Appendix 4 – SLVRMI Passenger Rail Ridership Study

San Luis and Rio Grande Railroad
Ridership Demand Study

Final Report

Prepared for

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August 28, 2009

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1. INTRODUCTION

BACKGROUND

As part of the American Recovery and Reinvestment Act of 2009, $1.5 billion of discretionary funds were appropriated to the US Department of Transportation to be awarded for capital investments in surface transportation infrastructure. The funds provided through TIGER Discretionary Grants will be available for obligation until September 30, 2011. According to the *Federal Register*, Volume 74, No. 115, the funds will be awarded "…on a competitive basis to projects that have a significant impact on the Nation, a metropolitan area, or a region." Eligible TIGER projects include passenger and freight rail transportation projects.

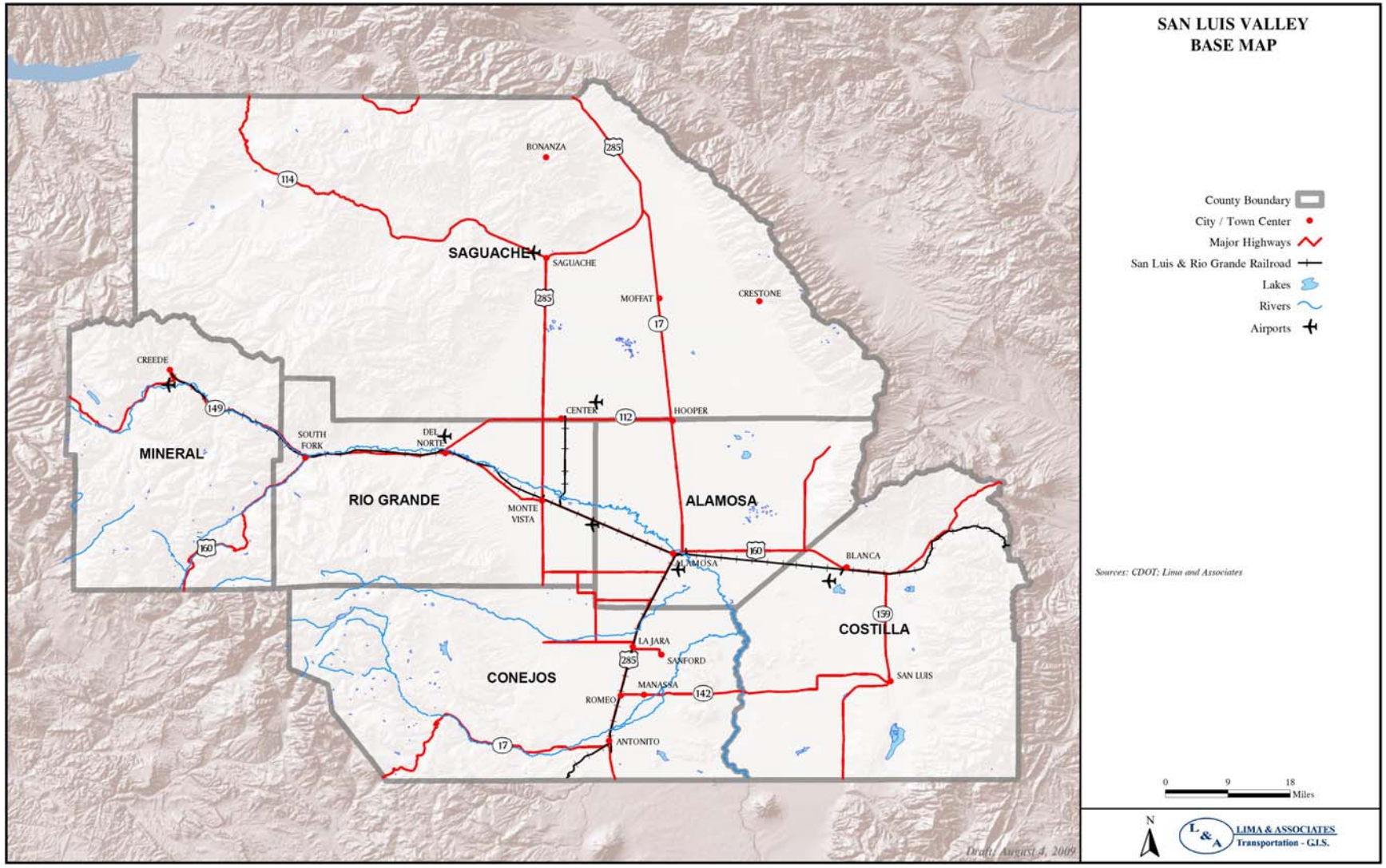
Iowa Pacific Holdings (IPH), a shortline railroad holding company, is preparing to submit a Grant for Transportation Investment Generating Economic Recovery (TIGER Discretionary Grant) to the US Department of Transportation. The TIGER Grant funds will be used to make significant railroad infrastructure improvements to the routes of the San Luis and Rio Grande Railroad (SLRG) between the communities of Alamosa and Antonito and Alamosa and South Fork in the San Luis Valley in South Central Colorado. IPH plans to use the funds to upgrade these two lines of the SLRG to FRA Class III standards, permitting maximum operating speeds of 40 mph for freight and 60 mph for passenger.

