3.1 INTRODUCTION

Transportation is a part of infrastructure development of a country; it helps in integrating people, goods and services for mutual benefit. In today’s modern world transport is the basic infrastructural requirement for economic development of a country. If agriculture and industry are regarded as the body and bones of national economy, transport and communication constitute its nerves.

Meaning

Transport means conveyance of goods and passengers from one place to another place. Transport provides a vital link between production centres, distribution areas and to the ultimate consumers. The exchange of goods and service is generally dependent upon physical distribution and it is possible only by means of transport. Transport has become an independent and specialized branch of trade and industry which provides employment to the society.

Significance of Transportation

Transport in the republic of India is an important part of India’s economy. Since the economic liberalization of the 1990s, infrastructure development has progressed rapidly. Today there are different modes of transportation i.e., by land, water and air.

In the interim, public transport remains the primary mode of transport for most of the population, and India’s public transport systems are among the most heavily used in the world. India’s rail network is the 4th longest and the most heavily used system in the world.

3.2 RAIL TRANSPORT IN INDIA

The Rail transport in India is most commonly used mode of long distance transportation; it helps in carrying of goods and passengers from one place to other place by rail.
Indian Railways (IR) is an Indian state owned enterprise, owned and operated by Government of India through the Ministry of Railways. Indian Railways, the premier transport organisation of the country, is the largest rail network in Asia and the world’s second largest network under one management.

The first railway on Indian subcontinent ran over a stretch of 21 miles from Bombay to Thane on 16th April, 1853. The first passenger train steamed out of Howrah station destined for Hooghly with a distance of 24 miles ran on 15th August, 1854. 1880, the Indian Railway system had a route mileage of about 9000 miles, mostly working through Bombay, Madras and Calcutta (three major port cities).

In 1951, the systems were nationalised as one unit, the Indian Railways becoming one of the largest networks in the world. Indian Railways is the world’s fourth largest commercial or utility employer by number of employees with over 1.4 million employees after Wal-Mart with 2.1 million employees, China National Petroleum Corporation with 1.61 million employees and State Grid Corporation of China with 1.53 million
employees. Its operations cover twenty eight states and three union territories and also provide limited service to Nepal, Bangladesh and Pakistan.

Indian Railways (IR) is one of the world’s largest railway networks comprising 115,000 KM of track over a route of 65,436 KM and 7,172 stations. In 2013-14, Indian Railways carried 8,425 million passengers’ annually or more than 23 million passengers daily (roughly half of which were suburban passengers) and 1050.18 million tons of freight in the year. In 2013-2014 Indian Railways had revenues of ₹1441.67 billion (US$23 billion) which consists of ₹940.0 billion (US$15 billion) from freight and ₹375.0 billion (US$6.1 billion) from passengers tickets.

3.3 HISTORY OF INDIAN RAILWAYS

The novel plan for the introduction of a rail system, transformed the whole history of India. This innovative plan was first proposed in 1832. In 1844, private entrepreneurs were allowed to launch a rail system by Lord Hardinge, the Governor General of India.

Two new railway companies, Great Indian Peninsular Railway (GIPR) and East Indian Railway (EIR) were created in 1853-54 to construct and operate two experimental lines near Mumbai and Kolkata respectively. A British engineer, Robert Maitland Brereton, was responsible for the expansion of the railways from 1857 onwards. By 1946 all rail systems had been taken over by the government. In 1952, it was decided to replace the existing rail networks by zones. A total of six zones came into existence in 1952. As India developed its economy, almost all railway production units started to be built indigenously. On 6th September, 2003 six further zones were made from existing zones for administration purpose and one more zone added in 2006. The Indian Railway has now seventeen zones including the Kolkata Metro Railway. The city of joy Kolkata is the headquarters of three railway zones in India namely Eastern Railway zone, South Eastern Railway zone and the Kolkata metro. In 2003, the Indian Railways celebrated 150 years of its existence.
Map no. 3.1 Indian Railways

INDIA
RAILWAY ZONE MAP
Figure no.: 3.3.1 Organisation structure of Indian Railways
### 3.3.2 Railway zones

Indian Railways is divided into seventeen zones headed by a General Manager (GM) who reports directly to the Railway Board, which are further subdivided into divisions each having a divisional headquarters under the control of Divisional Railway Managers (DRM). The number of zones in Indian Railways increased from six to eight in 1951, nine in 1952, sixteen in 2003 then seventeen in 2010, and there are total of sixty eight divisions.

