

Proposal of a Modular Road System with the New Road Pieces

Version 1.2, January 4th, 2021

Basics

The module size is two by three baseplates 32x32. There are three main variants: The left corner, the right corner, and the straight part. The corner parts offer space for one normal and one corner Modular Building, the straight part offers space for three normal Modular Buildings. The Modular Buildings are expected to offer their own pedestrian way, while the modular road system offers a bike way, parking lots and small places for trees or other plants, and a two-lane half-road. The corner parts also offer a mixed pedestrian and bike area and crossing.

The designs given are just examples. Some buildings like the Fire Brigade or the Corner Garage will need some adaption to give access to their garages or fuel pumps. One might add bus stops, or move the parking lots or places for plants to put trees somewhere else.

The mixed pedestrian and bike area of the corner pieces are left mostly unfinished (yellow studs) here. It is recommended to put a pattern matching the Modular Buildings pedestrian way design.

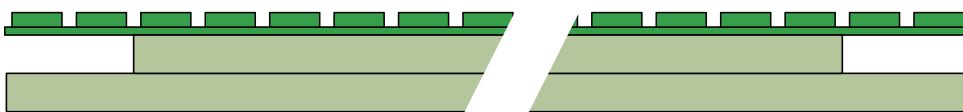
Each module has a specially designated area near the road (red studs) where I hide a microcontroller to control the lights and traffic lights, and cover it up with e.g. a small coffee or hot dog shop.

The areas with brown studs are places to put flowers or trees.

Construction

The whole module is placed on a wooden base: Two MDF boards of 5mm thickness, one cut to 768x512mm and the other one to 736x480mm, are glued on each other, so the smaller one sits on top and there is a distance of 16mm from the edge of the smaller to the edge of the larger board on all four sides.

The baseplates are affixed to the smaller board with double-sided tape, matching the larger board with regards to the position:



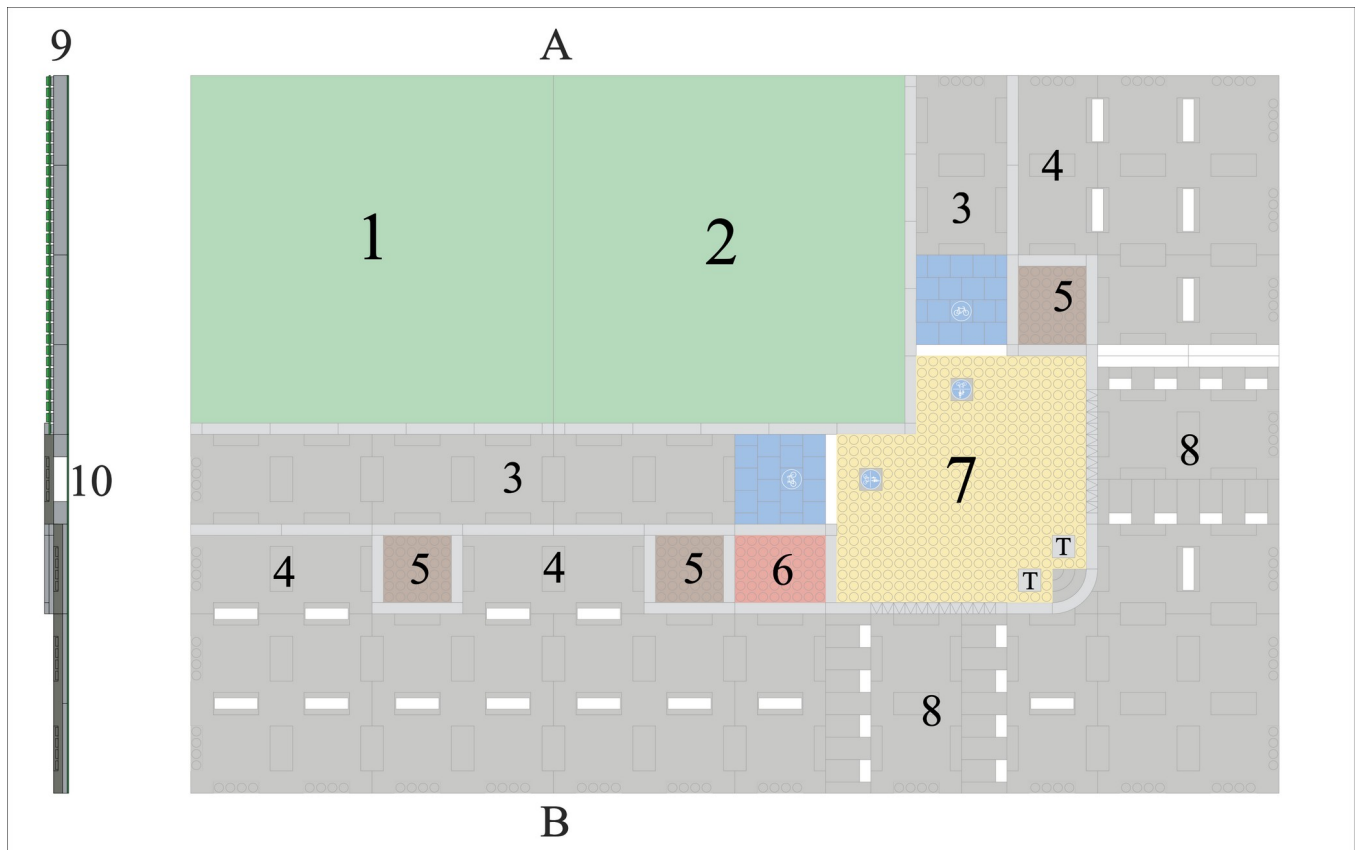
This way, the modules can be connected and leveled by putting boards cut to 5x30mm into the "grooves".