IPH recognizes the positive effect on freight operations that the upgrade from the current Class II speed of 25 mph to 40 mph will have and is committed to operation of a passenger rail service without subsidy. IPH plans to initiate an all-weather passenger rail rural transit service on the SLRG serving these communities. The goal of this service will be to maximize mobility in the service area and improve livability in the region. IPH plans to include ridership demand estimates in the TIGER Grant submittal. The complete grant application must be submitted to the US DOT no later than September 15, 2009.

STUDY OBJECTIVES

This Ridership Demand Study developed ridership demand projections for passenger rail service on the SLRG serving San Luis Valley communities. The consultant collected demographic and economic data for the six counties that comprise the Southern San Luis Valley region. (See Figure 1) Passenger rail operating schedules between Alamosa and Antonito and Alamosa and South Fork were developed by the SLRG that reflect upgrading operating speeds on certain track segments to a maximum of 60 mph. Ridership for the 2010, 2015, 2020, and 2030 horizon years was projected and appropriate exhibits developed for inclusion in the TIGER Discretionary Grant application.

FIGURE 1. STUDY AREA



PROPOSED ALL-WEATHER PASSENGER RAIL OPERATION

The SLRG proposes to operate an all-weather passenger rail rural transit operation making four round trips daily between South Fork, Alamosa, and Antonito. The draft operating schedule is shown in Table 1.

TABLE 1. PROPOSED SLRG PASSENGER SCHEDULE

			Trip			
	Station	**Miles**	**1**	**2**	**3**	**4**
Leave	South Fork	0	6:30a	9:30a	12:30p	1530p
Leave	Del Norte	15.4	6:47a	9:47a	12:47p	1547p
Leave	Monte Vista	29.2	7:00a	10:00a	1:00p	4:00p
Leave	Alamosa West	44.5	7:16a	10:16a	1:16p	4:4:p
Arrive	Alamosa	46.5	7:20a	10:20a	1:20p	4:20p
Leave	Alamosa	46.5	7:25a	10:25a	1:25p	4:25p
Leave	La Jara	61	7:40a	10:40a	1:40p	4:40p
Leave	Romeo	68.1	7:48a	10:48a	1:48p	4:48p
Arrive	Antonito	75.1	7:57a	10:57a	1:57p	4:57p
			1	**2**	**3**	**4**
Leave	Antonito	0	8:00a	11:00a	2:00p	5:00p
Leave	Romeo	7	8:08a	11:08a	2:08p	5:08p
Leave	La Jara	14.1	8:16a	11:16a	2:16p	5:16p
Arrive	Alamosa	28.6	8:32a	11:32a	2:32p	5:32p
Leave	Alamosa	28.6	8:35a	11:35a	2:35p	5:35p
Leave	Alamosa West	30.6	8:39a	11:39a	2:39p	5:39p
Leave	Monte Vista	45.9	8:55a	11:55a	2:55p	5:55p
Leave	Del Norte	59.7	9:05a	12:05p	2:05p	6:05p
Arrive	South Fork	75.1	9:25a	12:25p	2:25p	6:25p

Source: Iowa Pacific Holdings

This proposed schedule would result in 600.8 train-miles of service per day, or 219,442 train-miles of service annually, assuming seven-days-per-week—or 365.25 days per year—of operation.

Two methodologies were followed for developing sketch estimates of future ridership. The first methodology is based on the traffic volumes on the segments of highways US 160 and US 285, which parallel the rail route. This approach estimates the numbers of "choice" riders—current motorists—who would be diverted to the rail service. The second methodology, developed by the Transit Cooperative Research Program, was used to develop estimates of members of transit-dependent populations who may use the proposed service. The following two chapters describe these methodologies in detail and present the findings.

Chapter 4 summarizes the findings of the two previous chapters and Chapter 5 presents a suggested fare structure and revenue estimates based on the projected ridership.

2. PARALLEL HIGHWAY TRAFFIC-BASED DEMAND ESTIMATION

CHARACTERISTICS OF PROPOSED ROUTES

The following pertinent characteristics were considered when developing an estimate of ridership demand:

- Even though the proposed schedule shown in Table 1 can be operated with one set of equipment, the route to be served represents two discrete passenger rail corridors: South Fork – Alamosa and Antonito – Alamosa. As the largest community in the study area, Alamosa is the likely destination for persons traveling for work, school, medical, shopping or other reasons from either west or south.
- Both corridors will also serve tourist travelers including persons transferring to and from the Cumbres & Toltec Scenic Railroad at Antonito, and possibly persons arriving by plane at Alamosa.
- The tourist component of the travel volume is very seasonal in nature.

Two types of motor vehicle traffic count data were obtained from the Colorado Department of Transportation (CDOT):

1. Detailed average annual daily traffic (AADT) data was obtained for 31 count locations on US 160 between South Fork and Alamosa (See Table A-1 in the Appendix), and detailed AADT data was obtained for 19 locations on US 285 between the New Mexico state line and Alamosa (See Table A-2).
2. Seasonally adjusted daily traffic count data was available for one of the 31 locations on US 160 and for one of the 19 locations on US 285. The two locations for which seasonal data was available are highlighted in yellow in Tables A-1 andA-2 for reference.

