<u>ATLS Level (Grade) Crossings</u> (March 2019)

These are a set of UK style level crossings. They replace my old set of 12 crossings with built-in ATLS assets.

The non tram crossings can be used with ATLS or as stand-alone basic Trainz crossings without ATLS. The tram crossings will only work with ATLS.

The use of ATLS allows the Crossings to be Triggered earlier, thus ensuring extra time for a more prototypical closing sequence.

The latest versions of ATLS Level Crossings are now Trainz Build 4.6, (TRS19). You can download older versions by right clicking on the asset in Content Manager and selecting, 'Download This Version'. This works in TRS19, Tane and TS12. (Delete any <u>later</u> versions first). Note that these earlier versions may have minor bugs and less features. <u>Always use the latest version you can!</u>

All crossings have a drive on the Left or Right traffic option. Left is default.
All crossings come in a double and a single track version.
All crossings come in AHB and MCB versions.

The Tram Crossings can only be used with the very low AJS Street Kit Roads.
The non tram crossings come in 3 versions.
1) To connect to very low AJS Street Kit roads. (long)
2) To connect to older <u>low</u> attachment point roads. (short)
3) To connect to newer <u>high</u> attachment point roads, e.g. Yarnish. (short)

As these new crossings are true mocrossings, no Traffic Stoppers are needed. This makes Surveyor Placement simple, though the Tram Crossing requires extra set-up for the tram assets.

'Short' Crossings for use with ordinary roads.

'LOW' version
(Kuids 76656:28613, 28614, 28617 & 28618)
These crossings have a low road attachment point and were designed to be used with mgreen48's roads, eg 'Road With Sidewalk', kuid:52519:37060. Although these roads are old, they are excellent for street scenes. The Low crossings will also work well with other older roads.