Heights

The new road plates that are 2/3 high are placed onto plates on the base plates. Planting areas are one brick high, the bike path and the mixed pedestrian and bike areas are one brick plus one plate plus one tile (or one brick plus one road plate) high.

At the pedestrian crossings and wherever else a special access to the road is necessary, slopes 33 1x1x2/3 are used.

Sample Module



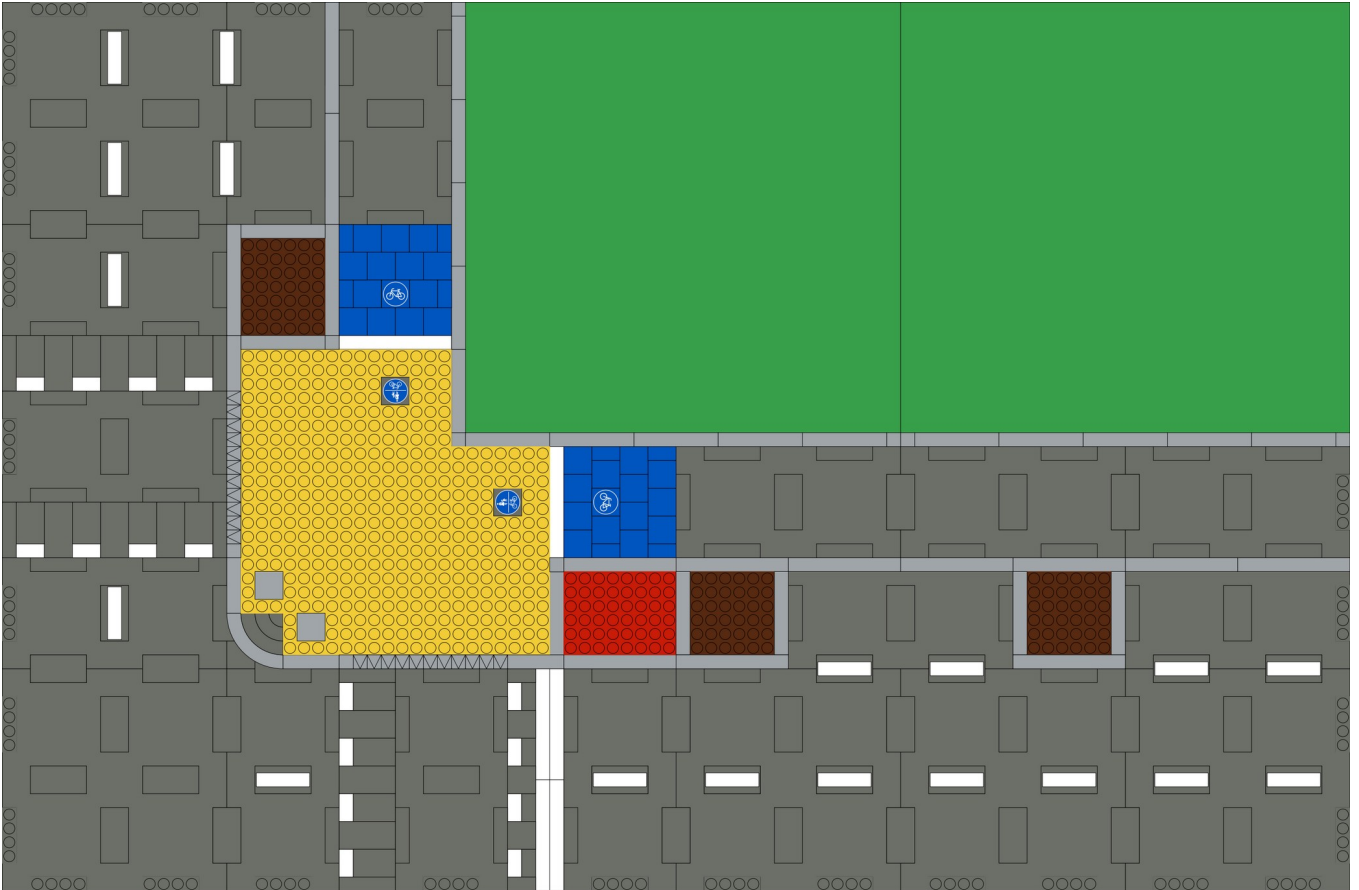
1. Baseplate of a normal Modular Building, together with its curb tiles.
2. Baseplate of a corner Modular Building, together with its curb tiles.
3. Bike path with printed bike path sign.
4. Parking lot, level with the road
5. Place to plant some flowers or trees.
6. Place for a special building like a coffee or donut shop. Underneath is the space for hiding the microprocessor that controls lights and traffic lights.
7. Mixed pedestrian and bike area, with printed signs. The design should be adapted to match the corner buildings' pedestrian way design. Traffic lights can be placed here, too, at location "T".
8. Mixed pedestrian and bike path. The marked curb pieces denote the slope 33 1x1x2/3 pieces.
9. Cut / side view at line A/B.
10. If the module is powered, cables and connectors run beneath the bike path.

