



**Pacific Coast Region NMRA  
Diamond Rails Forever  
2019 Joint PCR/FRRS Convention  
May 2–5, 2019  
Sacramento, California**



**Let's Visit Miniatur Wunderland and Gulliver's Gate**

**Irwin D. Nathanson,  
President, Hudson-Berkshire Division, Northeastern Region  
May, 2019**

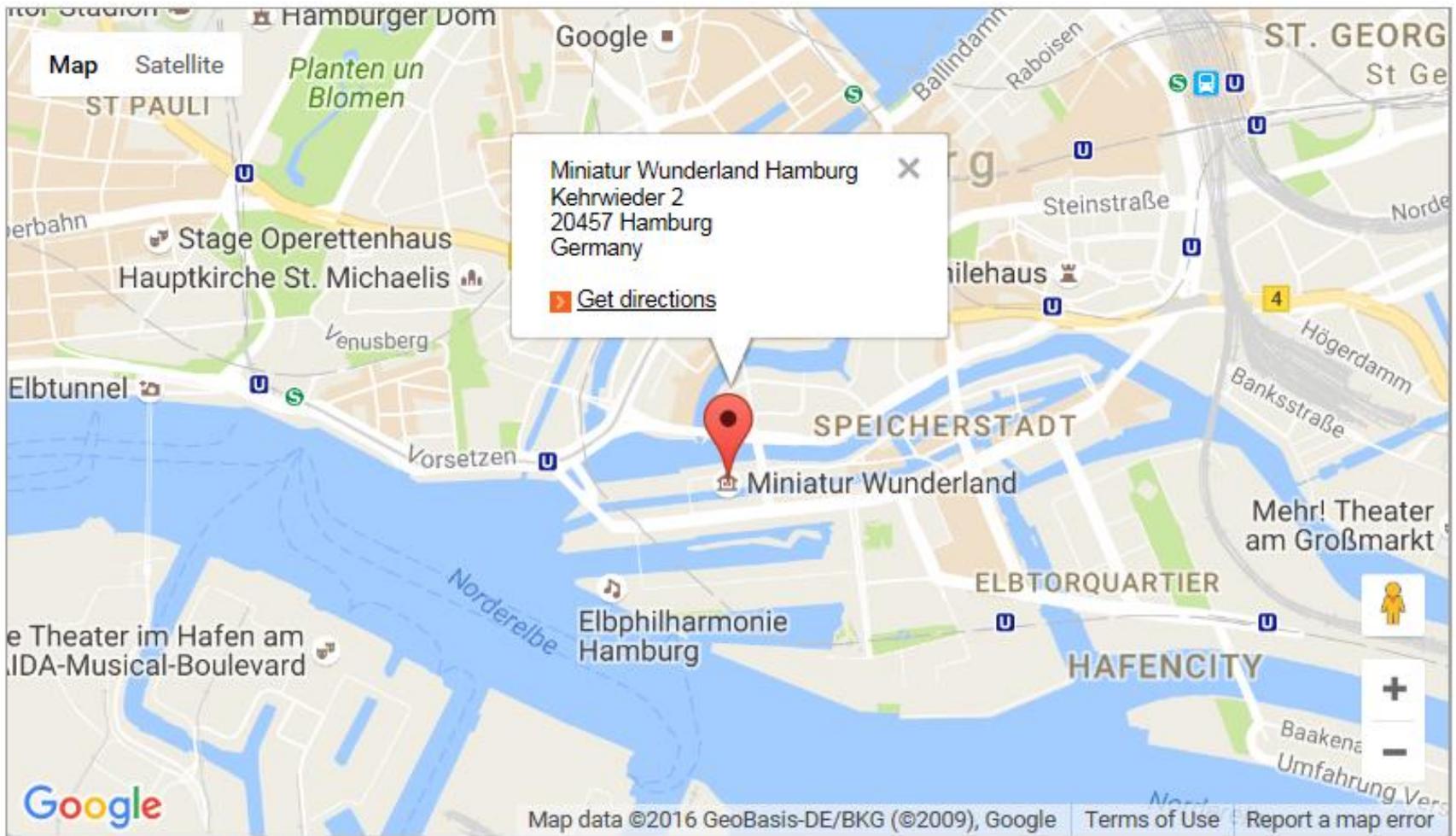


# Putting Hamburg on The Map

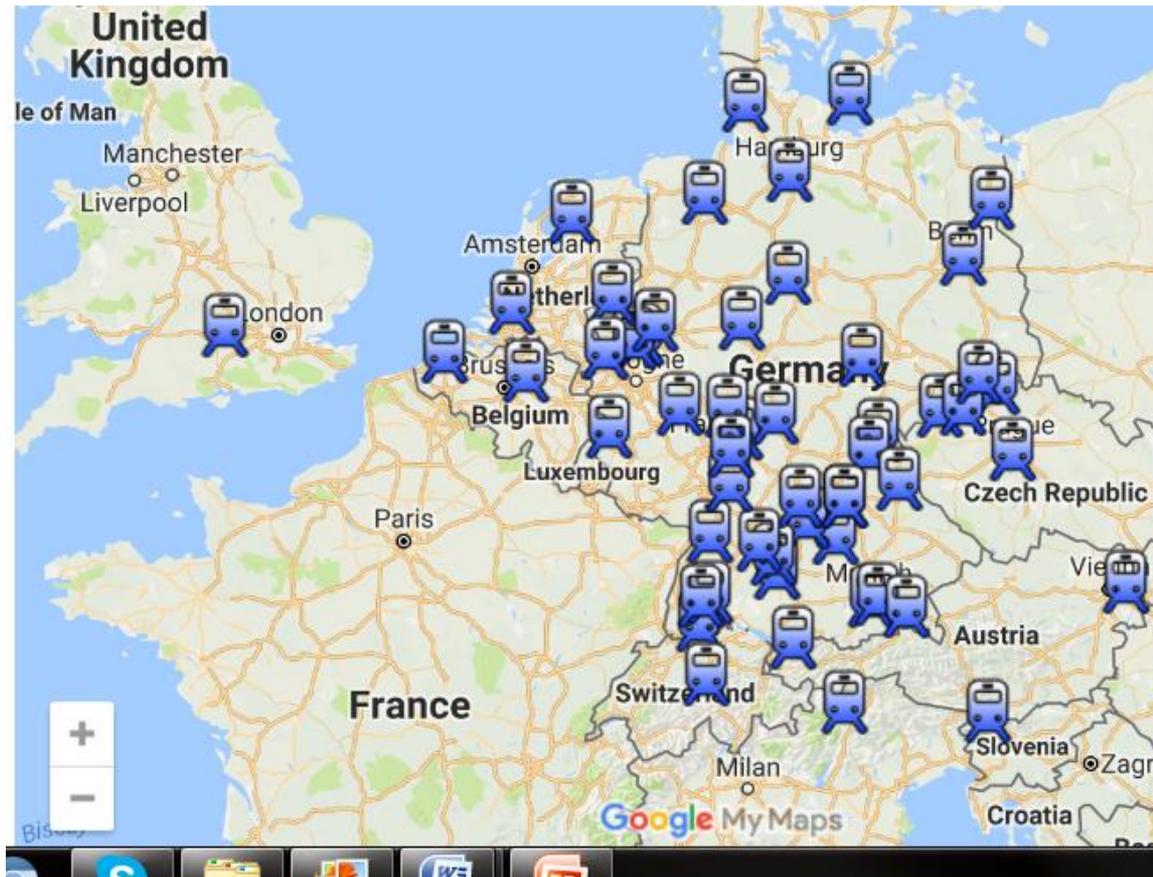


## **10 Interesting Facts About Hamburg Germany:**

1. Hamburg is a city-state located in the northern part of Germany.
2. Hamburg is the second largest city in Germany (first is Berlin).
3. There are over 100 clubs and music venues in Hamburg.
4. Many refer to Hamburg as Germany's 'Gateway to the World'.
5. There are about 1.8 Million living in the city of Hamburg.
6. The term 'Hamburger' originally derived from Hamburg.
7. The Miniatur Wunderland is the largest model railway in the world.
8. Hamburg has over 2300 bridges.
9. The Planten un Blomen park has the largest Japanese landscape gardens in Europe.
10. Hamburg's official name is 'Freie und Hansestadt Hamburg' meaning the Free and Hanseatic City of Hamburg.



# Miniatur Wunderland is The Most Famous...But It's *Not* the Only Large Model Railroad Layout in Europe



<http://www.modelrailroadmuseums.com>

# Examples

- Modellbahnwelt  
<https://www.modellbahnwelt-odenwald.de>
  - HO
  - G
- Mini World HO  
<https://miniworldlyon.com/en/>
- Pendon  
<https://www.pendonmuseum.com/>
- Miniature Land  
<https://www.miniatureland.ca>
- Smile Stones
- **Miniatur Wunderland \***  
<https://www.miniatur-wunderland.com/>

\* Size when completed in 2020

## Odenwald (Frankfurt area)

400 m<sup>2</sup>  
45 m<sup>2</sup>

Lyon 2,500 m<sup>2</sup>

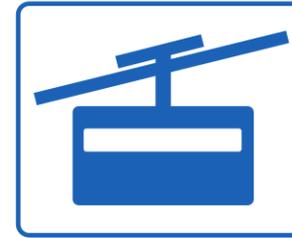
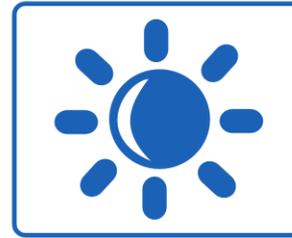
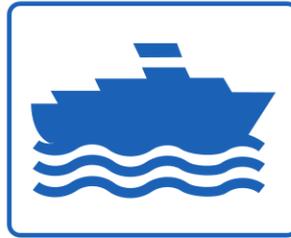
Oxfordshire 285 m<sup>2</sup>

Toronto Under construction

Rheinfall 130m<sup>2</sup>

**Hamburg 10,000 m<sup>2</sup>**

# Miniatur Wunderland Overview



**Miniatur Wunderland**  
**[www.miniatur-wunderland.de](http://www.miniatur-wunderland.de)**

<https://www.youtube.com/watch?v=R669I5CA1YA>

# Miniatur Wunderland Facts and Figures

- 45 cleaning trains
- 14,500 freight cars
- 3,000 switches
- 45 computers, 20 large video screens
- 300 employees
- 10,000 visitors/day average

# The largest Model Railway in the World in Numbers

The Miniatur Wunderland is hard to describe in words, so we have summarized the most important facts in numbers:



**1.490 m<sup>2</sup>**  
Layout size



**260.000**  
Figures



**21 Mio. Euros**  
Building costs



**42 Planes**  
up in the air



**9.250**  
Cars



**1.040**  
Trains



**1.380**  
Signals



**385.000**  
LEDs



**760.000 hours**  
Construction  
Time



**15.400 m**  
Track Length



**4.110**  
Buildings



**130.000**  
Trees

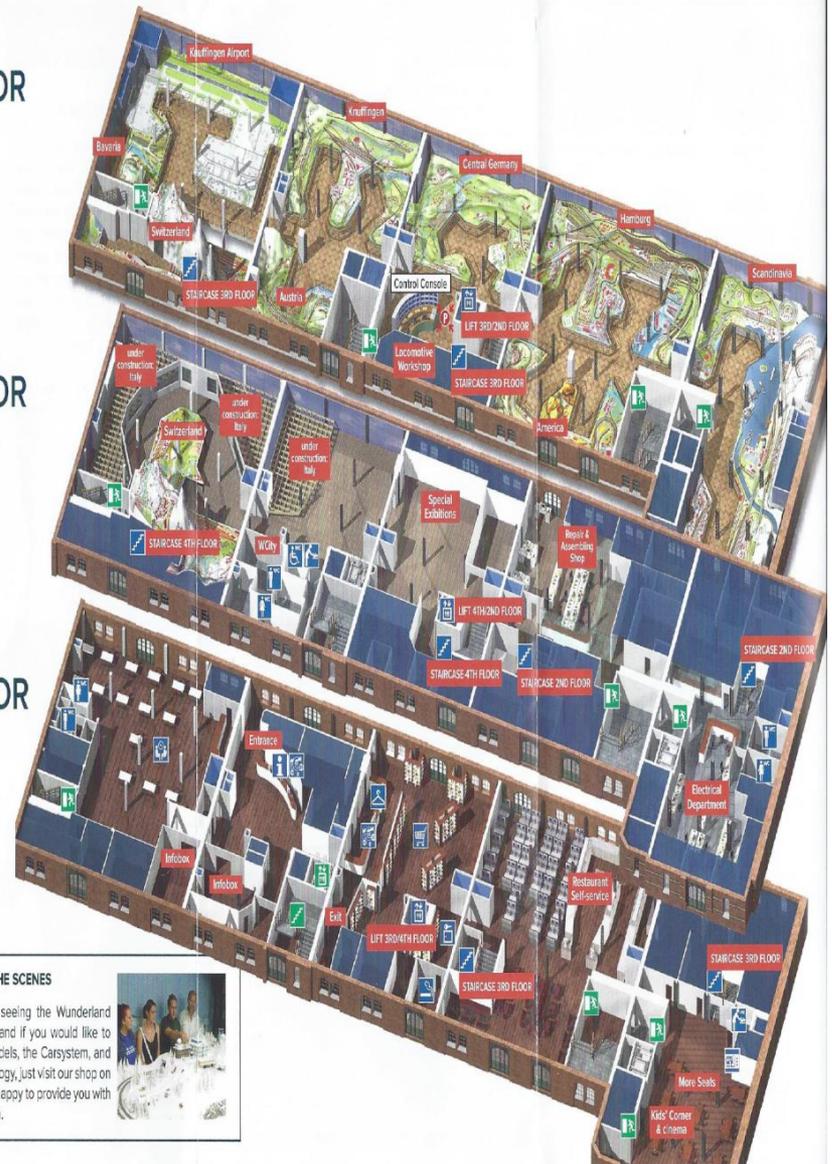
# Floor Plan

5/13/2019

4<sup>TH</sup> FLOOR

3<sup>RD</sup> FLOOR

2<sup>ND</sup> FLOOR



**GUIDE TOUR BEHIND THE SCENES**

If you are interested in seeing the Wunderland from a new perspective and if you would like to learn more about the models, the Carsystem, and the Wunderland's technology, just visit our shop on the second floor. We are happy to provide you with more detailed information.



# 1st - 3rd Section Middle Germany, Knuffingen, and Austria

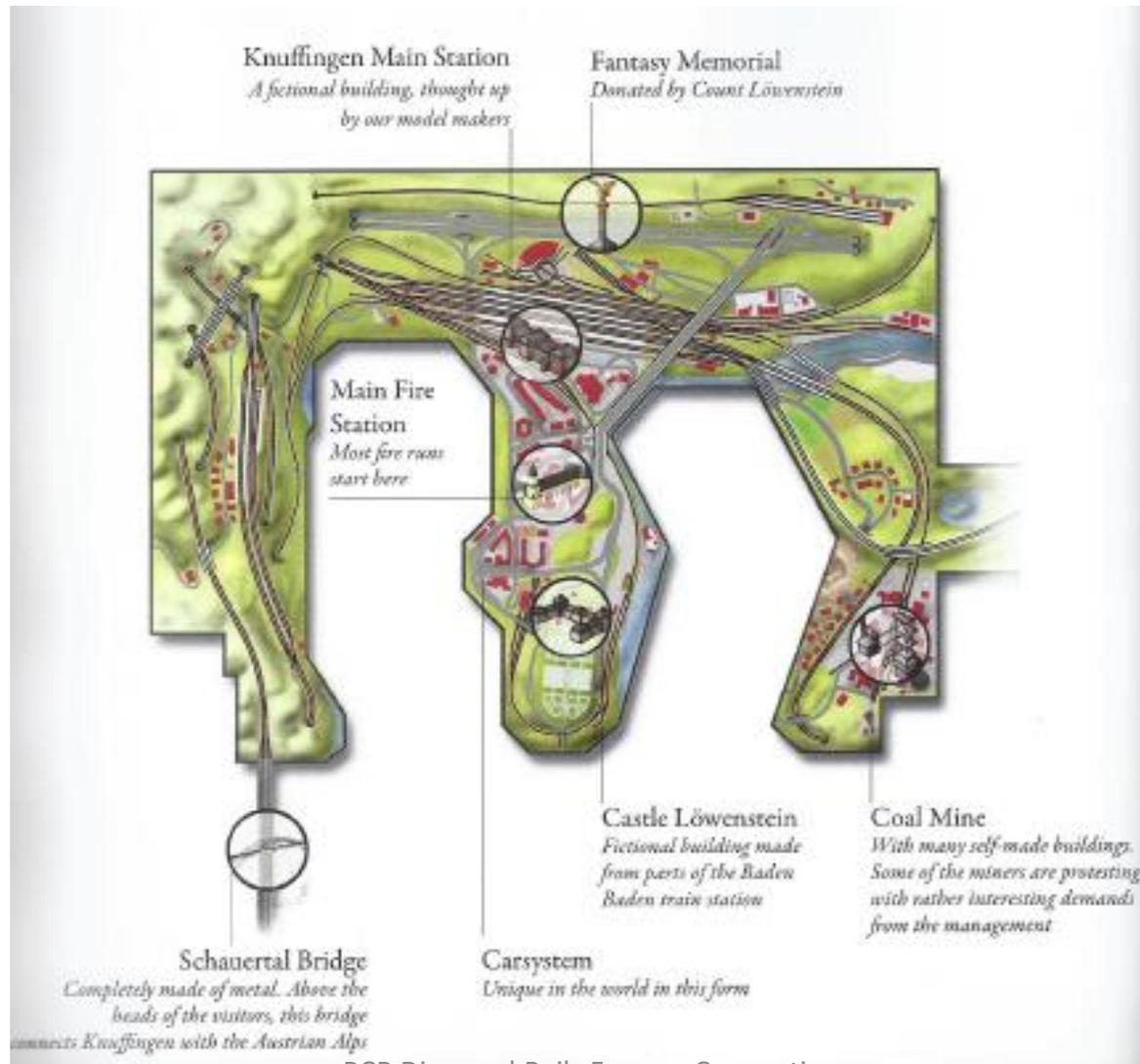
Highlights: Beautiful landscapes, revolutionary Car system with fire engines actually operating. Beautiful Alps with functional lifts. A large carnival, a very long highspeed route for the ICE-train, and much more

- Construction Phase: December 2000 - August 2001
- Model Area: approx. 300 m<sup>2</sup>
- Track Length: 3,000 meters
- Trains: 230
- Wagons: 2,400
- Signals: 220
- Switches: 450
- Computers: 11
- Lights: approx. 70,000
- Buildings and Bridges: 850
- Figurines: 40,000
- Cars: 1,000
- Trees: 70,000
- Work Hours: approx. 60,000