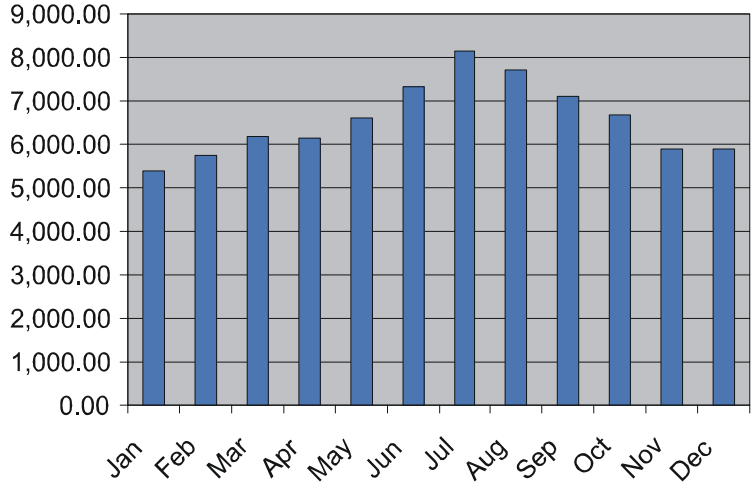
The roadway segments paralleling the rail line carry three basic types of motor vehicle traffic:

- Area residents, assumed for the purposes of this study to be making the same numbers of trips year-round
- Tourists traveling by car
- Commercial trucks

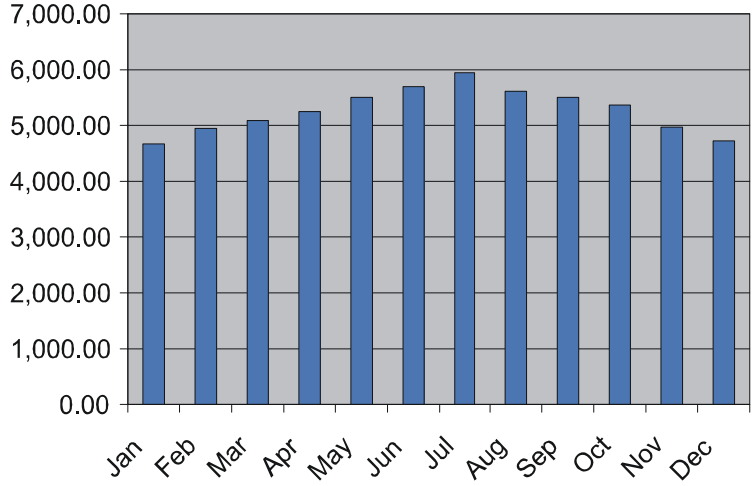
To estimate the "base" level of trips made by year-round area residents as differentiated from seasonal tourist trips, the seasonal traffic count data for both highway segments was first compared with seasonal visitation data from Great Sand Dunes National Park (GRSA), as shown in Figure 2.

FIGURE 2. SEASONAL DISTRIBUTION OF TRAFFIC AND VISITORS

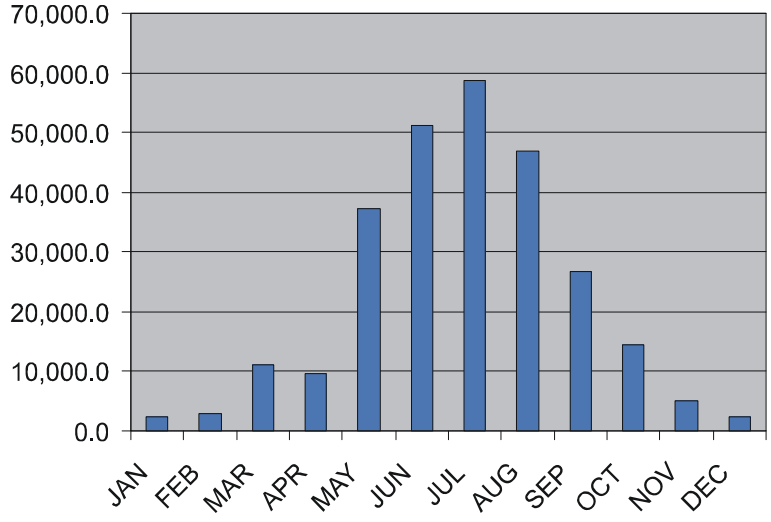
Seasonal Distribution of Traffic on US 160, Reference Point: 219.093, Count Station: 000218 (Daily Averages)



Seasonal Distribution of Traffic on US 285, Reference Point: 26.829, Count Station: 000238 (Daily Averages)



Seasonal Distribution of Visitation to Great Sand Dunes National Park (Monthly Averages)



Sources: Colorado Department of Transportation; Great Sand Dunes National Park

The monthly data for the GRSA for the years from 1992 through 2008 was averaged to identify the percentages of total visitations that occur in a given month (See Table 2). During either January or December, the GRSA experiences less than one percent of its annual visitation.

TABLE 2. GREAT SAND DUNES NATIONAL PARK
AVERAGE MONTHLY SEASONALLY ADJUSTED FIGURES

Month	Visitation	Percent of Annual
Jan	2,381.10	0.89%
Feb	2,976.80	1.11%
Mar	11,132.30	4.14%
Apr	9,584.10	3.56%
May	37,204.50	13.84%
Jun	51,139.90	19.02%
Jul	58,798.30	21.87%
Aug	46,872.70	17.43%
Sep	26,744.00	9.95%
Oct	14,523.40	5.40%
Nov	4,985.50	1.85%
Dec	2,512.40	0.93%

Source: Great Sand Dunes National Park

However, at the opposite end of the valley, South Fork functions as a gateway to winter ski resorts in the Wolf Creek area as well as camping and fishing venues and other four-season activity. The consultant believes that the flatter seasonal volume curves of the two roadway segments compared with that of the GRSA as depicted in Figure 2 reflect the use of these roadways by motorists accessing these four-season activities.