'HIGH' version
(Kuids 76656:28623, 28624, 28627 & 28628)
These crossing are intended to work with newer roads, (e.g. many Yarn roads). They have a higher attachment point so the road will sit correctly.
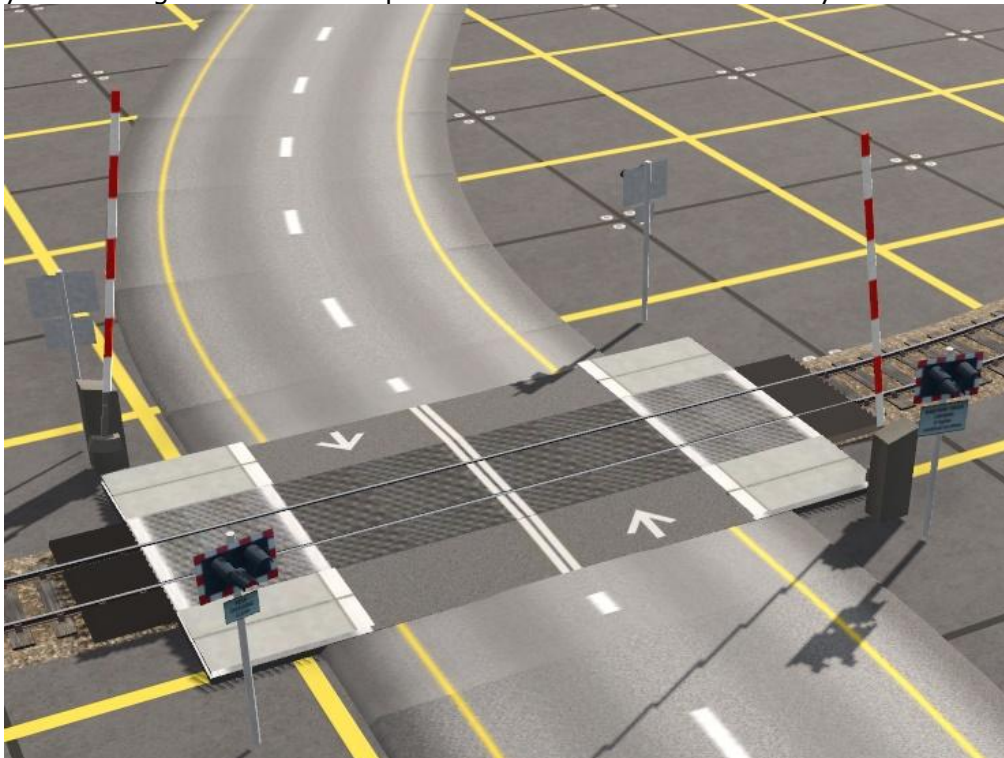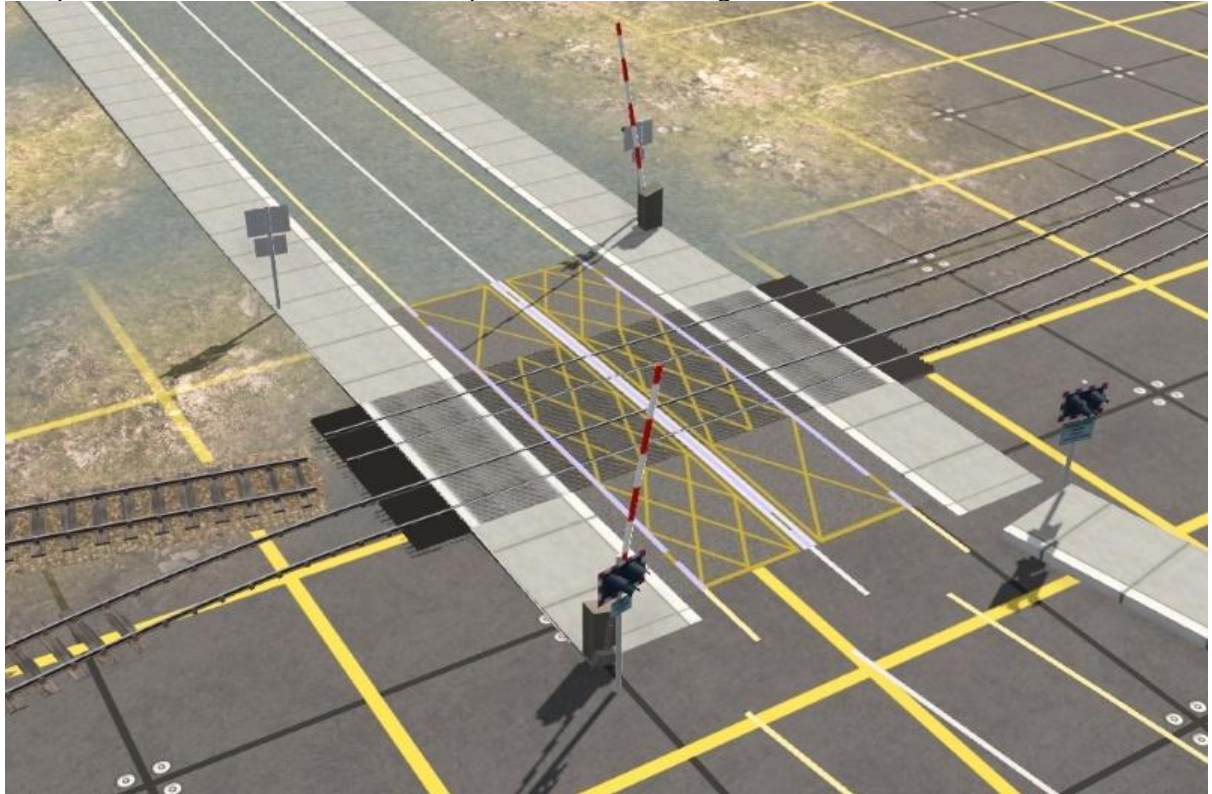
'Long' Crossings for use with AJS Street Kit roads.
(Kuids 76656:28611, 28612, 28615 & 28616)

These crossings have a very low attachment point of 0.4. This is correct for the AJS road system, e.g. Traffic (long Lines) kuid:122285:1127. The system is unique in that the road surface is 'painted' on to the ground.

Surveyor placement

Non Tram Crossings
Surveyor placement is straightforward and similar for all the crossings. Just place the crossing on your route and attach rail track and roads to the relevant attachment point.

The 'AJS Long' crossings will in addition need some slight ground adjustment as the rail track is slightly below ground level. Just use the 'Smooth Spline Height' tool to adjust.

All the above crossing will now work as a standard Trainz level crossings. They will react to trains within 200 meters.

Tram Crossings
Surveyor Placement is the same as 'AJS Long' crossings above but also requires extra tram and ATLS assets. See Crossings With Tram Crossover.

