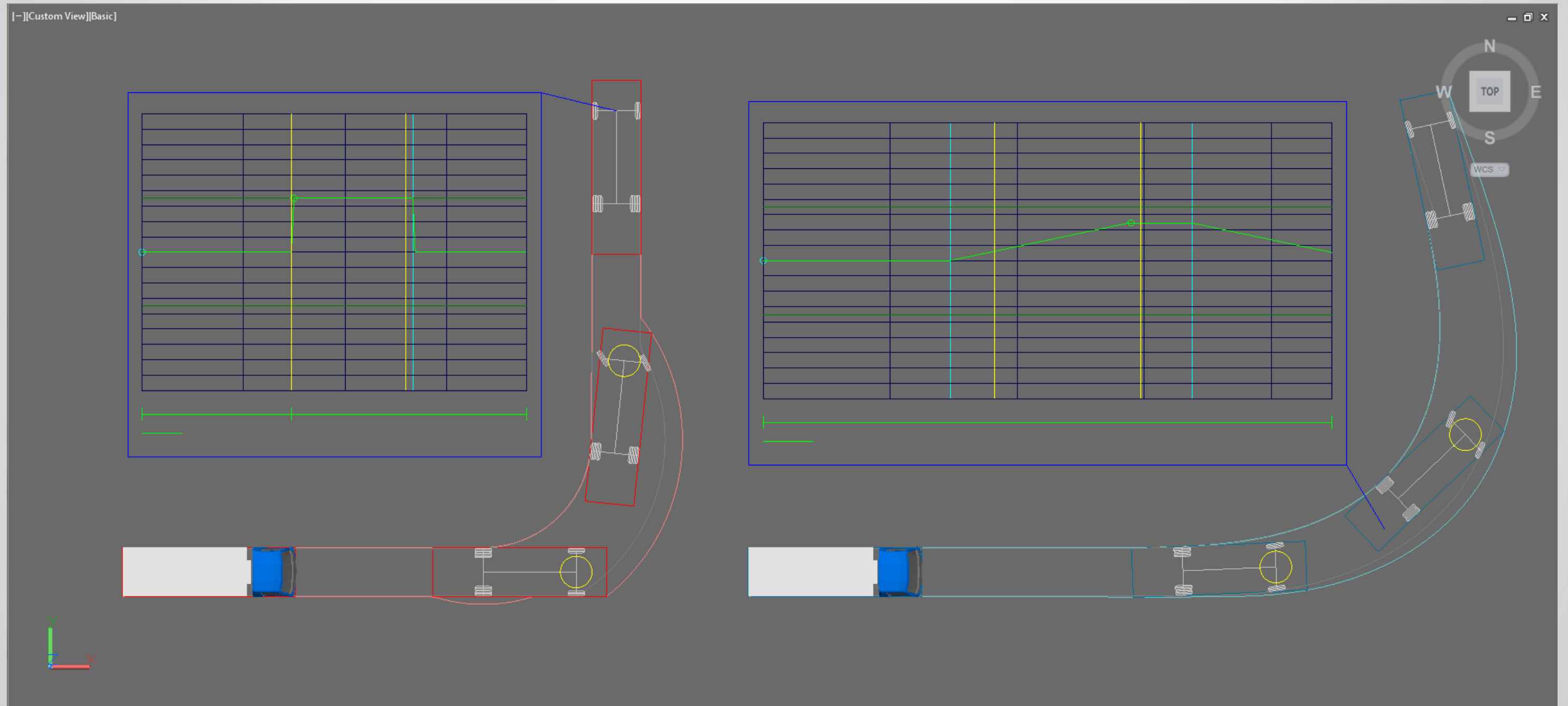


Transitions in action



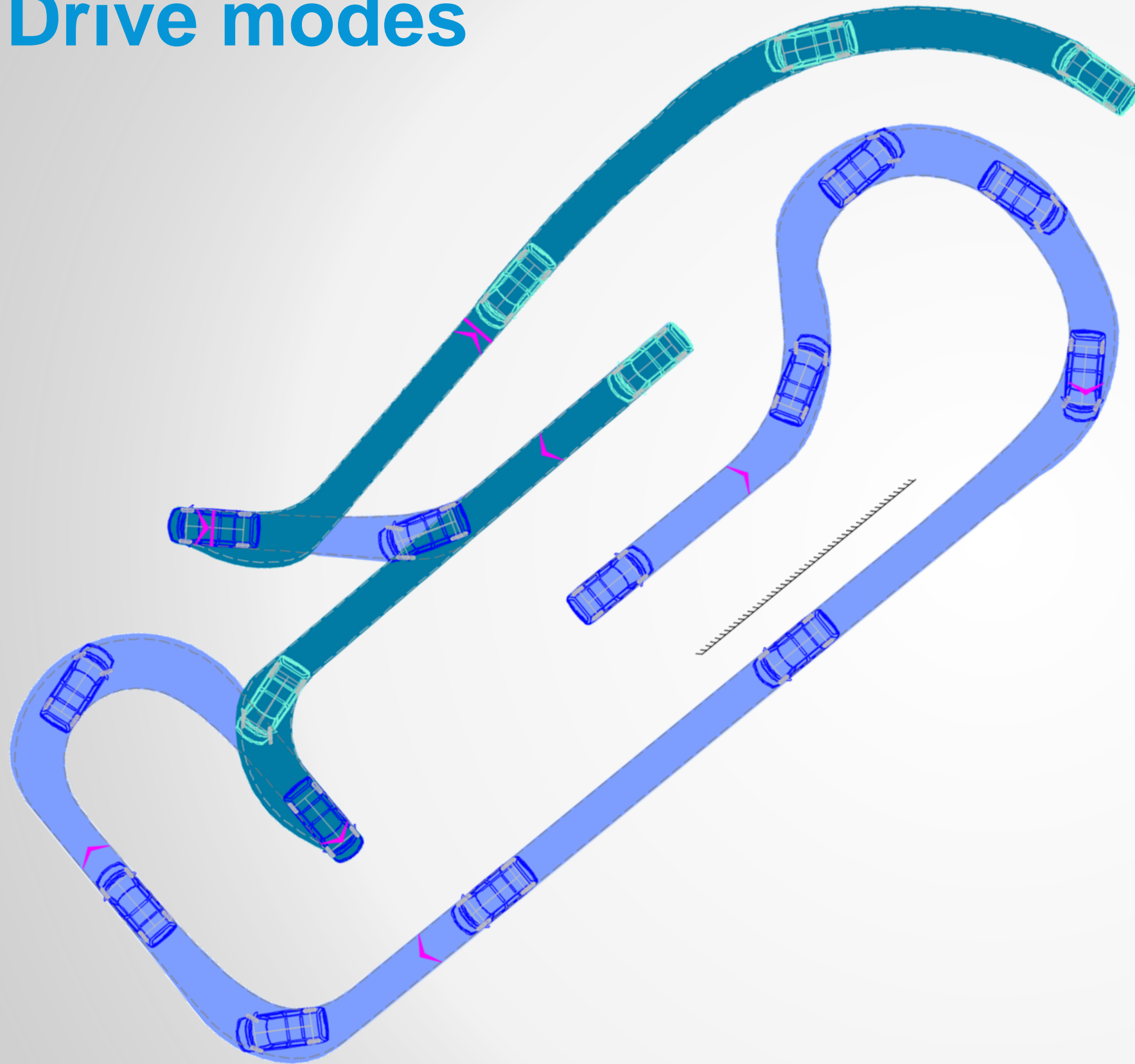
- Front of the vehicle
 - Dependant on the turn rate and vehicle speed
- Rear of the vehicle
 - Dependant on the vehicle's effective wheelbase

Transitions in action



Drive it like you own it!