It is assumed that during any month a minimum of ten percent of the highway traffic is tourist traffic. An estimated "base" figure of year-round local traffic on the two roadways was calculated using the following steps:

1. The month having the lowest daily traffic volume was identified (January for both roads)
2. The percentage of truck traffic—7.1 percent for US 160 and 8.6 percent for US 285—was subtracted from the January figures.
3. Ten percent assumed tourist traffic was subtracted from the January Figures.
4. The resulting daily local traffic base figures were 4,508 vehicles for US 160 and 3,850 vehicles for US 285.

Tables 3-A and 3-B present analyses of the traffic count data for the segments of US 160 and US 285, respectively.

TABLE 3-A. ANALYSIS OF AVERAGE MONTHLY TRAFFIC COUNTS FOR POINT ON US 160

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Count	5,391.88	5,760.47	6,162.06	6,143.65	6,597.18	7,324.18	8,136.12	7,705.76	7,115.94	6,668.41	5,896.76	5,875.24
Less 7.1% trucks	5,009.06	5,351.48	5,724.55	5,707.45	6,128.78	6,804.16	7,558.46	7,158.65	6,610.71	6,194.95	5,478.09	5,458.10
Local Base	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00	4,508.00
Estimated Tourist Traffic	501.06	843.48	1,216.55	1,199.45	1,620.78	2,296.16	3,050.46	2,650.65	2,102.71	1,686.95	970.09	950.10

Sources: Colorado Department of Transportation, Continuous Traffic Count for Highway 160A, Reference Point: 219.093, Count Station: 000218; Lima & Associates

TABLE 3-B. ANALYSIS OF AVERAGE MONTHLY TRAFFIC COUNTS FOR POINT ON US 285

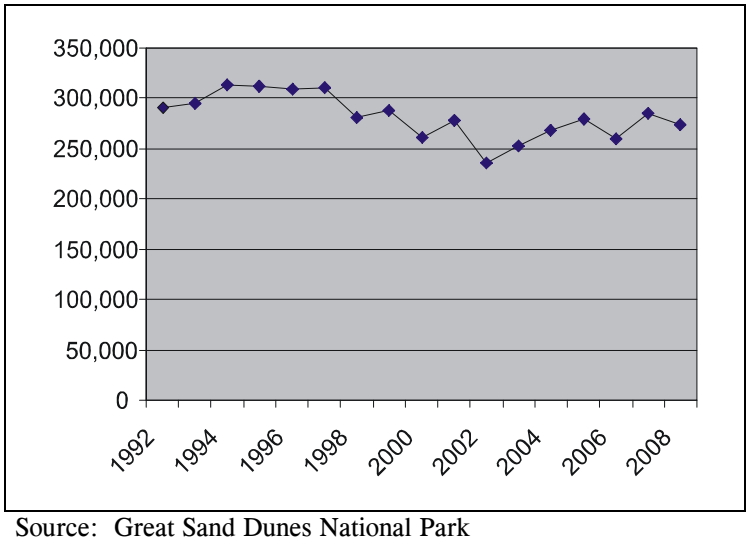
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Count	4,680.29	4,942.00	5,088.14	5,245.43	5,508.57	5,684.43	5,951.29	5,618.43	5,503.29	5,365.86	4,961.43	4,732.29
Less 7.1% trucks	4,277.79	4,516.99	4,650.56	4,794.32	5,034.83	5,195.57	5,439.48	5,135.25	5,030.01	4,904.40	4,534.75	4,325.31
Local Base	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00	3,850.00
Estimated Tourist Traffic	427.79	666.99	800.56	944.32	1,184.83	1,345.57	1,589.48	1,285.25	1,180.01	1,054.40	684.75	475.31

Sources: Colorado Department of Transportation, Continuous Traffic Count for Highway 285A,, Reference Point: 26.829, Count Station: 000238; Lima & Associates

FUTURE GROWTH TRENDS

As Figure 3 shows, annual visitation to the GRSA has fluctuated between 250,000 and 300,000 for a number of years, exhibiting no clear trend.

FIGURE 3. GREAT SAND DUNES NATIONAL PARK VISITATION TREND



Source: Great Sand Dunes National Park

Hence future traffic projections obtained from CDOT were used to develop growth factors as shown in Table 4. These factors were used in the demand estimation process described below:

PARALLEL HIGHWAY TRAFFIC-BASED DEMAND ESTIMATION PROCESS

Tables 5-A and 5-B present the parallel highway traffic-based demand estimation process using the local and tourist traffic volumes derived from Tables 3-A and 3-B, and the growth factors derived from Table 4. In addition, the following assumptions were made:

- Tourist vehicles were assumed to have an average of two persons per car.
- Local vehicles were assumed, for diversion purposes, to be single-occupant vehicles, with the reasoning that multiple occupants of local vehicles would be carpooling and would not be using the train. Alternatively, the driver of a car with a passenger may be giving a transit-dependent person a ride to the train station.
- An average of two percent of the tourists would be diverted to rail.
- All tourists would travel the entire route.
- An Average of one percent of the local drivers would be diverted to rail.