Tram crossings MUST use ATLS to work!
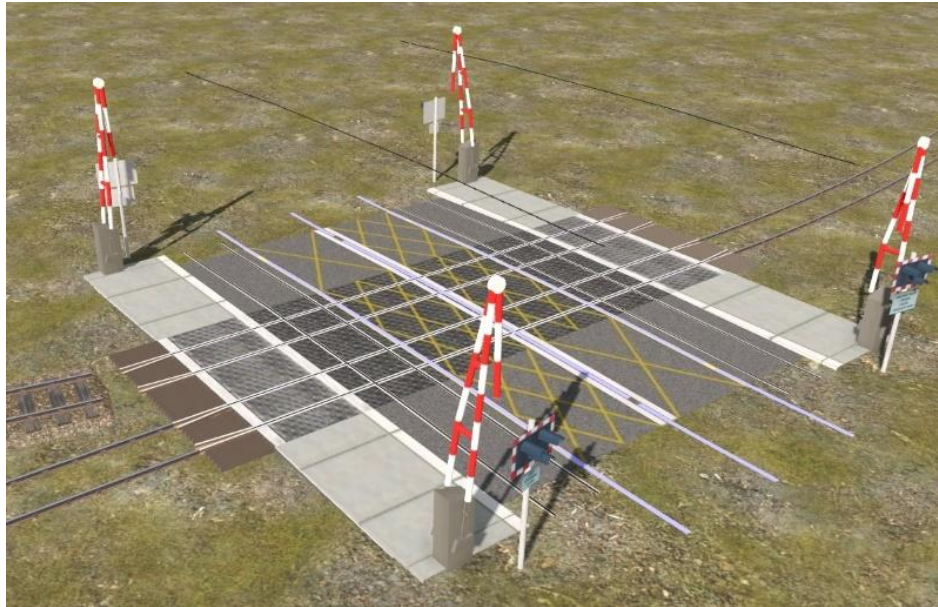
All Crossings
All my crossings have a pavement, (sidewalk) spline as standard. This is the 'AJS Pavement Type 1', kuid:122285:1195. Attach more pavement to form your road boundary. Alternatively you may delete the pavement on the crossing by attaching the 'AJS Spline Eraser', kuid:122285:1002.

ATLS is recommended for all crossings. Go to ATLS Set-Up.

Crossings with Tram Crossover.
(Kuids 76656:28511, 28512, 28513 & 28514)

These crossings use AJS Street Kit roads and Motorman1066 tram track, (6.4 meter wire height) or AJS tram track, (5.6 meter wire height). When placed, it sets attachment points to -0.4 for roads and -0.3 for tram track, (relative to local ground height). It also puts the main line rail track slightly below ground level but this is necessary to allow the lower road traffic and trams to cross.

The Tram crossings will only work under ATLS control and they require extra ATLS assets in order to stop trams when the crossing is active.
Essentially, this means 2 ATLS Tram Stoppers, kuid:76656:500013 placed on the tram track.
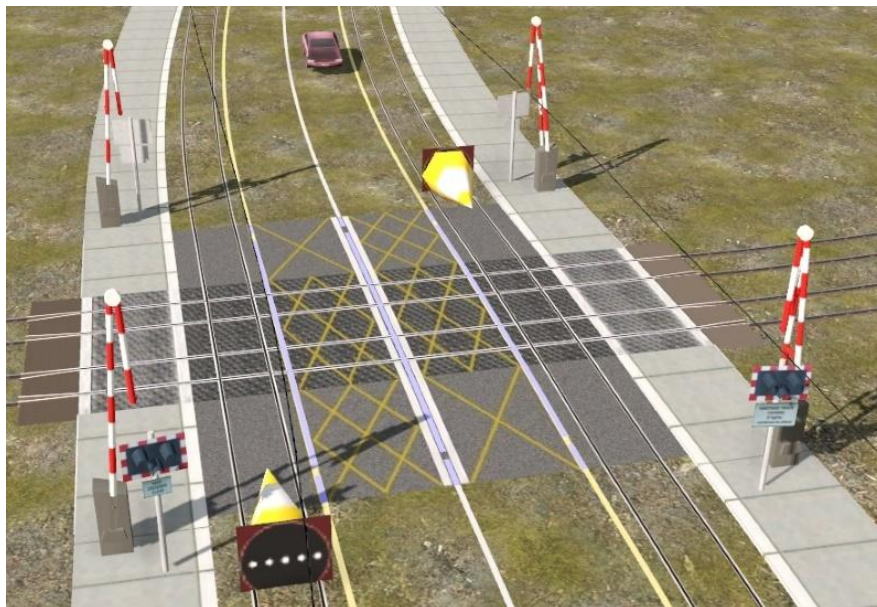
These Tram Stoppers should be set to the same Channel as you (or the Controller) have chosen for this crossing. In addition, the Route should be set to 'Route 1'. Trams will then stop when the crossing is active. See ATLS Set-Up.