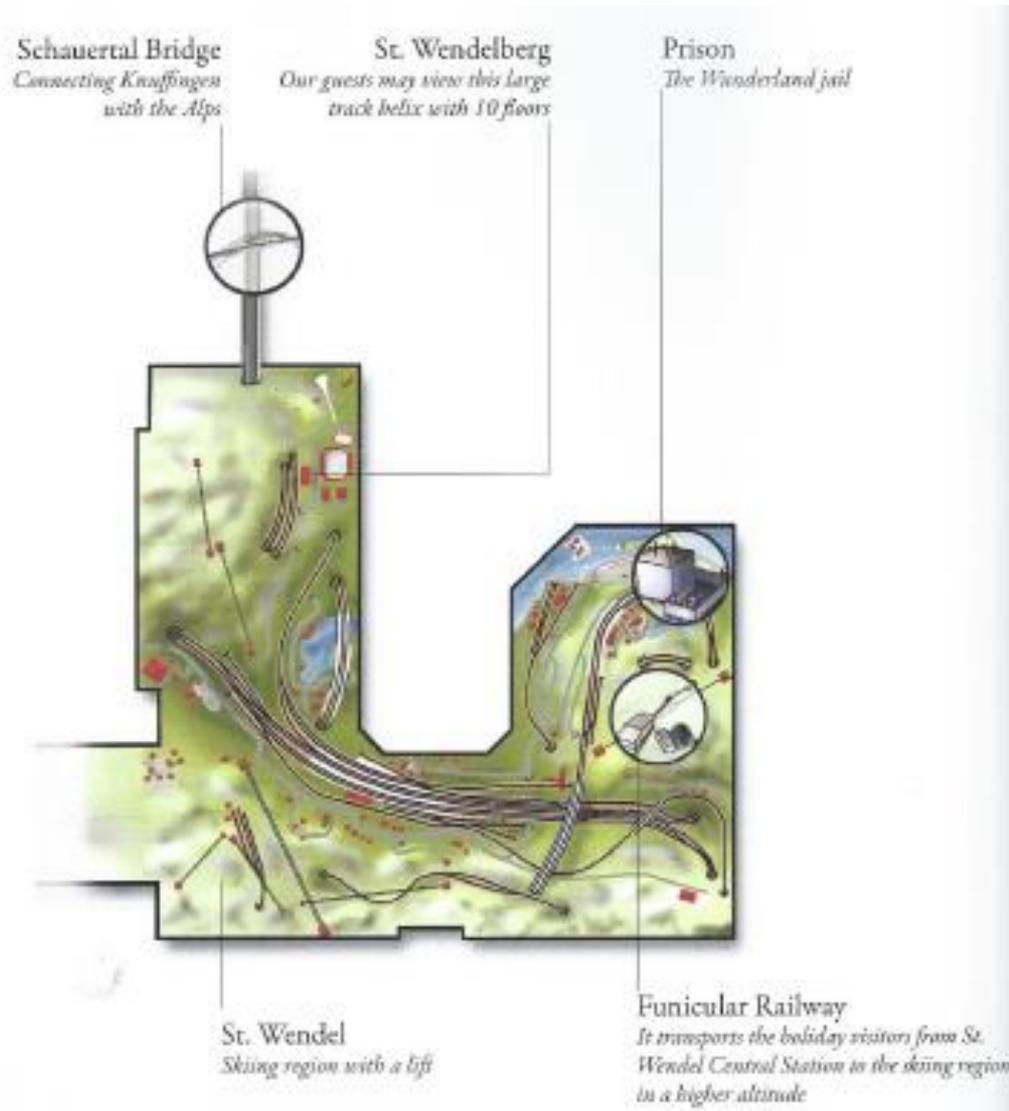
# Section1, Middle Germany



## Section 2, Knuffingen



# Section 3, Austria



# 4th Section Hamburg

Highlights: Busy train operation, unique city with Hamburg's landmarks such as St. Michaels Church (Michel), Imtec Arena (with 12,000 figures), Köhlbrandbridge, St. Pauli Landungsbrücken (harbour piers), Historic warehouse district, the harbour, Hagenbecks Zoo and so on

- Construction Phase: 1st November 2001 - 22nd November 2002
- Model Area: approx. 200 m<sup>2</sup>
- Track Length: 2,600 meters
- Trains: 190
- Wagons: 2,200
- Signals: 260
- Switches: 550
- Computers: 9
- Lights: approx. 60,000
- Buildings and Bridges: 1,000
- Figurines: 50,000
- Cars: 1,300
- Trees: 15,000
- Work Hours: approx. 95,000

# Section 4, Hamburg

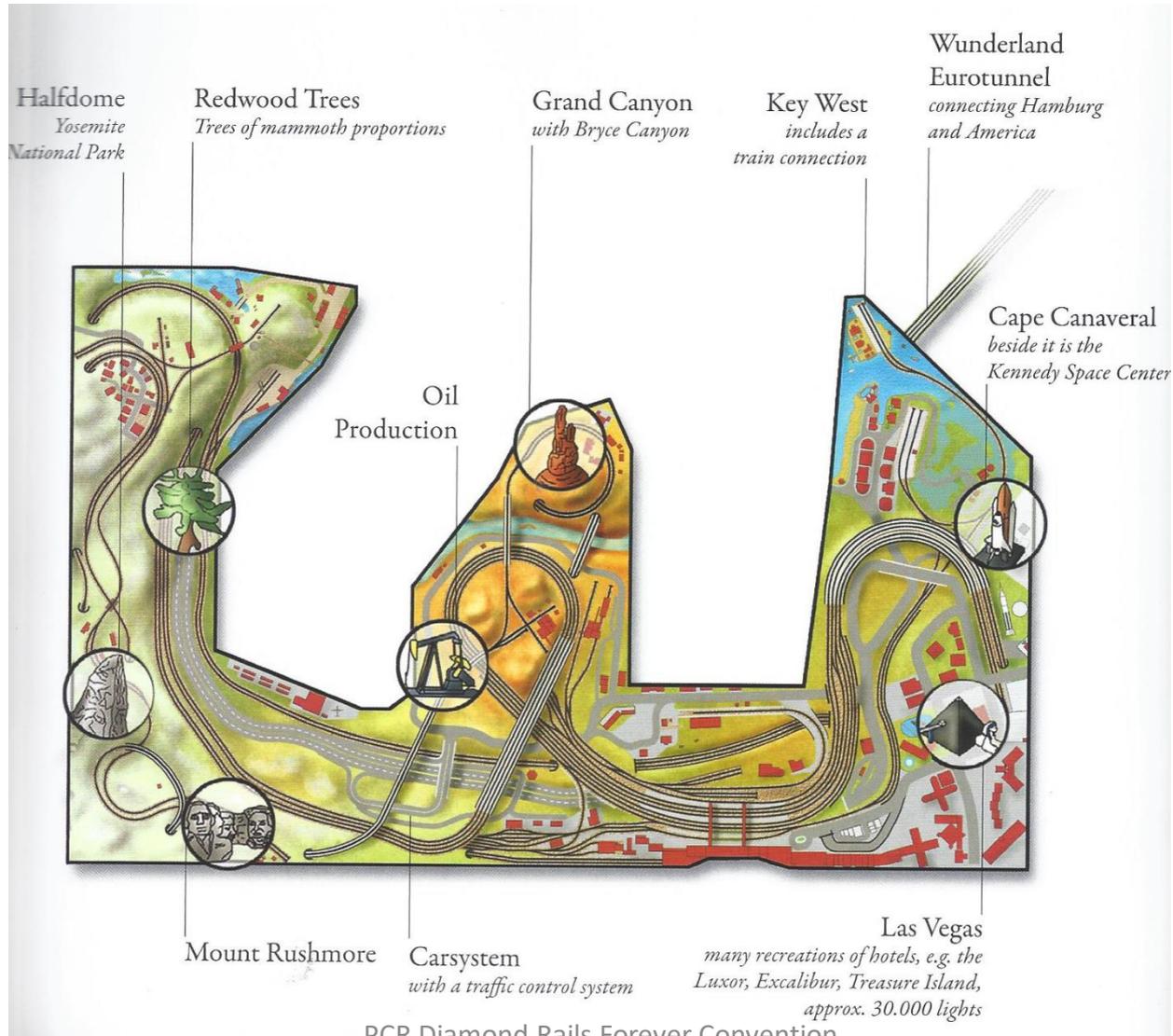


# 5th Section America

Highlights: Grand Canyon, Las Vegas with its more than 30,000 lights, the Rocky Mountains, the amazing Faller Car System with American fire engines, Miami, the Everglades, Area 51, Cape Canaveral, Pueblo villages, logging camps and so on...

- Construction Phase: January 2003 - 08th December 2003
- Model Area: approx. 100 m<sup>2</sup>
- Track Length: 1,400 meters
- Train: 140
- Wagons: 2,800
- Signals: 120
- Switches: 300
- Computers: 6
- Lights: approx. 70,000
- Buildings and Bridges: 450
- Figurines: 30,000
- Cars: 800
- Trees: 30,000
- Work Hours: approx. 80,000
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# Section 5, America

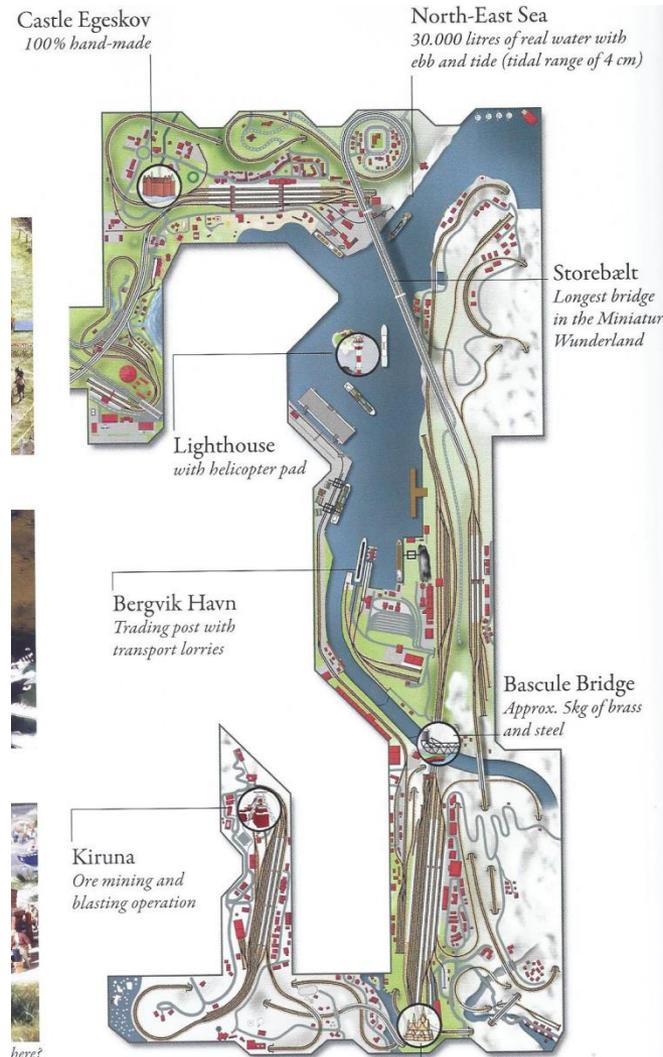


# 6th Section Scandinavia

Highlights: Denmark, Sweden, Norway, and Finland. Real water, Northern lights, high and low tide, Arctic Sea, moose, navigating ships and snow...

- Construction Phase: July 2004 - July 2005
- Model Area: approx. 300 m<sup>2</sup>
- Track Length: 2,000 meters
- Trains: 150
- Wagons: 2,950