TABLE 4. CALCULATION OF FUTURE HIGHWAY TRAFFIC VOLUME FACTORS

2008 AADT	2008 Total Trucks	2008 Net AADT	2015 AADT	2015 Total Trucks	2015 Net AADT	2015 Percent Change from 2008	2020 AADT	2020 Total Trucks	2020 Net AADT	2020 Percent Change from 2008	2030 AADT	2030 Total Trucks	2030 Net AADT	2030 Percent Change from 2008
Highway 160A, Reference Point: 219.093, Count Station: 000218														
7,300	520	6,780	8,526	607	7,919	116.79%	9,402	670	8,732	128.79%	11,154	794	10,360	152.80%
Highway 285A, Reference Point: 26.829, Count Station: 000238														
5,100	440	4,660	5,778	499	5,279	113.28%	6,263	540	5,723	122.81%	7,232	624	6,608	141.80%

Sources: Colorado Department of Transportation, Continuous Traffic Count Data; Lima & Associates

TABLE 5-A. PARALLEL HIGHWAY TRAFFIC-BASED DEMAND ESTIMATION PROCESS
LOCAL TRAFFIC

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
South Fork - Alamosa Corridor												
US 160 local daily	4,508	4,508	4,508	4,508	4,508	4,508	4,508	4,508	4,508	4,508	4,508	4,508
1 % divert to rail	45	45	45	45	45	45	45	45	45	45	45	45
Current US 160 Estimate	45	45	45	45	45	45	45	45	45	45	45	45
US 160 Factor for 2015	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%
2015 Estimate	53	53	53	53	53	53	53	53	53	53	53	53
US 160 Factor for 2020	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%
2020 Estimate	58	58	58	58	58	58	58	58	58	58	58	58
US 160 Factor for 2030	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%
2030 Estimate	69	69	69	69	69	69	69	69	69	69	69	69
Antonito - Alamosa Corridor												
US 285 local daily	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850	3,850
1 % divert to rail	39	39	39	39	39	39	39	39	39	39	39	39
Current US 285 Estimate	39	39	39	39	39	39	39	39	39	39	39	39
US 285 Factor for 2015	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%
2015 Estimate	44	44	44	44	44	44	44	44	44	44	44	44
US 285 Factor for 2020	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%
2020 Estimate	47	47	47	47	47	47	47	47	47	47	47	47
US 285 Factor for 2030	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%
2030 Estimate	55	55	55	55	55	55	55	55	55	55	55	55
SUM of South Fork – Alamosa and Antonito – Alamosa Corridor Local Estimates												
Current Daily Estimate	84	84	84	84	84	84	84	84	84	84	84	84
2015 Daily Estimate	96	96	96	96	96	96	96	96	96	96	96	96
2020 Daily Estimate	105	105	105	105	105	105	105	105	105	105	105	105
2030 Daily Estimate	123	123	123	123	123	123	123	123	123	123	123	123

Sources: Colorado Department of Transportation, Continuous Traffic Count Data; Lima & Associates

TABLE 5-B. PARALLEL HIGHWAY TRAFFIC-BASED DEMAND ESTIMATION PROCESS
TOURIST TRAFFIC

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
South Fork - Alamosa Corridor												
US 160 tourist vehicles daily	501	843	1,217	1,199	1,621	2,296	3,050	2,651	2,103	1,687	970	950
Avg. 2 persons/vehicle	1,002	1,687	2,433	2,399	3,242	4,592	6,101	5,301	4,205	3,374	1,940	1,900
2% divert to rail	20	34	49	48	65	92	122	106	84	67	39	38
Current Tourists from US 160	20	34	49	48	65	92	122	106	84	67	39	38
US 160 Factor for 2015	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%	116.79%
2015 Estimate	23	39	57	56	76	107	143	124	98	79	45	44
US 160 Factor for 2020	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%	128.79%
2020 Estimate	26	43	63	62	83	118	157	137	108	87	50	49
US 160 Factor for 2030	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%	152.80%
2030 Estimate	31	52	74	73	99	140	186	162	129	103	59	58
Antonito - Alamosa Corridor												
US 285 tourist vehicles daily	428	667	801	944	1,185	1,346	1,589	1,285	1,180	1,054	685	475
Avg. 2 persons/vehicle	856	1,334	1,601	1,889	2,370	2,691	3,179	2,570	2,360	2,109	1,369	951
2% divert to rail	17	27	32	38	47	54	64	51	47	42	27	19
Current Tourists from US 285	17	27	32	38	47	54	64	51	47	42	27	19
US 285 Factor for 2015	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%	113.28%
2015 Estimate	19	30	36	43	54	61	72	58	53	48	31	22
US 285 Factor for 2020	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%	122.81%
2020 Estimate	21	33	39	46	58	66	78	63	58	52	34	23
US 285 Factor for 2030	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%	141.80%
2030 Estimate	24	38	45	54	67	76	90	73	67	60	39	27
AVERAGE of South Fork – Alamosa and Antonito – Alamosa Corridor Tourism Estimates												
Current Daily Estimate	19	30	40	43	56	73	93	79	66	55	33	29
2015 Daily Estimate	21	35	47	49	65	84	107	91	76	63	38	33
2020 Daily Estimate	23	38	51	54	71	92	118	100	83	69	42	36
2030 Daily Estimate	27	45	60	63	83	108	138	117	98	81	49	43

Sources: Colorado Department of Transportation, Continuous Traffic Count Data; Lima & Associates

Summary of Parallel Highway Traffic-Based Demand Estimation Process

Table 6 presents a summary of the parallel highway traffic-based demand estimation process.