As Tram Crossings use AJS roads, the ground will need to be texture painted, and the area around the main-line track lowered slightly by using the 'Smooth Spline Height' tool.


Optional extras;
Signal Guard Triggers on the tram track. Set to the Crossing's Channel and 'Route 1'. Place them a little way before the Tram Stopper. When a tram hits the trigger it will delay the Tram Stopper going red. (To stop SPADs).
Clickety Clack Trigger - Just for fun. It makes a sound like trains going over points.
ATLS Corrector Trigger - This will allow trains in-between triggers at session start up. See the ATLS – LCM Tutorial for more information.
Sen City Signal or AOCL light - When the barriers are down the crossing will send a message to these ATLS assets to clear the line. Set their Channel same as the crossing and their Route to SPL/LCM.
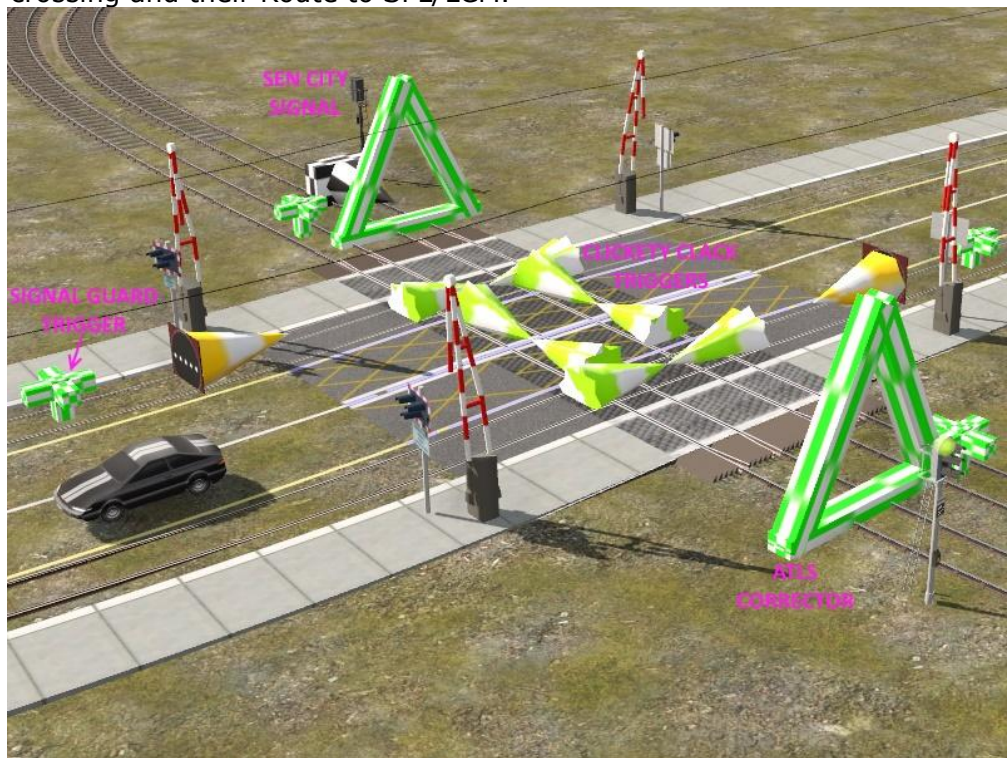
ATLS Set-Up.

ATLS is optional for the non-tram crossings but it is essential for the Tram Crossings.

Full details of ATLS set-up can be found in the ATLS **L**evel **C**rossing **T**utorial so only brief details are give here.

Use the new Controller/Slave asset kuid:76656:500041. Open this asset and set the next free Channel. This is automatic if you press the large + icon.

Place an ATLS Trigger on each track, just after the crossing to clear it after a train passes. Place another ATLS Trigger on each track some distance away, where you want the approaching train to activate the crossing. Set these trigger's Channel to the one you used in the Controller.