Drive modes



- AutoDrive
 - Arc
 - Bearing
 - Target alignments
- Manual drive
- Follow drive
- Script drive
- Templates

Vehicle Tracking conventions

Vehicle Tracking program settings

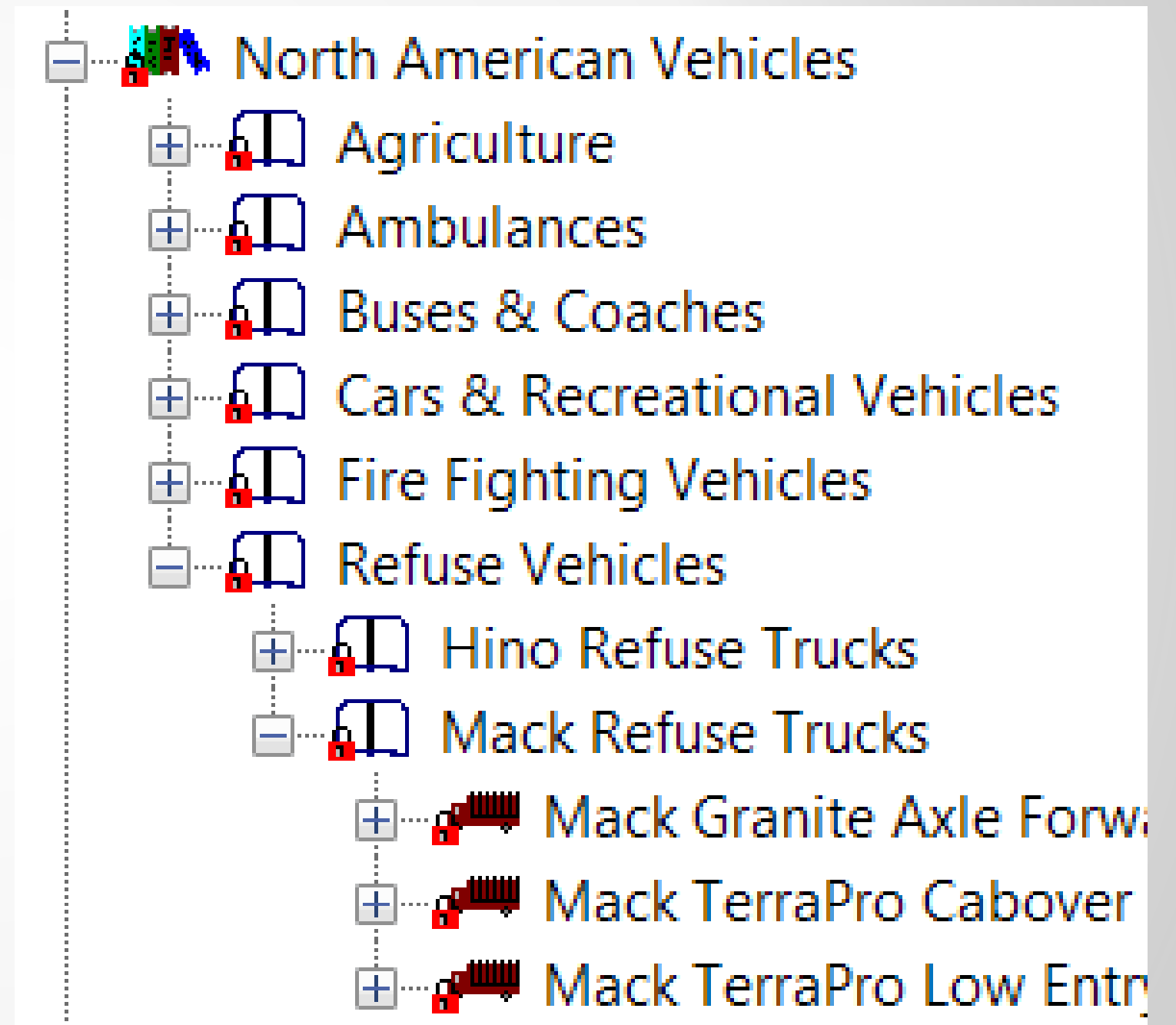
- System settings
 - These are the default settings for the Vehicle Tracking installation
 - These can be saved into corporate CAD templates
- Drawing settings
 - These are saved and remain in the current drawing/ project file
 - These can be exported separately
 - Custom design standards or entire vehicle libraries can also be shared inside drawings*