Note that these figures represent the sum of trips made on both the South Fork – Alamosa and the Antonito – Alamosa legs of the route during a given service day. An unknown percentage of highway travelers—particularly tourists—travel "through" Alamosa, such as tourists from South Fork traveling to and from Antonito to connect with the Cumbres & Toltec. Many of the tourists choosing to ride the train will be railroad buffs seeking the maximum experience. It was assumed that all the tourists diverted from the highway would travel both legs of the trip.

TABLE 6. SUMMARY OF PARALLEL HIGHWAY TRAFFIC-BASED DEMAND ESTIMATION

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SUM of South Fork – Alamosa and Antonito – Alamosa Corridor Daily Local Ridership Estimates												
Current Daily Estimate	84	84	84	84	84	84	84	84	84	84	84	84
2015 Daily Estimate	96	96	96	96	96	96	96	96	96	96	96	96
2020 Daily Estimate	105	105	105	105	105	105	105	105	105	105	105	105
2030 Daily Estimate	123	123	123	123	123	123	123	123	123	123	123	123
AVERAGE of South Fork – Alamosa and Antonito – Alamosa Corridor Daily Tourism Ridership Estimates												
Current Daily Estimate	19	30	40	43	56	73	93	79	66	55	33	29
2015 Daily Estimate	21	35	47	49	65	84	107	91	76	63	38	33
2020 Daily Estimate	23	38	51	54	71	92	118	100	83	69	42	36
2030 Daily Estimate	27	45	60	63	83	108	138	117	98	81	49	43
Sum of Local plus Tourism Daily Ridership Estimates for Both Corridors												
Current Daily Estimate	102	114	124	126	140	156	176	162	149	138	117	112
2015 Daily Estimate	118	131	143	146	161	180	204	187	172	160	134	129
2020 Daily Estimate	129	143	156	159	176	198	223	205	188	175	147	141
2030 Daily Estimate	151	168	183	187	207	232	262	241	221	205	173	166
Total Monthly Rodership Estimates based on 365.25 days per year												
Current Monthly Estimate	3,167	3,215	3,842	3,794	4,330	4,692	5,468	5,031	4,477	4,291	3,500	3,475
2015 Monthly Estimate	3,647	3,703	4,427	4,370	4,990	5,411	6,309	5,806	5,163	4,946	4,033	4,006
2020 Monthly Estimate	3,991	4,052	4,847	4,783	5,462	5,926	6,912	6,361	5,655	5,415	4,414	4,386
2030 Monthly Estimate	4,679	4,751	5,684	5,607	6,405	6,954	8,115	7,469	6,636	6,353	5,176	5,146

Total Annual Ridership Estimates	
Current	**49,281**
2015	**56,813**
2020	**62,204**
2030	**72,974**

Source: Lima & Associates

3. TRANSIT COOPERATIVE RESEARCH PROGRAM-BASED DEMAND ESTIMATION

The Transit Cooperative Research Program (TCRP) Report 3, *Workbook for Estimating Demand for Rural Passenger Transportation*, was also utilized to estimate possible demand for rural passenger rail service. This workbook provides a methodology for estimating transit demand for rural systems, using population data for the year of proposed service start-up and assumptions of service area size and route lengths.

The demand methodology outlined in TCRP Report 3 required that a hypothetical system be developed for analysis purposes. For the purposes of this report, the actual rail route connecting South Fork, Alamosa, and Antonito was used. (See Figure 1) Note that the TCRP Report 3 methodology is not mode-specific and could equally apply to either rail or bus service.

To conduct the demand estimation procedure, the following assumptions were made:

- The service area for the hypothetical system is defined as the array of Census Block Groups that are traversed by and portion of the rail line or within five miles of either side of the rail line. (See Figure 4) Note that the large Block Groups coincidentally incorporate portions of the SLRG not included in this study. However, for privacy reasons the sensitive income data is not available at the smaller "Census Block" level, which necessitates using the Groups.
- Every resident of the universe of these Census Block Groups is a potential user of the system.
- The percentages of Census Block Group residents aged 65 and over, having mobility limitations, or living below the poverty level will be the same in the future horizon years of 2010, 2015, 2020, and 2030 as they were in 2000.

TCRP DEMAND ESTIMATION METHODOLOGY

The TCRP estimations were developed based on specific population groups within the hypothetical service area presented in Figure 4. These population groups are typically referred to as transit dependent populations, and statistically are the most likely to use transit if available. The groups include (as defined by the Census); person aged 65 or over, persons aged 16 to 64 with mobility limitations, and persons aged 64 or under, residing in households with incomes below the poverty level. Table 7 shows the total 2030 forecasted populations for each group in the hypothetical service area.