**Table no: 3.1 A brief note on Indian Railway Zones**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Name</th>
<th>Date established</th>
<th>Route KM</th>
<th>Headquarters</th>
<th>Divisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Central Railway (CR)</td>
<td>5th November, 1951</td>
<td>3905</td>
<td>Mumbai</td>
<td>Mumbai, Bhusawal, Pune, Solapur and Nagpur</td>
</tr>
<tr>
<td>2</td>
<td>Western Railway (WR)</td>
<td>5th November, 1951</td>
<td>6182</td>
<td>Mumbai</td>
<td>Mumbai Central, Ratlam, Ahmedabad, Rajkot, Bhavnagar Gandhidham and Vadodara</td>
</tr>
<tr>
<td>3</td>
<td>Southern Railway (SR)</td>
<td>14th April, 1951</td>
<td>5098</td>
<td>Chennai</td>
<td>Chennai, Tiruchirappalli, Madurai, Salem, Palakkad, Thiruvananthapuram</td>
</tr>
<tr>
<td>4</td>
<td>Eastern Railway (ER)</td>
<td>14th April, 1952</td>
<td>2414</td>
<td>Kolkata</td>
<td>Howrah, Sealdah, Asansol and Malda</td>
</tr>
<tr>
<td>5</td>
<td>Northern Railway (NR)</td>
<td>14th April, 1952</td>
<td>6968</td>
<td>Delhi</td>
<td>Delhi, Ambala, Firozpur, Lucknow, Moradabad and Udhampur</td>
</tr>
<tr>
<td></td>
<td>Northern Eastern Railway (NER)</td>
<td>14th April, 1952</td>
<td>3667</td>
<td>Gorakhpur</td>
<td>Izzatnagar, Lucknow and Varanasi</td>
</tr>
<tr>
<td>6</td>
<td>South Eastern Railway (SER)</td>
<td>1955</td>
<td>2631</td>
<td>Kolkata</td>
<td>Adra, Chakradharpur, Kharagpur and Ranchi</td>
</tr>
<tr>
<td>7</td>
<td>South Central Railway (SCR)</td>
<td>2nd October, 1966</td>
<td>5951</td>
<td>Secunderabad</td>
<td>Vijayawada, Secunderabad, Guntakal, Guntur, Hyderabad and Nanded</td>
</tr>
<tr>
<td>No.</td>
<td>Railway Name</td>
<td>Date</td>
<td>Number</td>
<td>Station(s)</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------</td>
<td>---------------</td>
<td>--------</td>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>East Central Railway (ECR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; October, 2002</td>
<td>3628</td>
<td>Hajipur</td>
<td>Danapur, Dhanbad, Mughalsarai, Samastipur and Sonpur</td>
</tr>
<tr>
<td>11.</td>
<td>North Western Railway (NWR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; October, 2002</td>
<td>5459</td>
<td>Jaipur</td>
<td>Jaipur, Ajmer, Bikaner and Jodhpur</td>
</tr>
<tr>
<td>12.</td>
<td>East Coast Railway (ECoR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; April, 2003</td>
<td>2677</td>
<td>Bhubaneswar</td>
<td>Khurda Road, Sambalpur and Waltair</td>
</tr>
<tr>
<td>13.</td>
<td>North Central Railway (NCR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; April, 2003</td>
<td>3151</td>
<td>Allahabad</td>
<td>Allahabad, Agra and Jhansi</td>
</tr>
<tr>
<td>14.</td>
<td>South East Central Railway (SECR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; April, 2003</td>
<td>2447</td>
<td>Bilaspur</td>
<td>Bilaspur, Raipur and Nagpur</td>
</tr>
<tr>
<td>15.</td>
<td>South Western Railway (SWR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; April, 2003</td>
<td>3177</td>
<td>Hubli</td>
<td>Hubli, Bangalore and Mysore</td>
</tr>
<tr>
<td>16.</td>
<td>West Central Railway (WCR)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; April, 2003</td>
<td>2965</td>
<td>Jabalpur</td>
<td>Jabalpur, Bhopal and Kota</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>64255</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure no.: 3.3.2  Some Railway Zones of Indian Railways

Indian Railways HQ, Delhi  CR’s HQ, CST, Mumbai

NR’s HQ, New Delhi Railway Station  SCR’s HQ, Secunderabad Station

Southern Railway HQ, Chennai  Western Railway HQ, Mumbai
3.3.3 Types of passenger services

Trains are classified by their average speed. A faster train has fewer stops (halts) than a slower one and usually caters to long-distance travel.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Train</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Duronto Express</td>
<td>These are the non-stop point to point rail services (except for operational stops) introduced for the first time in 2009. These trains connect the metros and major state capitals of India and are faster than Rajdhani Express. These trains are now of the highest priority to the Indian Railways. The Duronto services consists of classes of accommodation namely first AC, two-tier AC, three-tier AC, AC 3 Tier Economy, Sleeper Class, General Class.</td>
</tr>
<tr>
<td>2</td>
<td>Rajdhani Express</td>
<td>These are all air-conditioned trains linking major cities to New Delhi. The Rajdhans have high priority and are one of the fastest trains in India, travelling at about 130 KM/hr (82 mph). There are only a few stops on a Rajdhani route.</td>
</tr>
<tr>
<td>3</td>
<td>Shatabdi Express</td>
<td>The Shatabdi trains are AC intercity seater-type trains for travel during day.</td>
</tr>
<tr>
<td>4</td>
<td>Garib Rath</td>
<td>Fully air conditioned trains, designed for those who cannot afford to travel in the expensive Shatabti and Rajdhani Express. Garib Rath means “Chariot of the Poor”. The maximum speed is 130 KM/h.</td>
</tr>
<tr>
<td>5</td>
<td>Jan Shatabdi</td>
<td>Jan Shatabdi Express are a more affordable variety of the Shatabdi Express, which has both AC and non-AC classes. The maximum speed is 130 KM/h.</td>
</tr>
<tr>
<td>6</td>
<td>Sampark Kranti Express</td>
<td>Sampark Kranti Express trains are a series of trains that provide quick connectivity from a particular state to the national capital, New Delhi.</td>
</tr>
</tbody>
</table>
7 Superfast Express/Mail
These are trains that have an average speed greater than 55 KM/h (34 mph). Tickets for these trains have an additional super-fast surcharge.

8 Express trains
These are the most common kind of trains in India. They have more stops than their super-fast counterparts, but they stop only at relatively important intermediate stations.

9 Passenger and Fast Passenger
These are slow trains that stop at most stations along the route and are the cheapest trains. The trains generally have unreserved seating accommodation but some night trains have sleeper, First Class and 3A compartments.

10 Suburban trains
These trains operate in urban areas, usually stop at all stations and have unreserved seating accommodation.

11 Metros and Monorails
These trains are designed for city transport in metro cities of India.

3.3.4 Other subsidiaries
There also exist independent organisations under the control of the Railway Board for electrification, modernization, research and design and training of officers, each of which is headed by an officer of the rank of General Manager. A number of public sector undertakings, which perform railway related functions ranging from consultancy to ticketing, are also under the administrative control of the Ministry of railways.