Potential Changes to the Standard

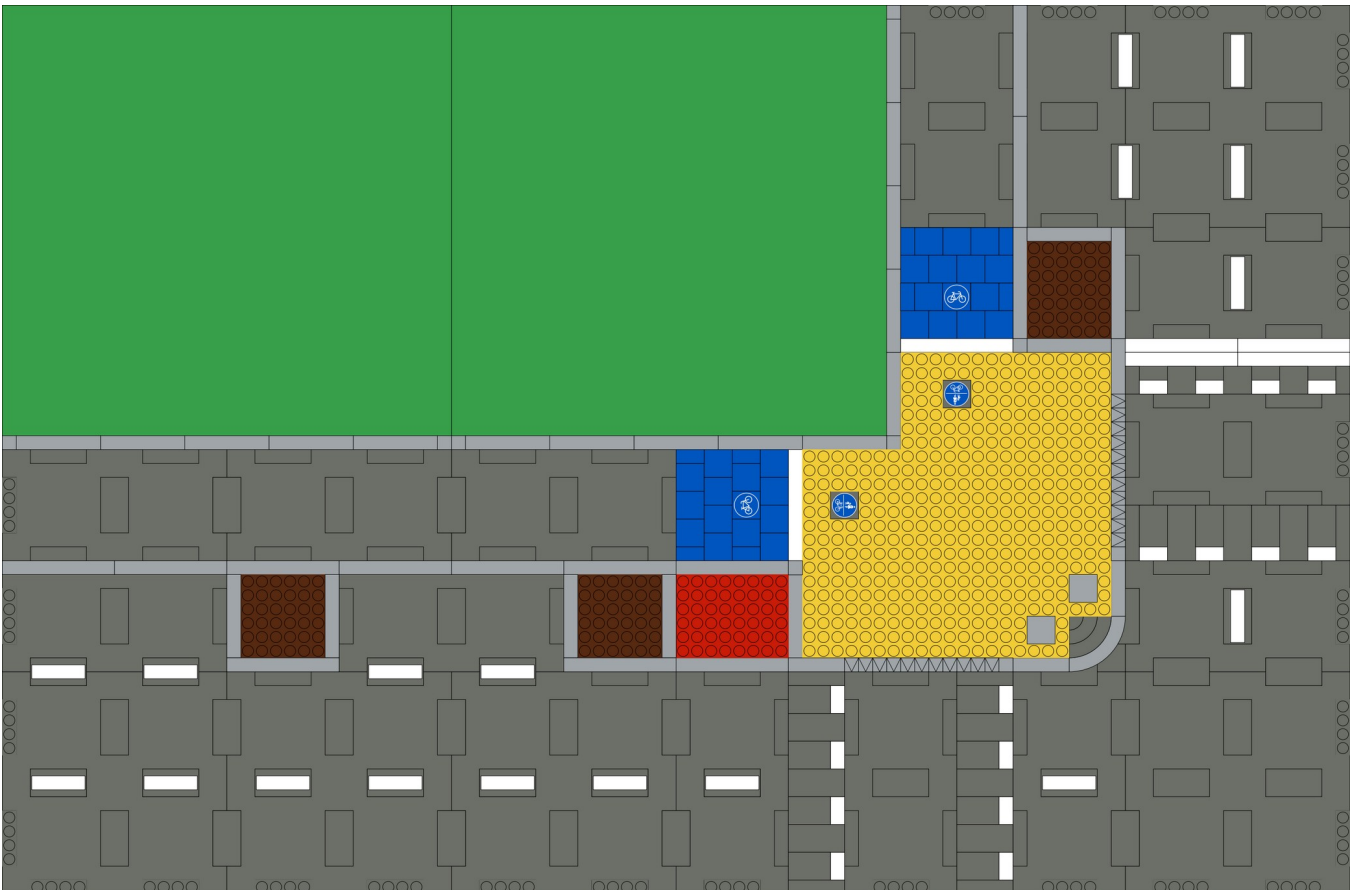
If LEGO® comes out with blue roadplates 8x16, it would be nice to use them for the bike lanes.

Once I have determined how to build the traffic lights, I will add them to this document. I'm still looking for inspiration.