FIGURE 4. CENSUS BLOCK GROUPS COMPRISING RAIL SERVICE AREA

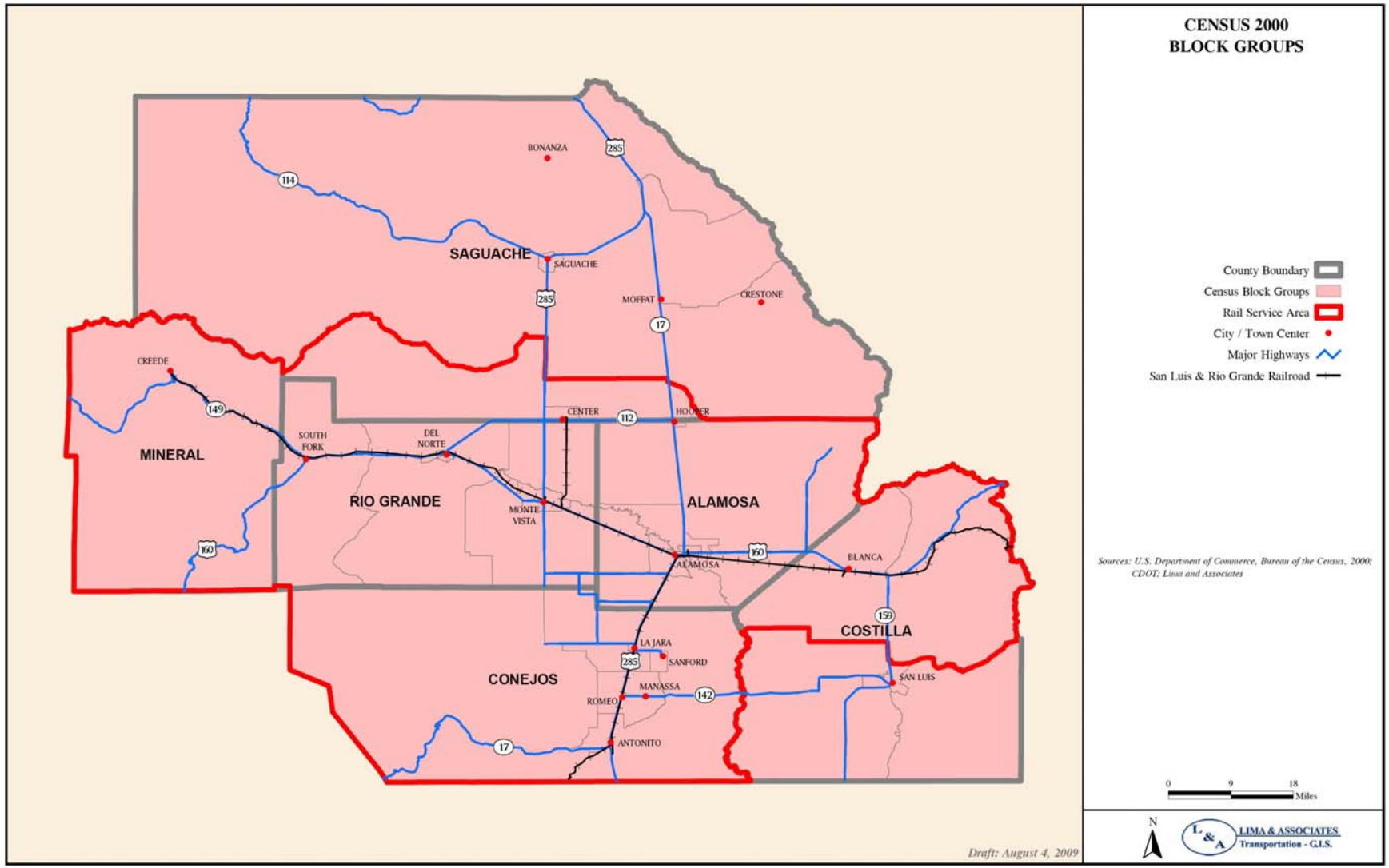


TABLE 7. POPULATION OF SERVICE GROUPS IN SERVICE AREA

Service Group	Census 2000 Statistics	2010	2015	2020	2030
Persons aged 65 or over	5,240	5,461	5,863	6,299	7,050
Persons aged 16 to 64 with mobility limitations	8,901	9,365	10,084	10,850	12,202
Persons aged 64 or under, residing in households with incomes below the poverty level	8,241	8,677	9,361	10,085	11,399

Source: Lima & Associates, Inc.

The TCRP workbook also requires estimations of train miles per year, and subsequently train miles per square mile. These estimations are used to understand the level, or amount of rail service that will be available to a defined service area. It was assumed that passenger service would be provided four times daily in each direction as provided for in the draft operating schedule depicted in Table 1. These trips would result in 600.8 train miles per day. Assuming that service was provided seven days per week, or 365.25 service days per year, the annual vehicle miles for the hypothetical system would be 219,442. Table 8 shows the process used for calculating the train miles per square mile.

TABLE 8. CALCULATION OF TRAIN MILES PER SQUARE MILE

Calculations	Data
Estimated train miles per day =	600.8
Estimated service days per year =	X 365.25
Estimated train miles per year =	219,442
Size of service area (square miles) =	4,971
Train miles / service area =	219,442/4,971
Train miles per square mile =	44

Source: Lima & Associates, Inc.

The calculations from Table 8, specifically the train miles per square mile, are input into a formula provided in the TCRP workbook to create a service factor for each population group. These formulas rely on given factors which are related to the train miles per square mile. Table 9 shows the calculation of the service factors needed for calculating the estimate of transit demand.

TABLE 9. SERVICE FACTOR CALCULATIONS

Population Group	Train Miles per Square Mile	Multiplied by TCRP Factor 1	Plus TCRP Factor 2	Divided by 1 million	Equals Service Factor
Over 65	44	2.682	376	1,000,000	0.000494
Mobility Limited	44	1.57	1010	1,000,000	0.0010791
Below Poverty	44	2.45	525	1,000,000	0.0006328

Source: Lima & Associates, Inc.

