Railroad time
Proposal Regionenshus i Göteborg
By Alvaro Campo

Background

Before Swedish normal time was introduced, the local time was valid and the time difference between Stockholm and Gothenburg, for example, was 24 minutes. When the railways were built, beginning in 1856, things became difficult. First, it was difficult to compare tables for different places, and the clocks had to be changed during the trip. In order to handle its train planning, Railway companies, introduced their own "railway time" which used Gothenburg's local time as a reference. Station clocks throughout Sweden received two minutes, one showed the railway time and the other showed local time.

Normal Time and Local Time (Sun Time)
Normal time introduced in 1879 in Sweden is a common time for a larger area or country that matches the different times that can arise when setting the time after the sun, so-called solar time. Solar time means that clocks are set at twelve when the sun is highest in the sky.

My suggestion is to build a solar clock that marks the railway time (or Gothenburg as it was also called) by displaying clock twelve (when the sun is highest in the sky) every day throughout the year.

Verket

The sundial is composed of 3 parts,

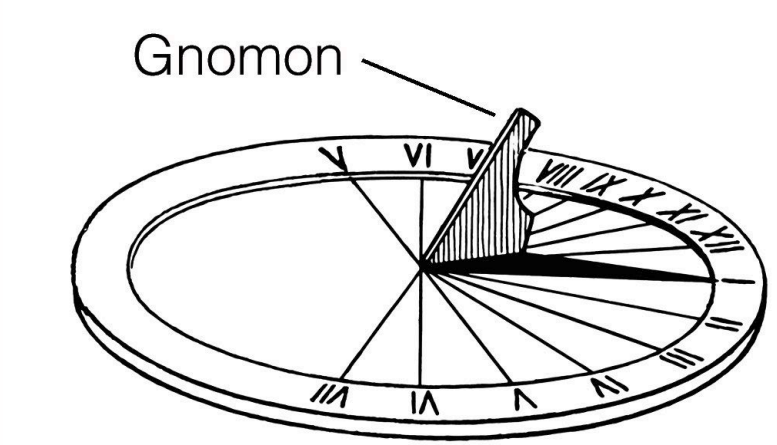
The gnomon, that casts its shadow, a metal pole with a perforated disc at the top. (Gnomon is the term used for the part of a sundial that casts a shadow)

A 35m. long wooden elliptical bench that mimics a landscape and that remind of a miniature train track in its construction. It is a natural extension of the deck/staircase

3 engraved markers on the ground which show important solar events during the year; the summer and winter solstices and the equinoxes.

The Gnomon

Gnomon is the term used for the part of a sundial that casts a shadow.



In this case the gnomon is perforated and projects an image of the sun. On certain dates during the year the projection of the sun will illuminate the markers. The Gnomon will be

made of stainless steel and will be approximately 260cm tall. The perforated plate will have a diameter of approximately 120cm.

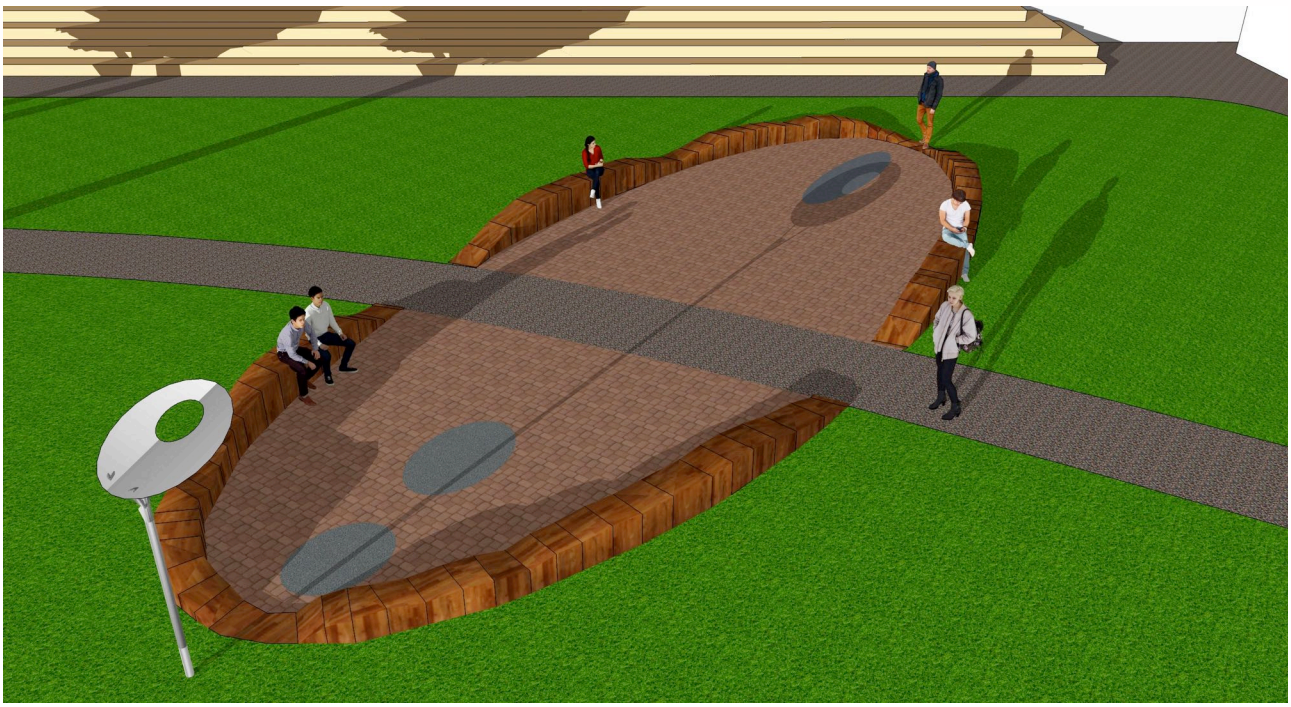
The elliptical bench

The bench serves two purposes, it surrounds the area where the shadow will be cast when the sun is at it´s highest point in the sky, everyday during the whole year. It also serves as a bench, a continuation of the wooden stairs coming down from regionens hus, a place for people to sit outside in the park. It can also be read and seen from high above.

The elliptical bench´s dimensions are directly connected to the size of the gnomon.The ellipse is 17m long because the shadow cast by the gnomon in the month of december at 12.00 is approx. 17 m long. (In december the shadow is at it longest)
The bench will be made of wood, to match the wooden stairs coming down into the park, it´s shape, the ellipse, remind of a wooden model train track and it´s profile reminds of a landscape with it´s ups and downs.

The length of the shadow in december is approximately 17m.

May 5th 12.00



Dec 10 12.00

Mar 27 10.30

Mar 27 13.00

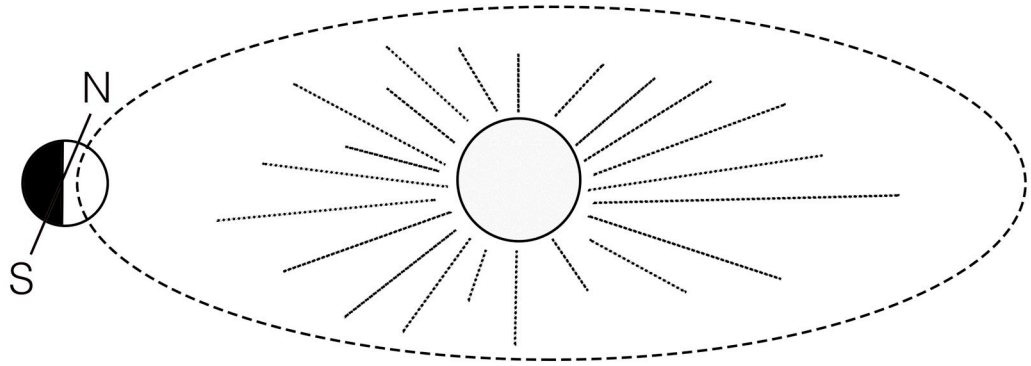
The time shown within the ellipse ranges from 10.30 to 13.00 and can vary depending on the days.

The 3 markers

The 3 markers are engravings that show a diagram of the position of the earth in relation to the sun at the current time. They will light up when the projection passes over them. Since the daily visitor perhaps has no knowledge of the artwork being a sundial, these engravings will also serve as clues to reveal the totality of the work.

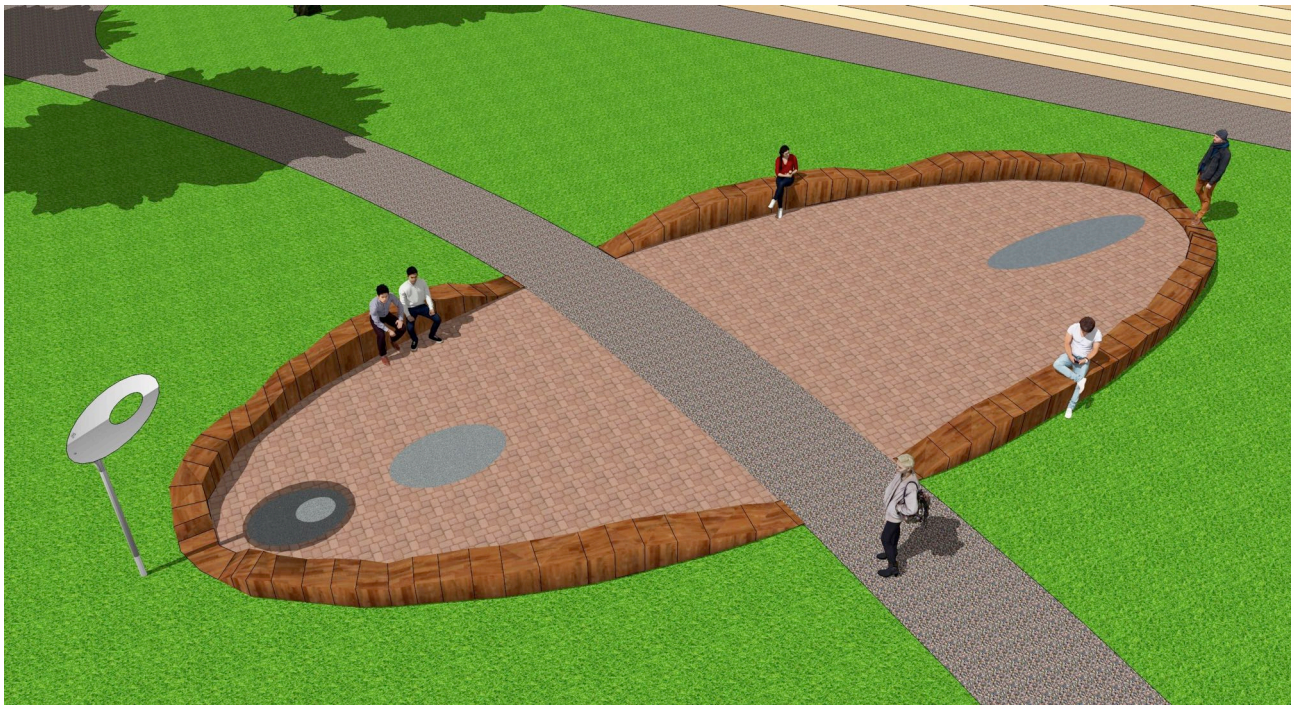
The markers will be engraved in stone or concrete that will be part of the paving that is within the circumference of the bench, they will show the position of the earth in relation to the sun at important solar events during the year; the summer and winter solstices and the equinoxes.

Examples of metal engraving in concrete.



This diagram represents the summer solstice June 21st and the position of the shadow also matches approximately the position of the earth in the ellipse. (See photo below)

June 21st 12.00



For the interior of the ellipse and its paving I would like to take up the invitation to collaborate with the landscape architects already involved in the project. The sketch and its illustrations show specific material on the ground and a difference in color where the markers will be placed, all of this is a temporary solution and meant to be rediscussed within the terms of the collaboration. The idea is to find a solution that will best fit the piece but also its integration in the landscape as a whole, with materials that correspond to the overall architectural idea/ concept.

Construction and production
I have been in touch with several companies for the production of the work. This is how the responsibility will most likely be distributed.

The gnomon will be produced and installed in collaboration with Hangmen AB
The bench will be produced and installed in collaboration with Bysso AB
The groundwork, paving and lighting will be produced/organised in collaboration with the landscape architects -> if possible.

Installation

The separate pieces will be transported to the location at a given date and installed.
The installation will be overlooked by an engineer or astronomer to calculate the exact positions of the shadows and to construct the whole accordingly. (Budget)

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