3.3.5 Track and gauge
Indian railways uses four gauges, the 1,676 mm (5 ft 5 in) broad gauge which is wider than the 1,435 mm (4 ft 8 in) standard gauge; the 1,000 mm (3 ft 28 in) meter gauge; and two narrow gauges, 762 mm (2 ft 6 in) and 610 mm (2 ft). Track sections are rated for speeds ranging from 75 to 160 KM/hr (47 to 99 mph).

The total length of track used by Indian Railways was about 114,000 KM while the total route length of the network was 64,215 KM on 31st March, 2011. About 33% of the RKM and 44% of the total track KM was electrified on 31st March, 2011.

Broad gauge is the predominant gauge used by Indian Railways. Indian broad gauge-1,676 mm (5 ft 6 in) is the most widely used gauge in India with 102,000 KM
(63,000 mi) of track length (90% of entire track length of all the gauges) and 54,600 KM of RKM (85% of entire RKM of all the gauges) on 31<sup>st</sup> March, 2011.

**3.3.6 International links:** India has rail links with Pakistan, Nepal and Bangladesh.

**Pakistan**

Before the partition of India there were eight rail links between India and Pakistan. However, currently there are only two actively maintained rail links between the two countries. The first one is at Wagah in Punjab. The Samjhauta Express plies this route from Amritsar in India to Lahore in Pakistan. The second one, the Thar Express, opened in 2006 runs between Munabao (in Rajasthan in India) and Khokhrapar (in Sindh in Pakistan). Other discussed links are Ferozepur-Samasata, Ferozepur-Lahore, Amritsar-Lahore, Amritsar-Sialkot and Jammu–Sialkot.

**Bangladesh**

After the creation of East Pakistan (later Bangladesh), many trains that used to run between Assam and Bengal had to be rerouted through the Siliguri Corridor. As on March 2010, there exists one passenger link between India and Bangladesh, the Maitree Express, which plies between Kolkata and Dhaka twice a week. A metre gauge link exists between Mahisasan (Mohishashon) and Shahbazpur. Another link is between Radhikapur and Birol. These two links are used occasionally for freight.

**Nepal**

There are two links between India and Nepal: Raxaul Jn., Bihar-Sirsiya, Parsa and Jaynagar, Bihar-Khajuri, Dhanusa. The former is broad gauge, while the latter is narrow gauge.

Indian railway has also proposed rail links to some other foreign countries
PROFILE OF SOUTH CENTRAL RAILWAY

3.4 Introduction

The South central railway (SCR) is one of the seventeen zones in Indian Railways. It was created on 2nd October, 1966 as the ninth zone of Indian Railways. South central railway is the 2nd highest revenue earning zone in Indian railways after Northern railway zone. It operates through six divisions namely: Secunderabad, Vijayawada, Guntakal, Guntur, Hyderabad and Nanded.

Figure no.: 3.4. South central railway

Map no.:3.2  Map of South central railway Zone
It serves Andhra Pradesh, Telangana and Maharashtra and to a limited extent, portions of Karnataka, Tamil Nadu & Madhya Pradesh. It was formed when Hubli and Vijayawada divisions of Southern railway and Solapur and Secunderabad divisions of Central railway were carved out and merged into a new zone. Subsequently, Guntakal division of Southern railway was merged with South central railway on 2nd Oct, 1977 and Sholapur division was remerged with Central Railway. Secunderabad division was split into two divisions namely Secunderabad and Hyderabad on 17th Feb, 1978. Following reorganisation of zones and divisions with effect from 1st Apr 2003, two new divisions viz., Guntur and Nanded were operationalised duly transferring Hubli division to newly formed South Western Railway.

Table no. 3.3 SCR in Brief

<table>
<thead>
<tr>
<th></th>
<th>(As on 30.6.2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of Divisions</td>
</tr>
<tr>
<td>2</td>
<td>Number of States covered</td>
</tr>
<tr>
<td>3</td>
<td>Number of stations</td>
</tr>
<tr>
<td>4</td>
<td>Originating Earnings 2011-12 (in crores)</td>
</tr>
<tr>
<td>5</td>
<td>Apportioned Earnings 2011-12 (in crores)</td>
</tr>
<tr>
<td>6</td>
<td>No. of originating Passengers 2011-12 (in millions)</td>
</tr>
<tr>
<td>7</td>
<td>Originating Loading 2011-12 (in million Tonnes)</td>
</tr>
<tr>
<td>8</td>
<td>Operating Ratio 2011-12</td>
</tr>
<tr>
<td>9</td>
<td>Capital at Charge 2011-12 (in crores)</td>
</tr>
<tr>
<td>10</td>
<td>Number of passenger Trains run daily:</td>
</tr>
<tr>
<td></td>
<td>Mail/Express Passager Trains</td>
</tr>
<tr>
<td></td>
<td>Local Trains</td>
</tr>
<tr>
<td></td>
<td>MMTS Trains</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Staff Strength</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: SCR Annual reports.
Table no: 3.4
Division wise Route & Running Kilometer
(As on 30-06-2012)

<table>
<thead>
<tr>
<th>Division</th>
<th>Broad Gauge</th>
<th>Meter Gauge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Route</td>
<td>Running</td>
<td>Route</td>
</tr>
<tr>
<td>Secunderabad</td>
<td>1315.143</td>
<td>2073.453</td>
<td>--</td>
</tr>
<tr>
<td>Vijayawada</td>
<td>958.926</td>
<td>1626.431</td>
<td>--</td>
</tr>
<tr>
<td>Guntakal</td>
<td>1354.151</td>
<td>1865.227</td>
<td>--</td>
</tr>
<tr>
<td>Guntur</td>
<td>617.200</td>
<td>648.050</td>
<td>-</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>565.650</td>
<td>594.420</td>
<td>--</td>
</tr>
<tr>
<td>Nanded</td>
<td>822.990</td>
<td>822.740</td>
<td>175.930</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5634.060</strong></td>
<td><strong>7630.321</strong></td>
<td><strong>175.930</strong></td>
</tr>
</tbody>
</table>

Source: SCR Annual reports.

