Historical Development of bridges

Natural rock arches

- Corbelled arches
- True arches

Natural stepping stones

- Artificial stepping stone
- Stone slab on stepping stones

Stone beam bridges

Stone cantilever bridges

Masonry arch bridges

Reinforced concrete arch bridges

Steel arch bridges
Accidentally fallen Trees

purposely falled Trees

Felled trees and transverse platform

Timber beam on stepping stones

Timber cantilever bridges

Steel truss bridges

Timber:

Rope bridge

suspension bridge

Simply Supported Construction

Continuous Construction

Cantilever Construction

Rigid Frame

Combination

Cast iron beam bridge

Plate girder bridge

Reinforced concrete girder

Prestressed concrete girder
<table>
<thead>
<tr>
<th>Span</th>
<th>Type</th>
<th>Location</th>
<th>Bridge</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>Stone Arch</td>
<td>Lucca, Italy</td>
<td>1967</td>
<td>1967</td>
</tr>
<tr>
<td>52</td>
<td>Timber Arch</td>
<td>Danube River, Vienna, Austria</td>
<td>1914</td>
<td>1914</td>
</tr>
<tr>
<td>332</td>
<td>Suspension</td>
<td>New York City, New York</td>
<td>1877</td>
<td>1877</td>
</tr>
<tr>
<td>250</td>
<td>Cable-Stayed</td>
<td>Sydney Harbour Bridge, Australia</td>
<td>1923</td>
<td>1923</td>
</tr>
<tr>
<td>1286</td>
<td>Concrete Arch</td>
<td>Duisburg Bridge, Germany</td>
<td>1847</td>
<td>1847</td>
</tr>
<tr>
<td>350</td>
<td>Simple Truss</td>
<td>Ushio Bridge, Japan</td>
<td>1988</td>
<td>1988</td>
</tr>
<tr>
<td>251</td>
<td>Cable-Stayed</td>
<td>Bay Bridge, Uproto Bay, USA</td>
<td>1939</td>
<td>1939</td>
</tr>
<tr>
<td>350</td>
<td>Suspension</td>
<td>George Washington Bridge, New York</td>
<td>1933</td>
<td>1933</td>
</tr>
<tr>
<td>1967</td>
<td>Suspension</td>
<td>Danube Bridge, Vienna, Austria</td>
<td>1914</td>
<td>1914</td>
</tr>
<tr>
<td>158</td>
<td>Stone Arch</td>
<td>Lucca, Italy</td>
<td>1967</td>
<td>1967</td>
</tr>
</tbody>
</table>
Bridges

Types of Bridges:

1. Culverts
2. Reinforced Concrete Bridges: Beam Bridges, Arch Bridges
3. Prestressed Concrete Bridge
4. Steel Bridges:
   a) Simply Supported Truss Br.
   b) Continuous Truss Br.
   c) Cantilever Truss Br.
   d) Plate Girder Br.
   e) Box Girder Br.
   f) Arch Steel Br.
5. Cable stayed Bridge
6. Suspension Bridge
7. Temporary and movable Bridges

1. Culverts

SECTION

precast units
2. Reinforced Concrete Bridge

Beam Bridge

Concrete Arch Bridge

3. Prestressed concrete Bridges

Prestressed cable