These derived service factors, based on the frequency of service and size of the service area, are part of the final calculations to estimate demand. Table 10 shows the formula provided in the TCRP workbook, which includes a standard factor, population of each group, and the service factor. Table 10 shows the estimated demand for each population group and the total estimated demand for transit. This methodology estimates a total yearly demand (all trips made during a year period) for the South Fork – Alamosa – Antonito route of 20,890 based on the 2000 Census figures, increasing to 21,953 for 2010, 23,642 for 2015, 25,442 for 2020, and 28,636 in 2030.

Note that, unlike the highway traffic-based procedure described in the previous chapter, this approach considers the system as one route as opposed to two discrete corridors.

Alternate TCRP Method

The TCRP workbook includes an alternative method for estimating demand. This alternative method provides a secondary demand estimate that can be compared against the first. This alternative method is based on pre-calculated trip rate curves created from research and analysis of other rural transit programs. The chart compares train miles per square mile (as derived in Table 8) against annual trips per person as shown in Figure 5.

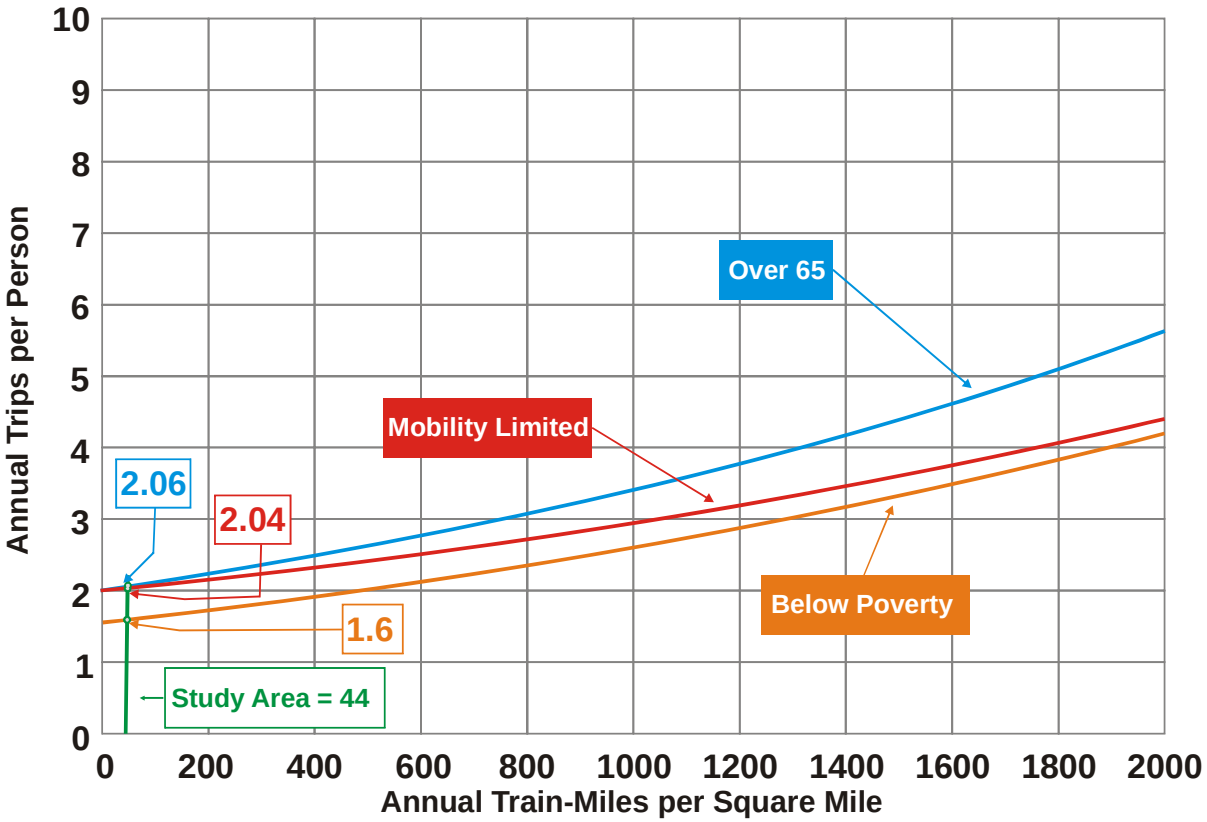
The estimated trip rates taken from Figure 5 are used to estimate the demand for each population group as shown in Table 11.

TABLE 10. ESTIMATION OF TRANSIT DEMAND USING TCRP PROCEDURE

	2000	2010	2015	2020	2030
Total Rail-served population	41,632	43,789	52,671	56,720	63,871
Persons aged 65 or over.	5,240	5,461	5,863	6,299	7,050
Service Factor	0.000494	0.000494	0.000494	0.000494	0.000494
TCRP Factor	1,200	1,200	1,200	1,200	1,200
Est. Over 65 Annual Demand	3,106	3,237	3,476	3,734	4,179
Persons aged 16 to 64 with mobility limitations	8,901	9,365	10,084	10,850	12,202
Service Factor	0.001079	0.001079	0.001079	0.001079	0.001079
TCRP Factor	1,200	1,200	1,200	1,200	1,200
Est. