# Changes In Final ERD from as compared to initial ERD:

# Added 'Stop' associative entity, between Route and Locality entities.

# Ticket to Booking detail, changed cardinality to “many” on the foreign key side.

# Driver entity foreign key fixed from 'route\_id' to ‘tram\_id’.

# Driver entity has relationship “Optional many” from Tram to Driver with a limit of 1 driver.

# Removed start locality id, end locality id, tram stop from Route entity.

# Accident to tram relationship changed to mandatory one.

# Booking detail to ticket relationship changed to mandatory one.

# Entities added:

|  |  |
| --- | --- |
| Stop | This entity is an associative entity between Route and Locality, with attributes stop id (primary key), stop name, locality id (foreign key) and route id (foreign key). |

# Cardinalities added:

|  |  |  |
| --- | --- | --- |
| **Route** | **Stop** | One to Many (1:M) |
| **Locality** | **Stop** | One to Many (1:M) |

# Business Rules added:

* A locality is associated with multiple stops and one stop must be present in only one locality.
* A route passes through multiple stops and a stop is present only in a single route.

# Design decisions added:

* **Stop:** This entity defines the stops that are present on each route. Each route will have multiple stops within a locality for the tram to stop and resume on the route. The decision to incorporate this is to provide a linkage between the locality and the route as each route and locality would have multiple stops.