**Supplement Information**

1. **Digital twin environment feature references.**

Provided list of materials, meshes, models, vehicles, and animations used for constructing digital twin enviornments for Unreal Engine simulation of roadsides.

"Rail track straight" (<https://skfb.ly/6zAVO>) by Unreal Nick is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Chain Link Fence Low Poly Version" (<https://skfb.ly/o9Xyx>) by Kain Hunter is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Electrical Transformer" (<https://skfb.ly/6XnAH>) by Nazzareno Giannelli is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Old Soviet Transformer Low-Poly" (<https://skfb.ly/6ZPSI>) by MrUnity is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Train" (<https://skfb.ly/6UzZR>) by metrosp is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

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"Silo" (<https://skfb.ly/6URE9>) by pasquill is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Trees Low Poly" (<https://skfb.ly/6YpAS>) by Igor\_K. is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Tire Prop" (<https://skfb.ly/Vw6y>) by Gamedirection is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Grass" (<https://skfb.ly/6GCuF>) by Somersby is licensed under Creative Commons Attribution-NonCommercial (<http://creativecommons.org/licenses/by-nc/4.0/>).

"Single Grass" (<https://skfb.ly/X77o>) by oppne is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Lump Grass" (<https://skfb.ly/6SrXQ>) by kelvladmail is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

"Sign package" (<https://skfb.ly/6rRZG>) by Pedram Ashoori is licensed under Creative Commons Attribution (<http://creativecommons.org/licenses/by/4.0/>).

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1. **Safety Report Sample.**

A close-up of a vehicle

Description automatically generated

A screenshot of a computer generated image

Description automatically generated