Over the years south central railway has attained sufficient transportation output with adequate infrastructure development and technological up gradation to serve the regions in its jurisdiction. Safe operation of trains, expansion of network, modern passenger amenities, punctuality of trains, courteous service and cleanliness in stations and trains remain the thrust areas of this railway.

For mass movement of freight, SCR has introduced high horse powered Diesel and Electric locomotives and high speed, higher Axle load Box-N-Wagons. Today, South central railway plays a pivotal role as a catalyst for agricultural and industrial development in the Southern peninsula apart from fostering the growth of trade and commerce including import/export through ports by connecting sea ports with their hinder land and inland container depots.
Figure no.: 3.4.1 Organisation Structure
South central railway plays a pivotal role as a catalyst for agricultural and industrial development in the Southern peninsula apart from fostering the growth of trade and commerce including import/export through ports by connecting sea ports with their hinder land and inland container depots. Its reliable and comfortable passenger services for long and short distance travel by introducing many super fast and intercity trains helps transform the society by catering to their personal, business, educational and tourism purposes.

In 2008 South Central Railways was the first to implement a wireless MU Coupler system supplied by Ms Lotus Wireless Technologies, permitting longer freight trains delivering higher capacity. The system was first implemented in diesel locomotives in 2008 followed by installation on electric locomotives in 2011 at Electric Loco Shed, Kazipet. Trains equipped with this system are in use at Badrachalam region in the South Central Railway.

3.4.2) Milestones/Timeline events

The milestones crossed by South central railway in its ambitious journey towards achieving network expansion, modernization, higher performance and customer satisfaction are as follows.

1970s

- Rail Nilayam, Zonal headquarters office of the South Central Railway, Secunderabad was opened.
- The Wagon workshop, Guntupalli was inaugurated in 1974.
- The first Plasser and Theurer Quick Relaying System (PQRS) for mechanized laying of track was introduced in 1975.
- First Route Relay Interlocking (RRI) system of South central railway was commissioned in January 1976 at Vijayawada Station.

1980s

- The Electric Loco Shed, Vijayawada was inaugurated in April, 1980 with a capacity to maintain 100 Electric locomotives.
- Sanchalan Bhavan, the Headquarters building of Secunderabad division of South central railway was inaugurated on 10th November, 1980.
➢ The first electrified route from Vijayawada to Gudur on South central railway system was inaugurated on 15th December, 1980.

➢ The additionally laid broad gauge railway line between Bibinagar-Nadikudi was opened for traffic in three phases i.e., in 1987; November 1988 and April 1989.

➢ South central railway introduced the computerised Passenger Reservation System (PRS) at Secunderabad railway station on 30th September, 1989.

1990s

➢ The ballast-cleaning machine in South central railway was introduced in May, 1990.

➢ The first Solid State Interlocking (also known as Electronic Interlocking system) was commissioned at Kavali station of South central railway in July 1994.

➢ South central railway had introduced 5000 HP electric locomotives for passenger transport in May, 1995.

➢ The Electric Loco Shed, South Lallaguda with a capacity to maintain 100 Electric Locomotives was inaugurated in September, 1995.

➢ Andhra Pradesh express was augmented to 24 coaches from 30th November, 1995 followed by Charminar Express, Godavari Express, Pinakini Express.

➢ The first Diesel Multiple Unit (DMU) service on SCR between Vijayawada and Machilipatnam was inaugurated on 1st September, 1996.

➢ The first long-haul digital Microwave link of South central railway was commissioned on Vijayawada-Gudur-Renigunta route in September 1996.

➢ The first Mobile Police station was introduced by Hyderabad-Tirupati, Narayanadri Express in April, 1998.

➢ South central railway had introduced 5000 HP Electric Locomotives for goods transport in July 1998.

2000s

➢ ISO 9002 certification was granted to carriage workshop, Lallaguda, Secunderabad in April 2000.
- Escalator for climbing the foot over bridge connecting various platforms was commissioned at the Vijayawada station in April 2000.
- The first diesel engine with AC cabin for drivers was introduced in South central railway on 16th November, 2002.
- Anti-collision device was fitted to locomotives running on Renigunta-Guntakal route of Guntakal division on an experimental basis in 2003.
- The first electric multiple unit (EMU) service on SCR was inaugurated between Secunderabad and Lingampalli in August 2003.
- The Multi Modal Transport System Train (MMTS-Train) between Secunderabad-Lingampalli was inaugurated on 9th August, 2003.
- Signal, telecommunication, carriage, stores finance and store bills wings of the office of Chief Controller of stores, Rail Nilayam, Secunderabad were granted ISO 9001/2000 certificate on 16th March 2004.

2010s
- The South central railway has bagged the prestigious Govind Vallabh Pant Efficiency Shield (jointly with Western Railway) from the railway ministry in recognition of its overall best performance among all the 17 zones of Indian Railways for the year 2011-12.

3.4.3 The Personnel department

Personnel department is one of the key departments of South central railway, entrusted with the task of human resource development. Personnel department is the vital link in SCR’s journey into the future as a modern, customer friendly organisation, functioning through all six divisions.