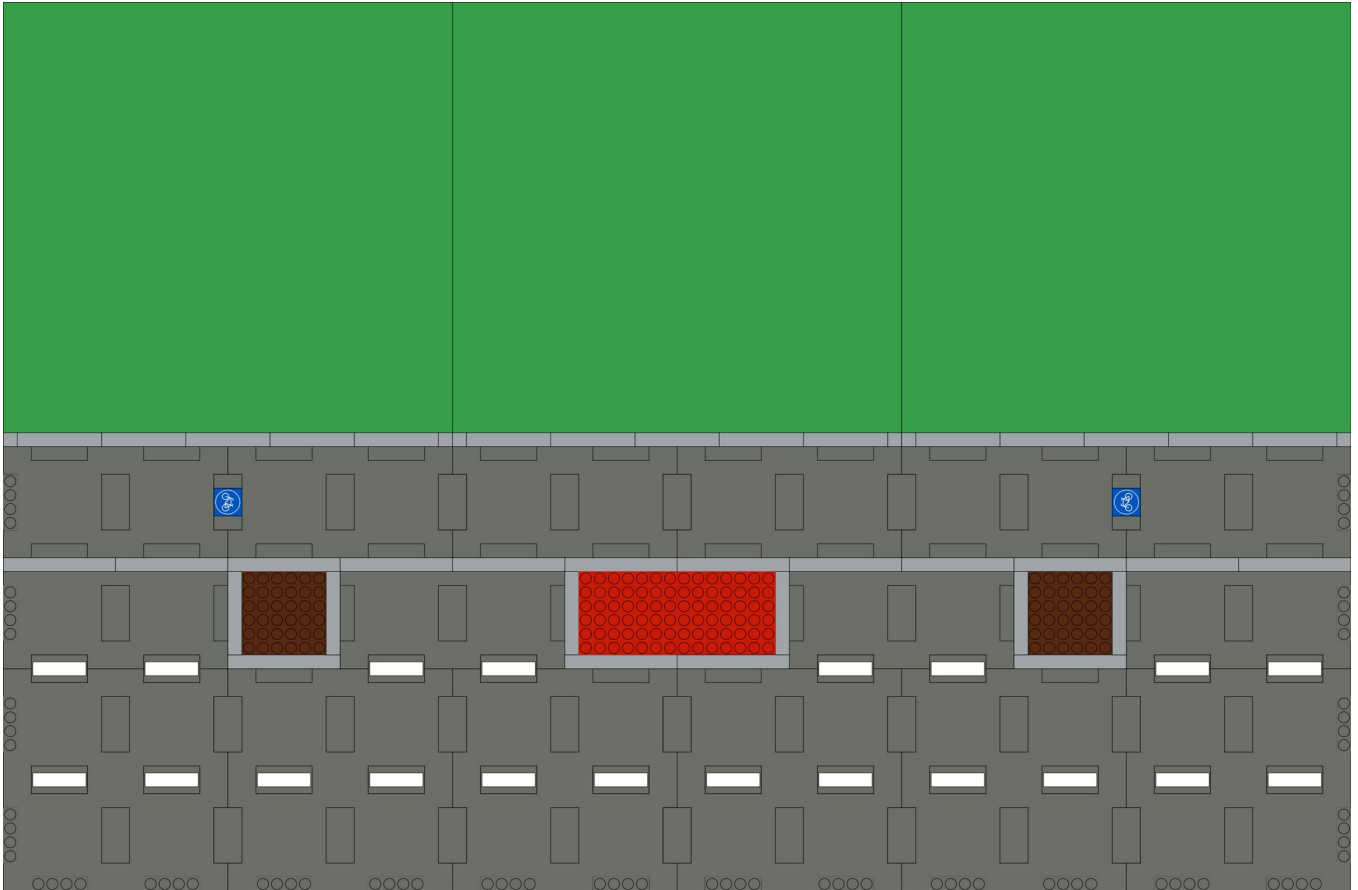
Corner Left



Corner Right



Straight Part



Credits and Contact

I, Christian Treczoks, LEGO® Ambassador of the MBFR (LEGO® Modellbaufans Rheinland e.V) am the creator of this standard and this documentation. Feel free to use it if you like it. All I ask is to be credited as the designer of this standard.

If you have questions or ideas, contact me at christian@treczoks.net

Change Log

From Version 1.0 to Version 1.1

Changed the bike path from a seven studs wide tile grave to an eight studs wide path based on road planes. This reduces the width of the parking bays down to seven studs., but allows for easier and cheaper construction.

From Version 1.1 to Version 1.2

Raised the whole construct by one plate. This can be seen at the cut or side view of the sample modle. It allows for a lot of things like integrating rail modules at road level for trams, cable paths running under the road, and easier support of the Modular Buidings by just using bricks instead of layers of plates.