- Signals: 300
- Switches: 600
- Computers: 7
- Lights: approx. 50,000
- Buildings and Bridges: 500
- Figurines: 40,000
- Cars: 600
- Ships: 16
- Trees: 50,000
- Water (real): 30,000 liters
- Work Hours: approx. 105,000

# Section 6, Scandinavia



# 7th Section Switzerland

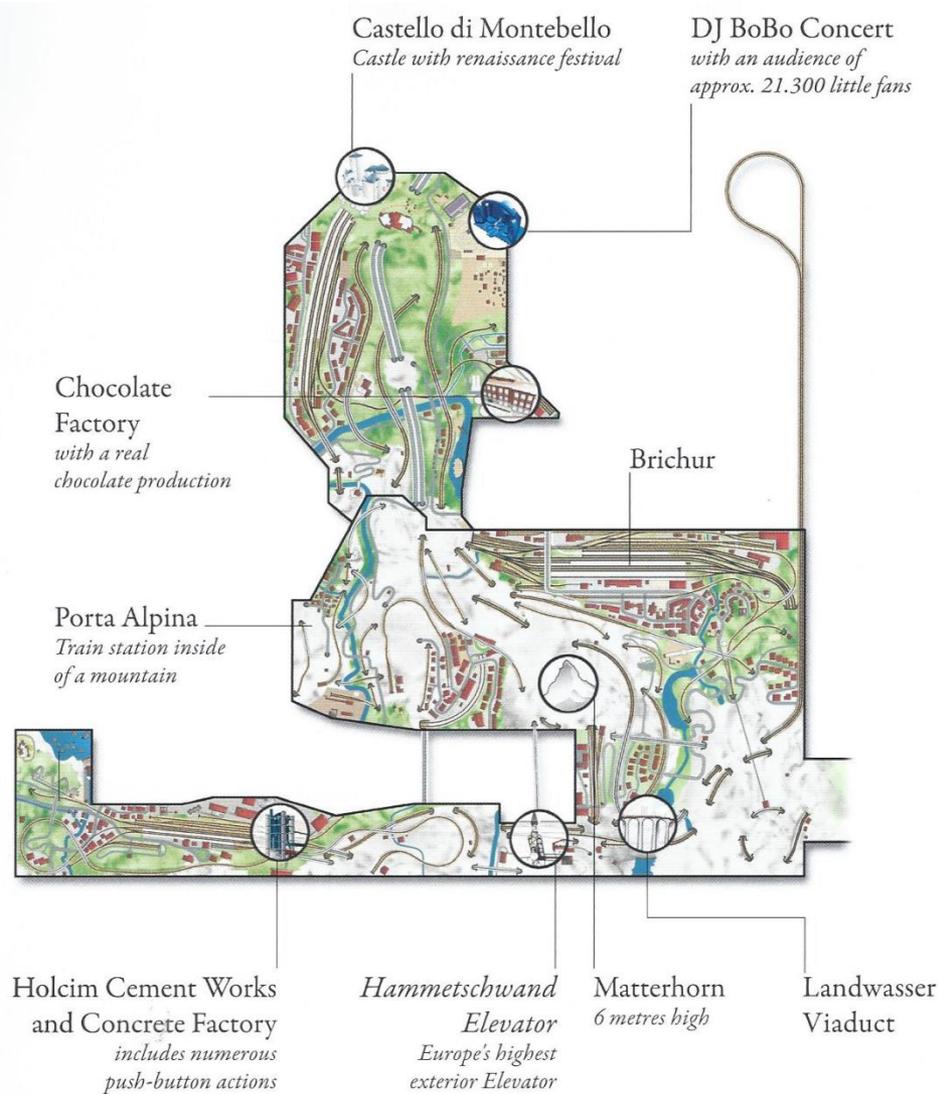
This section was the most demanding from a modeller's point of view. The 5-6 meters high summits of Switzerland's Alps loom through a 100 sqm large hole in the ceiling. Trains snake through stunning canyons to the third floor, where the bulk of the Switzerland Alps is emerging. On a twined metal staircase which leads through the inner of the Alps passing stalactite caves and grottos, you will reach the new floor. Here you have an astonishing view on the mountains whose peaks vanish in the clouds (ceiling :-)). Ticino will only be a few steps away from there. With its characteristic landscape and lake it will definitely be a very special part in the Wunderland world. Not only Ticino will be built in Wunderland, but 3 cantons in total will be established in Wunderland's Switzerland.

Many different features have been installed in the area of the three cantons such as a functioning chocolate factory and an open air festival featuring DJ Bobo.

Work on our "Mini"-Switzerland started in October 2005 and the modelling team of Gerhard Dauscher worked almost day and night. Finally, on November 12th 2007, our Switzerland was inaugurated with a great ceremony.

- Construction Phase: October 2005 - End 2007
- Model Area: 250 m<sup>2</sup>
- Track Length: approx. 3,000 Meters
- Trains: 180
- Wagons: 3,500
- Signals: 300
- Switches: 600
- Computers: 7
- Lights: approx. 45,000
- Buildings and Bridges: 700
- Figurines: 50,000
- Cars: 1,000
- Trees: 50,000
- Work Hours: 110,000

# Section 7, Switzerland

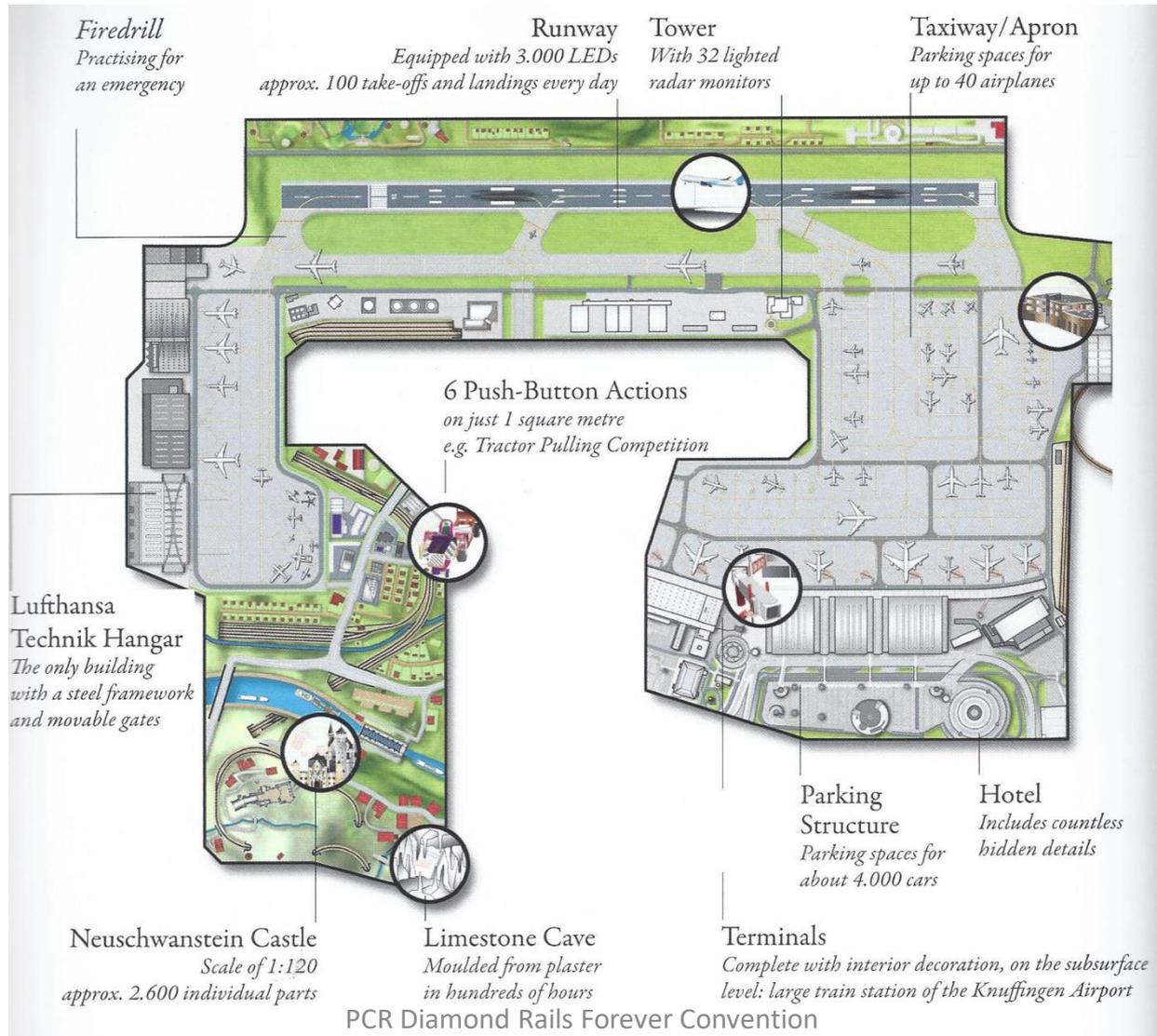


# 8th Section: Airport and Bavaria

- 150 M<sup>2</sup>
- Located in the middle of the Alps
- Opened in May 2011
- Simulated takeoff and landing
- Employees Faller Car System
  - Planes
  - Vehicles
- Largest model airport in the world

<https://youtu.be/X9IIPDOar7E>

# Section 8, Airport and Bavaria



## FACTS & FIGURES

Construction Phase:	Beginning 2013 - ca. mid 2016
Model Area:	approx. 190 m <sup>2</sup>
Work Hours:	approx. 180,000 Hours
Track Length:	2,400 Meters
Trains:	110
Wagons:	800
Signals:	110
Switches:	404
Computers:	4
Lights (LED):	approx. 50,000
Buildings and Bridges:	450
Figures	30,000
Cars:	400
Trees:	10,000

## 9th Section: Italy

- Recently completed
- About 100 m<sup>2</sup>
- Highlights:
  - Venice
  - Rome
  - Pisa
  - Tuscany

# Statistics When Completed in 2020

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5/13/2019

Leased <u>Floorspace</u>	10,000 m <sup>2</sup>
Model Area	over 2,300 m <sup>2</sup>
Construction Areas	12
Track Length	approx. 20,000 Meters
Trains	approx. 1,300
Wagons	20,000
Longest Train	14.51 Meters
Signals	1,900
Switches	4,000
Computers	64
Lights	over 500,000
Buildings and Bridges	6,000
Figurines	400,000
Cars	10,000
Trees	330,000
Work Hours	approx. 850,000
Staff	300
Construction Cost	approx. 20,000,000€

# Future Sections

- France
- UK
- Africa
- Other(s)?

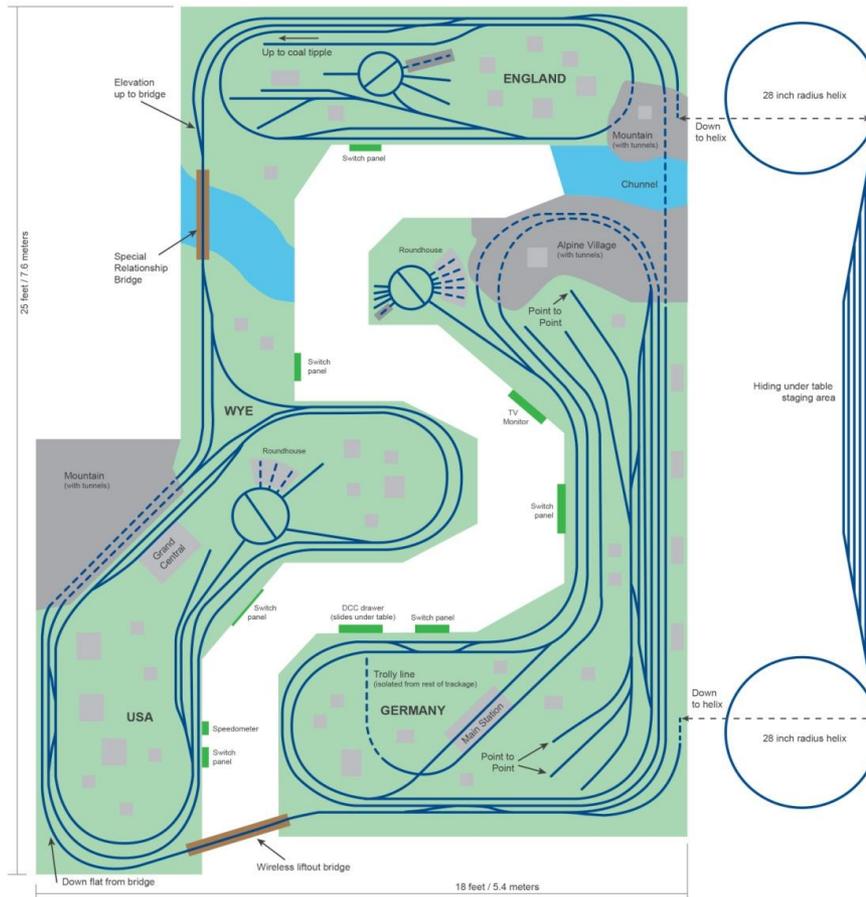
**Miniatur Wunderland is running out of space for further expansion...owners are considering “out of the box” solutions**

# Miniatur Wunderland Photo Tour

[Photos](#)

by Irwin D. Nathanson

# Clinician's "Germany"



<http://www.flickr.com/photos/111726564@N04/collections/72157638754036615/>





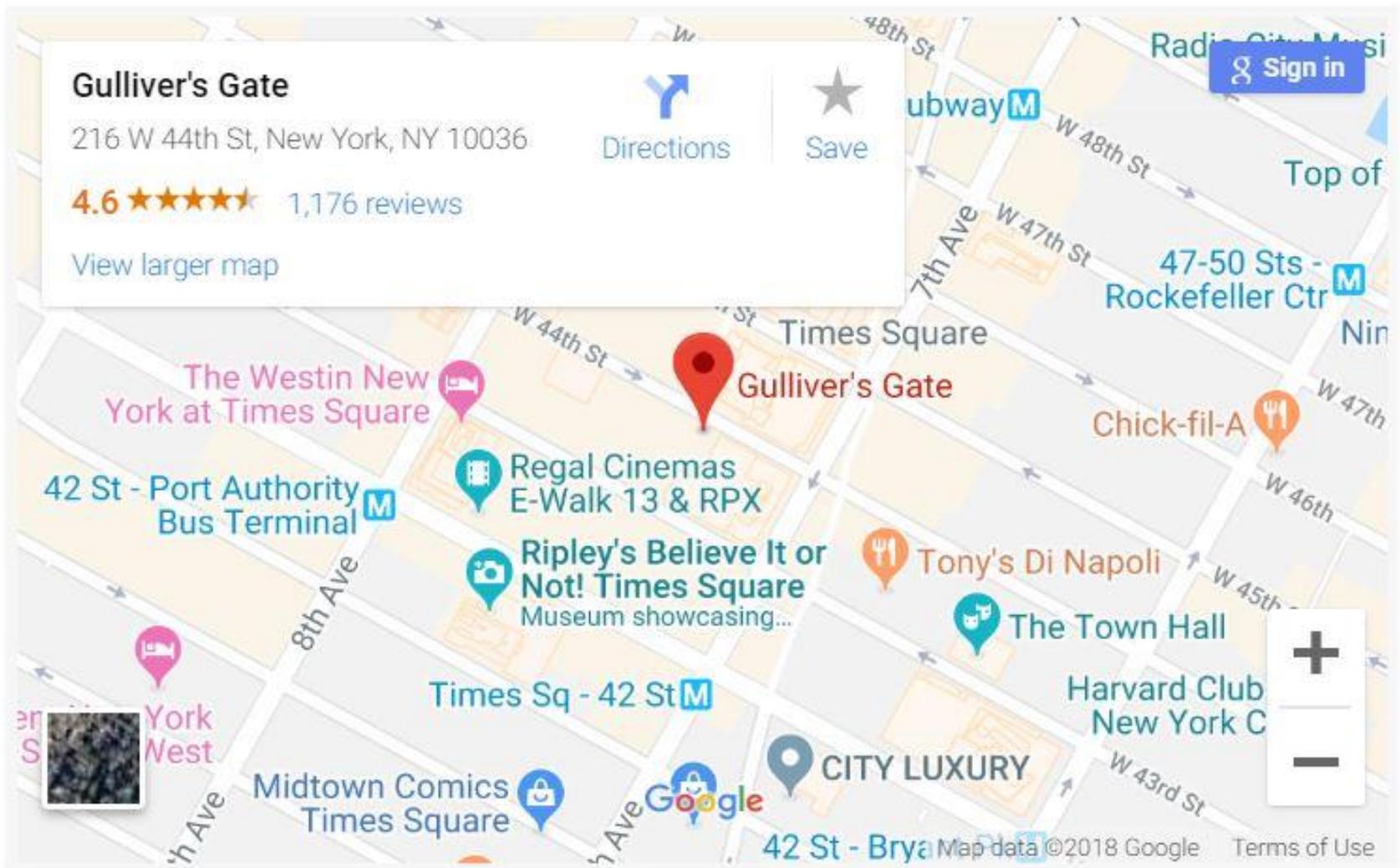












# Gulliver's Gate Overview

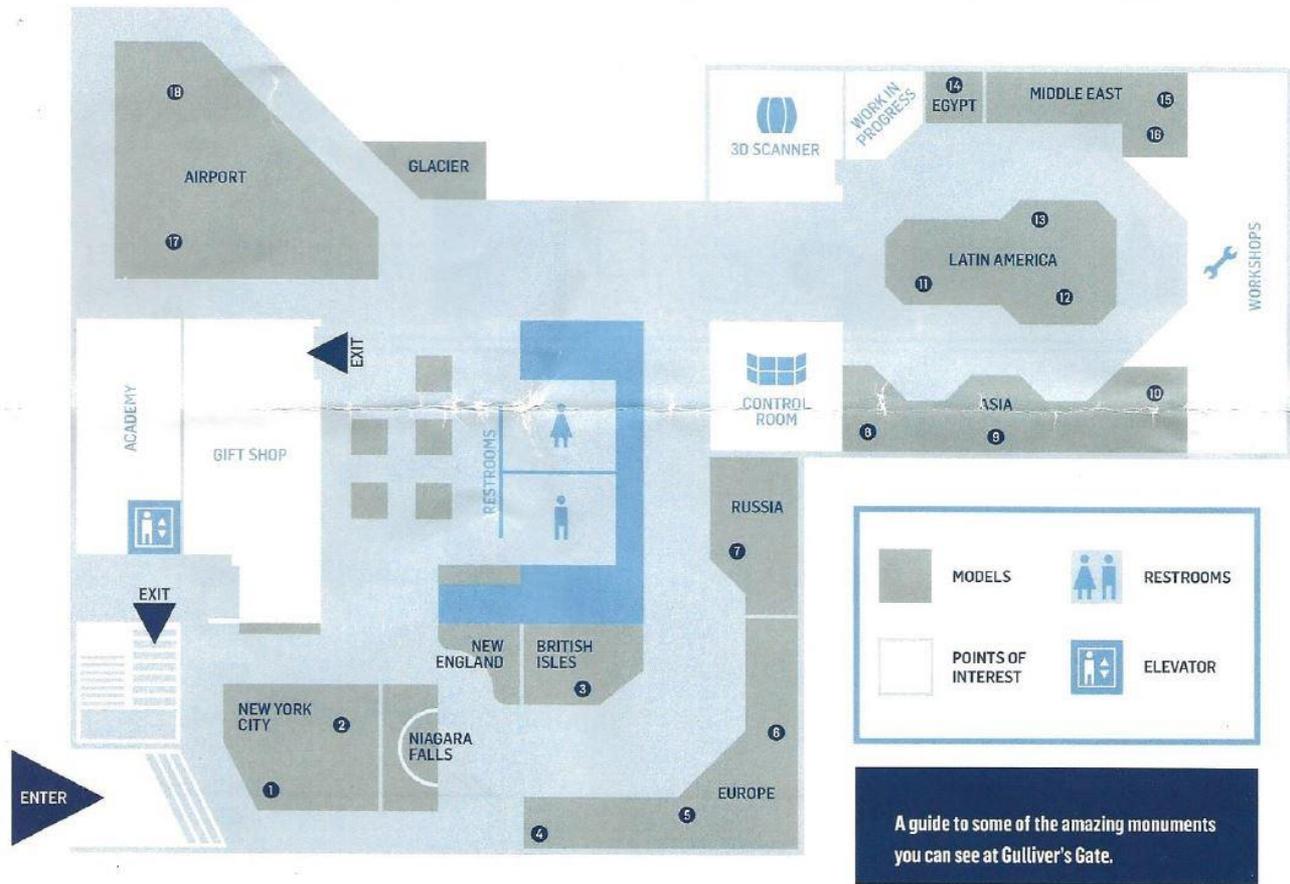


<https://www.youtube.com/watch?v=FHmeVu7vkGs>

# Gulliver's Gate Facts and Figures

- 25 cities, 5 continents
- 1,000 trains
- 10,000 cars
- 100,000 people
- \$40M invested

# Floor Plan



# Gulliver's Gate Photo Tour

[Photos](#)

by Julie Nathanson and Jeff Paston

# Miniatur Wunderland – Gulliver’s Gate Comparison

	Miniatur Wunderland	Gulliver’s Gate
<b>Theme</b>	Largest Model Railway in the World	Giant Experience in a Miniature World
<b>Investment</b>	21 M € (\$ 24 M)	\$40 M
<b>Tickets on line in advance</b>	Yes	Yes
<b>Open</b>	365 days	365 days?
<b>Hours</b>	9:30 AM – 6 PM weekdays/non-holidays	10 AM – 8 PM
	As long as 7:30 AM – Midnight (weekends/holidays)	
<b>Admission</b>	Adults 15 € (\$16.75)	Adults \$36
	Children < 3 feet Free	Children to 3 Free
	Children < 16 7.5 € (\$8.50)	Children 4 – 12 \$27
	Seniors (65+) 13 € (\$12.50)	Seniors (65+) \$27
<b>Visit duration</b>	8 hours	3 hours
<b>In-out privileges</b>	Yes	No
<b>Food service</b>	Yes: “Dining Car” cafe	No
<b>Behind the scenes tours</b>	Yes	Yes
<b>3D Scanning</b>	No	Yes

Thanks for attending my  
clinic!  
Enjoy the rest of the  
Convention!

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