Total workforce of South central railway is 95,645.
Human Resources of SCR at a glance

<table>
<thead>
<tr>
<th>Department</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts</td>
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<td>1748</td>
<td>233</td>
<td>2062</td>
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<tr>
<td>Administration</td>
<td>28</td>
<td>17</td>
<td>1115</td>
<td>501</td>
<td>1661</td>
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<tr>
<td>Civil</td>
<td>71</td>
<td>117</td>
<td>8671</td>
<td>19713</td>
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<tr>
<td>Mechanical</td>
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<td>21178</td>
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<td>Commercial &amp; Operations</td>
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<td>696</td>
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<td>12</td>
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<td>1791</td>
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<tr>
<td>Stores</td>
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<td>25</td>
<td>1118</td>
<td>767</td>
<td>1938</td>
</tr>
<tr>
<td>RPF</td>
<td>12</td>
<td></td>
<td>2932</td>
<td>45</td>
<td>2989</td>
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<td><strong>Total</strong></td>
<td><strong>471</strong></td>
<td><strong>438</strong></td>
<td><strong>56814</strong></td>
<td><strong>37922</strong></td>
<td><strong>95645</strong></td>
</tr>
</tbody>
</table>

*Source: SCR Annual reports.*

**Personnel department at a glance**

- Departmental strength of 2,166 employees (around 2% of the total SCR workforce)
- Leading personnel service provider to the railway
- In-charge of all establishment and personnel matters.
Continuous and sustained employee friendly initiatives

Achievements

- Low employee per gross ton transportation ratio
- Constant profit earning Railway
- Unique Degree College at Secunderabad in Railway Network
- Holiday home at Tirupathi, Horseley Hills.

3.4.4 Safety Department

Improved safety in Train operations is one of the Mission areas of South Central Railway, it is committed for ‘Accident Free train services’.

Steps taken to prevent train accidents

- Safety drives at regular intervals are carried out by officers and supervisors to improve awareness among staff to prevent accidents.
- A no. of Safety seminars are conducted on various safety sensitive subjects to improve awareness among railway staff as accident prevention measure.
- In House Safety bulletins are published, in which finer aspects of safety are discussed in detail.
- Special drives are conducted to counsel, educate and improve awareness among general public regarding prevention of accidents at unmanned level crossings.
- Advertisements are regularly published in newspapers to educate and improve awareness among public on railway safety issues.
- Advertisements are also displayed in electronic media as well as in film theatres on railway safety issues.
- Printed hand outs/pamphlets are distributed among road users near unmanned level crossings, petrol pumps and villages about unmanned level crossings.

Security gadgets available in SCR:

- CCTVs, Door frame metal detectors, hand held metal detectors, bullet proof jackets, bullet proof helmets, VHF Sets – 25 Watts, VHF Sets – 5 Watts, dragon search lights, mega phones, body protectors, polycarbonate shields, polycarbonate helmets, digital handy cam/cameras, binoculars, trolley mirrors.
3.4.5 The Centre for Railway Information Systems (CRIS)

The Centre for Railway Information Systems (CRIS) is an autonomous organisation under the Ministry of Railways. The Ministry of Railways set up CRIS as a society in July 1986. It is headquartered in New Delhi, with regional offices in Delhi, Kolkata, Mumbai, Chennai, and Secunderabad. It develops and manages the Information Technology applications of the Indian Railways. CRIS also provides IT applications for non-Railway Government and Public Sector organisations. The current portfolio of projects covers the gamut of Indian Railways functions, such as passenger ticketing, freight operations, train dispatching and control, crew management, e-procurement, management of Railways’ fixed and moving assets, and production of rolling stock. Its information systems provide services in the remotest locations, from Kargil to Kanyakumari, from Tawang to the Andaman Islands.

PROFILE OF DIVISIONS OF SOUTH CENTRAL RAILWAY

3.5 INTRODUCTION

South central railway has six divisions namely:

1. Vijayawada
2. Secunderabad
3. Guntakal
4. Guntur
5. Hyderabad and
6. Nanded

1. VIJAYAWADA DIVISION

3.5.1 Vijayawada division

It was initially formed as one of the eight divisions in Southern Railway on 16th May 1956. After the formation of South central railway zone, the division was integrated into it on 2nd October 1966. The headquarters of the division is located at Vijayawada. Reporting mark of this division is BZA. Vijayawada is a primary centre of South Central
Railway. Being the main connecting point between Northern and Southern India, Vijayawada station is the busiest station on the South central railway routes.

Figure no.: 3.5.1 The Vijayawada Division

Map no.: 3.5.1 Vijayawada Railway Division
Vijayawada division is located on the Howrah-Chennai and New Delhi-Chennai trunk route. Some portion of it was carved out for creation of Guntur division with effect from 1st April, 2003. Vijayawada division forms a very vital Railway link on the Indian Railway System as ‘Gateway’ to the South. The division is located completely in Andhra Pradesh.

Vijayawada Station has the standard station layout with a perfect traction inside the station. All the tracks in the station are broad gauged and electrified. The Vijayawada-Machilipatnam line that passes through is non electrified, so diesel trains are common.

As one of the busiest railway junctions in South India, Vijayawada Junction is a hub for long-distance, inter-city express services in SCR. An average of 1, 40,000 people board different trains every day and an equal number of commuters exit trains at the station. More than 250 passenger trains and 150 goods trains utilize the station daily, with each train stopping for at least 15 to 20 minutes.

There are total 270 passenger trains with 78 daily expresses, 44 average non-daily expresses, 129 passenger trains, 15 average non-daily passenger trains, 2 work men special, 2 rail buses and 180 average no. of freight trains. It was covered a length of 958.926 KMs and the total track runs 1929 KMs electrified line and 264 KMs of non electrified line.

<table>
<thead>
<tr>
<th>Total number of tracks</th>
<th>22</th>
</tr>
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<tbody>
<tr>
<td>Passenger Trains</td>
<td>250</td>
</tr>
<tr>
<td>Goods Trains</td>
<td>150</td>
</tr>
<tr>
<td>Number of passenger tracks above ground</td>
<td>10</td>
</tr>
<tr>
<td>Passengers (daily)</td>
<td>1,40,000</td>
</tr>
</tbody>
</table>
3.5.1.1 Vijayawada division has good sports facilities

Vijayawada Division has a mini railway stadium with a 400 meters athletic track and provision for kabaddi, volleyball, basketball, football, cricket, ball badminton and gymnasium.

The DRM of Vijayawada division has the discretionary powers to recruit four sportspersons in Group D quota every year as per the guidance of Railway Board, DRM is also the chief of the Divisional Sports Association is giving priority to sporting activity and is taking interest in providing infrastructure.

3.5.1.2 Features

The Vijayawada Junction also houses a Diesel Loco Shed which has the WDM-2 Locomotive and also an Electric Loco Shed which has the WAG-7, WAM-4, WAG-5 locos. The wagon workshop at Guntupalli near Vijayawada was inaugurated in 1974, was granted ISO 9002 certificate on March 1999. The First Rout relay Inter Locking (RRI) system of South Central Railway at Vijayawada Station in January 1976. The Electric Loco Shed at Vijayawada station was inaugurated in April 1980 having a capacity of 100 electric locomotives.

3.5.1.3 Infrastructure

Since the headquarters of South-East railway has been moved to Bhubaneswar from Visakhapatnam, Vijayawada Railway station has seen major development and new appearance in the last five years again, due mainly to a change in the policy of the Indian Railways company. In the 2009 financial year, the board allocated Rs. 3.5 crores for improvements to the transport hub. A central aspect of the improvements was an ‘Integrated Security Scheme’, which included the construction of a compound wall around the station premises; furthermore, the works at the station sought to minimize the number of entry and exit points as a precaution against a rise of terrorism in India. The placement of modern surveillance gadgets on the station premises was also planned, with an anticipated timeframe for the security alterations set at six months.
2. SECUNDERABAD DIVISION

Figure no.: 3.5.2 Secunderabad Railway Division

Map no.: 3.5.2 Map of Secunderabad Division
3.5.2 Secunderabad division

It was formed on 2\textsuperscript{nd} October 1966; this is the most important division of South central railway and ranks amongst the top five divisions of Indian Railways. Secunderabad division is the headquarter of South central railway zone. The present day Secunderabad division takes its roots from erstwhile Nizam State Railway which was established in 1869. The Wadi-Secunderabad line was built with Nizam’s finance became part of Nizam Guaranteed State Railway. It was extended up to Warangal in 1886.

It was formed with broad gauge as well as meter gauge systems. Later, on 17\textsuperscript{th} November, 1977 the meter gauge was carved in to Hyderabad division. The division serves three states viz. Andhra Pradesh, Karnataka and Maharashtra. It has 1311.06 RKMs of track out of which 1006.42 KMs are in Andhra Pradesh, 179.37 KMs in Maharashtra and 125.27 KMs in Karnataka. Out of 1311.06 RKMs 825.33 KMs of track is electrified. There are in all 150 stations out of which 118 stations are situated in Andhra Pradesh, 22 stations in Maharashtra and 10 in Karnataka.

It carried 64 million tones of freight and 123 millions of passengers during the year 2011-12, it contributes over 64% of originating loading and over 35% of passenger traffic of South Central Railway. Gross earning of the division during the year 2011-12 was Rs. 3958 Cr. A dedicated work force of 22,178 employees and a jurisdictional spread of 1311 RKMs extending into the three states of Andhra Pradesh, Karnataka and Maharashtra and earnings of this division show the eminent position of Secunderabad division not only on South central railway but also on the Indian Railways.

Till June 2012 end this division carried 32.14 millions of passengers, 17.48 MT of freight and gross earnings of Rs. 1264.02 Cr.

Besides setting mammoth targets and chasing with utmost devotion to achieve the set goals, this division is the breeding ground of several innovations, technological applications, best management practices and initiation of several schemes for the benefit of customers/passengers and welfare of railway men.
3.5.2.1 Recruitment and training

Recruitment
Staff are classified into gazetted (group A and B) and non-gazetted (group C and D) employees. The recruitment of group A gazetted employees is carried out by the Union Public Service Commission through exams conducted by it. The recruitment to group C and D employees on the Indian Railways is done through 19 Railway Recruitment Boards which are controlled by the Railway Recruitment Control Board (RRCB). The training of all cadres is entrusted and shared between six centralized training institutes.

Training
IRISET has been set up in Secunderabad in 1957 by the Ministry of Railways, Government of India, to cater to specialized training needs of their own staff and officers in the field of Railway Signaling and Telecommunication, the Institute today caters to the needs of the entire Afro-Asian region.

Located in the southern part of India in Secunderabad adjoining the capital city of Hyderabad in Andhra Pradesh, the Institute is spread over about 28.3 hectares. IRISET provides initial as well as advanced training, theory as well as hands on, in Railway Signaling and Telecommunications. It caters to the total training requirement of the Officers and the Supervisors of Signal and Telecommunication department of Indian Railways.

IRISET is in the approved list of ESCAP and UNDP. It provides training in Railway Signaling and Telecommunications to private and public sector enterprises as well. It also trains officials of Foreign Railways.

3.5.2.2 Medical Department

Medical Department is headed by Chief Medical Superintendent and assisted by one Assistant Chief Medical Superintendent; it guides, advises and supervises all the Health Units of Secunderabad division. This is situated in Chilkalguda near Secunderabad railway station.

It is providing industrial medicine as per the need of the Indian railway and also providing medical treatment to railway beneficiaries. The system is a dynamic system which makes suitable changes in proper time to provide proper medical treatment to railway beneficiaries.
Medical department aims to perform following two important functions
- Functions related to Industrial Medicine.
- Functions related to Medical treatment to Railway beneficiaries.