Tram Crossings will also need an ATLS Traffic Stopper set to the same Channel and to 'Route 1'. Place on the tram track as shown earlier. That's it!
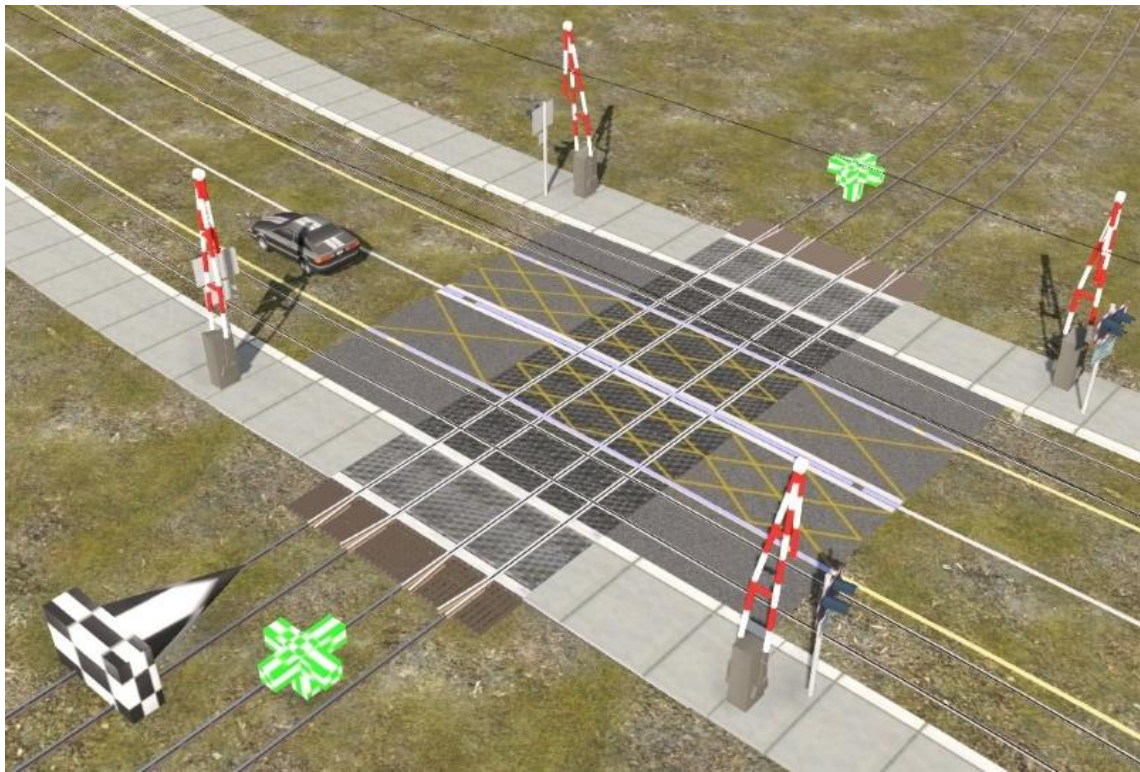
SAVING TO A MAP (Route)

This is optional. Normally settings are automatically saved to a Session. This shouldn't be a problem if you keep a 'Master Session' to build your Route from. However if you specifically want to, you may 'Name Save' a special code to the map. Then all settings will be saved to the Route Layer.

Take a look in the top left corner of the Properties Box and you will see something like ATLS1[0,3] in blue. This is an encoded representation of all the settings you have made to your assets. (All ATLS assets can do this).
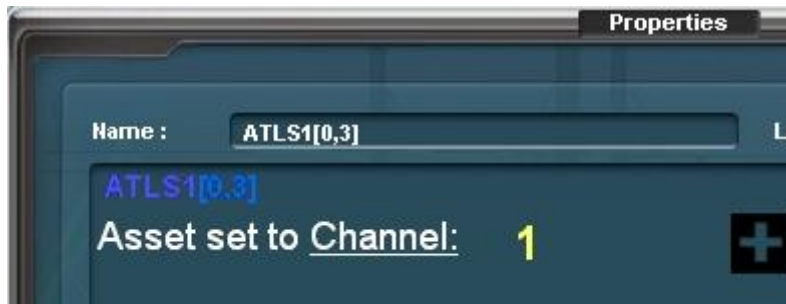
If you save the name of this signal EXACTLY as shown, the settings will be retained. It's important to keep the format, including the square brackets and comma or it will either just not work, or may cause errors.
On occasions you may encounter the *'That Name Is Already In Use'* message. If you do, DON'T save it but add: '(A)' to the name you are saving…. So you will save: ATLS1[0,3](A) Use the letter (B), (C) etc., for subsequent clashes.
The brackets are important.

CREDITS
Much credit goes to Motorman1066 for the intersecting rails used in the tram crossings and for creating and animating the unique pivoting barriers, (which were adapted from Adrian19's basic barrier mesh). Also to Adrian19 for his meshes, used in the non-tram crossings. Many thanks for all your work.