*Standards and libraries can also be shared outside drawing files

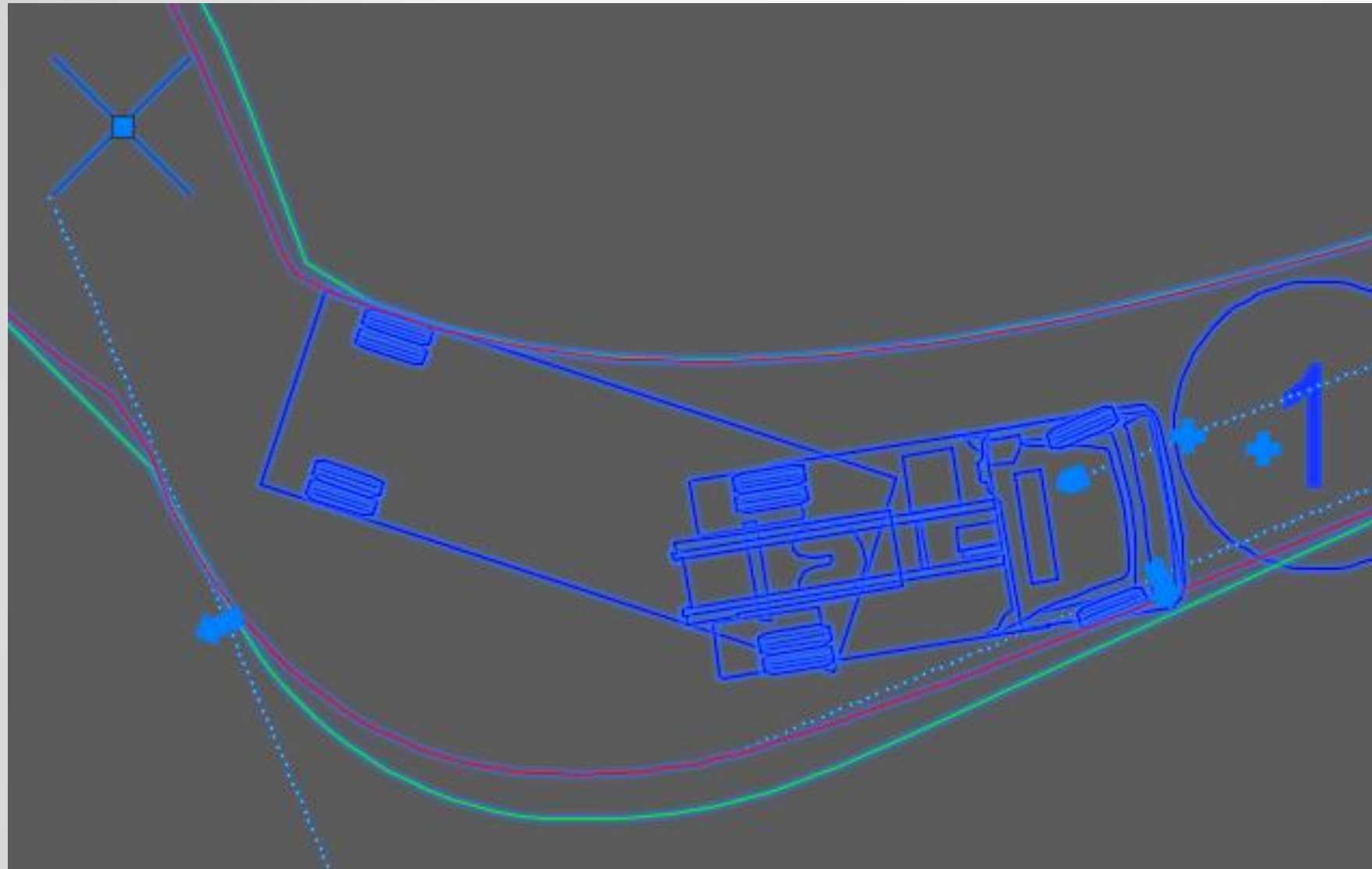
Data hierarchy

General content structure for vehicles, parking standards and roundabout standards:

- Library
 - Group
 - Sub-group
 - Vehicle or standard
 - Individual elements



Editing

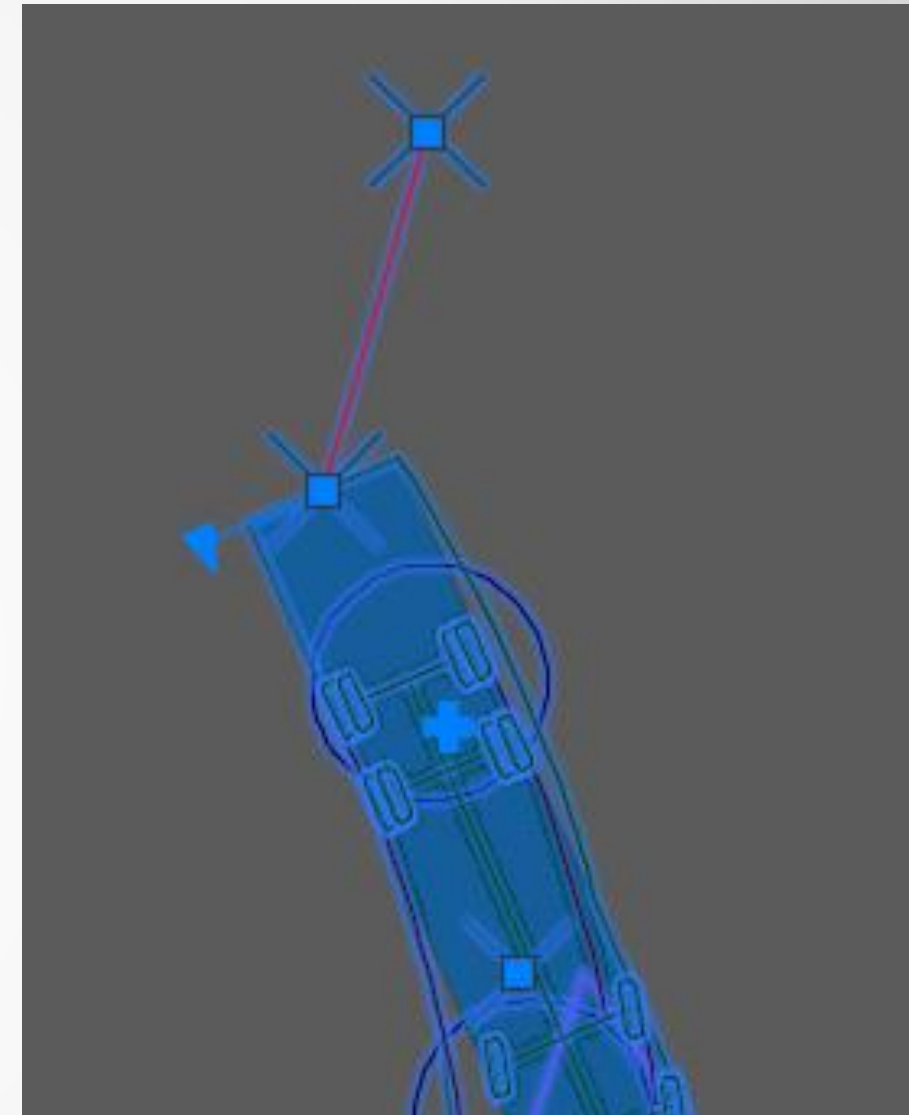


■ Edit

⊕ Add

◀ Trim

↑ Overturn



Technical Demonstration

Session Feedback

- Via the Survey Stations, email or mobile device
- AU 2014 passes given out each day!
- Best to do it right after the session
- Instructors see results in real-time







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