3.5.2.3 Safety Department
Safety organisation of SC division tries to create safety consciousness among the field staff engaged in train operation. It tries to improve safety environment to provide a reliable and safe service to the customers. Aiming to reduce any possibility of accidents high priority to safety has been accorded by the division.
Safety organisation is playing its unique role towards achieving this goal by consistently adopting a number of measures like

- Extensive safety camps, safety drives and safety seminars by associating officers and supervisors.
- Frequent ambush checks to prevent adoption of short cut methods.
- Issue of regular safety literature i.e. safety alert advises, monthly safety news, safety bulletins on different safety instructions/rules are issued in bilingual form for easy understanding by the grass root level staff.
- Counselling of safety category staff all over the division.
- Public awareness programs conducted at unmanned level crossings with the local RTOs, Safety Posters/Stickers have been printed and distributed to all concerned and public.
- Produced and distributed 720 Audio visual modules on precautions to be taken for prevention of fire incidents etc.,
- 30 Pantry car checks conducted.
3. GUNTAKAL DIVISION

3.5.3 Guntakal division

Guntakal division was formed in 1956 as a part of Southern Railway and was transferred to South central railway on 2\textsuperscript{nd} Oct, 1977. It has been declared as total Broad Gauge division with completion of Pakala-Dharmavaram during 2010-11.

Figure no.: 3.5.3 Guntakal Division

Map no.: 3.5.3 Guntakal Railway Division

This division is the first highest division in terms of 1307.07 RKMs and second highest division in terms of 1872.47 track KM in South Central Railway. Tracks are getting added with simultaneous ongoing doubling and new line projects of RVNL and
construction organization. Guntakal division is the abode of the world famous temple and it is also endowed with rich minerals, iron ore, barytes, lime stone and a host of natural stones. The increase in commercial exploitation of the above, coupled with accelerated industrialization and port activities, the goods traffic is increasing by leaps and bounds. Guntakal division is growing in stature year by year both in passenger and goods traffic.

3.5.3.1 Medical Department

Guntakal Railway Hospital started during the year 1908 to cater to the railway population. This hospital started with two doctors, one Pharmacist and one Peon and had 6 beds. The bed strength rose from 22 in 1942, 28 in 1949, 59 in 1957, 75 in 1962, and 105 in 1966 and 131 beds in 1981 onwards.

Services provided at railway hospital, Guntakal

Emergency services: 24 hours, OPD services, speciality services-general surgery, OBG, Ophthalmology, ENT, Medical, Dermatology, Dental and Physiotherapy Homeopathy clinic

3.5.3.2 Safety department

To achieve ‘zero’ accidents on Indian railways duly keeping eagle eye on the train operations. Safety department of Guntakal division is concentrating on the areas where attention is required and working on the issues to improve safety without hampering train operations. Moving nuke and corner of the division to identify the shortfalls and to rectify them as and when noticed through the respective departments. The staff knowledge is being updated on the changes/modifications/amendments in their day to day working through safety circulars, rule of the month, fly leaf, accidents newsletters, conducting safety seminars, safety drives, and during inspections.

Role of safety organisation:

- To sensitize all safety category train, passing staff in safety related issues
- To have effective emergency response mechanism to handle situations arising
- To enable the concerned departments to deliver the required assistance during emergency
4. GUNTUR DIVISION

Figure no.: 3.5.4  Guntur Railway Division

Map no.: 3.5.4  Guntur Railway
3.5.4 Guntur division

In order to strengthen the rail infrastructure of this region, Ministry of Railways sanctioned the formation of Guntur division in the year 1995-96. Guntur division was operationalised on 1st April, 2003 with 618.48 RKM by amalgamating 3 sections taken from 3 divisions viz., 369.39 KMs from BZA division, 141.29 KMs from Guntakal division and 107.88 KMs, from Secunderabad division. Now, with the addition of 10.74 RKM of Vishnupuram Janpahad section, the division RKM enhanced to 629 KMs.

It was formed by merging the most far flung and least productive stretches of Vijayawada, Secunderabad and Guntakal divisions of the South Central Railway. It has 72 major and minor stations spread over a total route length of 629 KMs. The major cities and towns served are Nalgonda, Miryalguda, Nadikudi, Sattenpalle, Piduguralla, Tenali, Repalle, Donakonda, Vinukonda, Narasaraopet, Markapur, Giddalur and Nandyal.

A primarily freight driven division Guntur started with earnings of only Rs. 930 million in 2003. A steady increase saw the figure reach Rs. 2.72 billion in 2007-08 before the ongoing worldwide recession brought it down to Rs. 2.37 billion in 2008-09. There was a marginal increase in the number of passengers carried as well as the earnings there from. This has now risen substantially to Rs. 4.67 billion in 2012-13. The division’s total expenditure in 2012-13 was to the tune of Rs. 2.6 billion, primarily owing to its track renewal and passenger amenities works. Its performance efficiency index was therefore pegged at 43.85%.

Guntur division was created to better administer the railway network in East Central Andhra Pradesh, one of the most backward regions of the state. The poorly developed road network in this region provides ample scope for the growth of the railways. It is completely consisting of broad gauge track. The headquarters of the Guntur division is located at Rail Vikas Bhavan, Pattabhipuram, Guntur.

The primary commodity transported by the division is cement besides quartz, coal and fertilizer. Other commodities include grains, cotton, chillies and timber waste. The main freight loading points are

- M/S India Cements Ltd.: Vishnupuram.
- M/S Penna Cements Ltd.: Vishnupuram and Miryalaguda.
- Rice: Miryalaguda and Nalgonda.
- Food grains, Cotton husk, Chillies: Reddipalem.
- Timber waste: Markapur and Cumbum.

### 3.5.4.1 Features
- The division has 386 level crossing gates in its jurisdiction. It maintains 6 telephone exchanges and runs 4 hospitals/health units.
- As part of its greenery efforts, the division maintains a 50-acre (200,000 m²) park called Kartik Vanam with more than 6500 trees, both native and exotic. It also has a duck park in it.
- Some of the popular trains passing through the division are the Falaknuma express, the Amaravati express, Prashanthi express, Machilipatnam Bangalore express Via Nandyal Bhubaneswar-Bangalore Garibrath weekly express via Nandyal, Vishakha express, Howrah-Prasanthi Nilayam weekly express via Markapuram and Nandyal, Palnadu express and the Chennai express.

About 17 pairs of express trains and 26 pairs of ordinary passenger trains operate through the division.

### 3.5.4.2 Medical Department
Guntur division medical department was established on 1st April, 2003 with health units at Nadikudi (NDKD), Nandyal (NDL) and Donakonda (DKD) with divisional hospital at Guntur (GNT).

Divisional hospital attends to primary care and industrial health i.e., attending to sick employees and medical examination of employees/candidates. On an average about 5,500 patients are treated at railway hospital/health units. Patient care is better met with specialist and super specialist doctors.

### 3.5.4.3 Safety Department
Guntur division’s safety branch is making continuous effort to improve safety indices by way of counselling, inspection of critical areas, locations night inspections, work spot inspections, conducting safety seminars ambush checks etc. There are 57 stations and 2 block cabins and all stations have been provided with multiple aspect
colour light signals at junction station and terminal stations respectively. All these improvements have contributed to satisfactory safety performance of the division.

**Safety Awareness Programmes**

- Safety awareness materials like pamphlets, stickers were distributed at during public gatherings and at UM LC Gates.
- Ambush checks were jointly conducted by ADRM/GNT along with RPF and RTA at UMLCs as a part of International level crossing day, 7th May. Monthly Safety seminars were organized regularly over the division at important stations to educate the staff and refresh their knowledge regarding safety rules.
- Safety drives were conducted every month. Speed breakers of standard type were being provided at all unmanned level crossing gates and painting of speed breakers is also being undertaken.
- About 800 day and 300 night inspections conducted from April 2012 to March 2013 by Sr.DSO and safety Supervisors in the division.
5. HYDERABAD DIVISION

Figure no.: 3.5.5  Hyderabad Railway division

Map no.: 3.5.5  Hyderabad Division
3.5.5 **Hyderabad Railway division**

The division is basically passenger traffic oriented and provides services to above 63000 passengers every day, by operating 29 express, 41 passenger, 40 MMTS and 44 suburban train services. It provides access to various tourist spots and pilgrim centers. The division has been contributing to the socio-economic development of the backward regions of Andhra Pradesh by facilitating transportation.

3.5.5.1 **Personnel department**

Personnel department has implemented Pay Roll and Independent Modules (PRIME) for arranging payment for all the staff of Hyderabad division including running, Security and engineering/gang staff during the month of May, 2006 further the division arranged single payment program for all the staff in the month of January, 2007. Apart from that the division has ensured all the payments through bank by means of Electronic Clearing System (ECS), core banking and cheques.

3.5.5.2 **Medical Department**

**Mission Statement:** Total patient satisfaction through humane approach and shared commitment of every single doctor and paramedic to provide quality health care using modern and cost effective techniques and technologies.

Medical branch provides curative, preventive and primitive health care to railway employees and retired employees and their dependent family members. It ensures safety of food and water used by passengers and residents of railway colonies.

3.5.5.3 **Safety Propaganda**

Public awareness campaigns are being conducted through audio/video programmes at various locations like bus stations, bus depots, villages and melas regularly. In all 66,900 people including RTC staff, jeep, auto drivers, tractor drivers, two wheeler drivers, college students and school children were counselled. The following steps are taken in order to reduce accidents in the division.

1. Conducting safety seminars.
2. Launching safety drives.
3. Issuing safety circular and general circular.
4. Issuing safety literature (safety posters, fly leaf, bulletins etc.)
5. Framing rule of the month for the benefit of the staff.
6. Conducting night surprise inspections.
7. Public awareness campaign.
8. Monitoring of refresher course and periodical medical examination.
9. Conducting weekly safety audit meeting with DRM, ADRM and branch officers, discussing all the safety related issues. The deficiencies pointed out during the meeting, action required to implement the safety measures are monitored and compliance is ensured.
6. NANDED DIVISION

Figure no.: 3.5.6 Nanded division

Map no.: 3.5.6 Nanded division
3.5.6) Nanded Railway division

Nanded Division became a fully-fledged division of South Central Railway on 1st April, 2003 with a route length of slightly more than one thousand kilometers, Nanded division extended from Pimpalkutti in Eastern Maharastra to Manmad via Adilabad of Andhra Pradesh and Mudkhed, with a long stretch of Meter Gauge from Khanawa of Madya Pradesh to Purna. Parbhani-Parli section of Nanded is part of an important route for carrying coal to Parli Thermal Power Station.

Nine departments are operating in this division. The personnel department of Nanded division focus on the human resource management including recruitment to recruitment and thereafter too. The total sanctioned staff strength is of Nanded division is 6219 and actual staff strength is 5278, which is catering the needs of the division. Personnel branch employees are responsive to grievances and solving efficiently. The personnel department is situated at ground floor of Nanded division building.

Figure no.: 3.5.6.1 Organisation structure
### 3.5.6.2 Staff strength of Nanded Division

(As on 1-1-2014)

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<th>Sl. No</th>
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<tr>
<td>9</td>
<td>Transportation</td>
<td>1030</td>
<td>930</td>
</tr>
</tbody>
</table>

| Total  | 6219  | 5278 |

Source: SCR Annual Reports.

This division has 166 residential quarters for officers and for subordinate, rest house, service buildings and health unit. An officer’s club has badminton courts, gym and billiards Room, an Institute for the staff, Communication centre and Welfare centre and two children parks. 72 additional quarters, community hall and co-operative shops are also there.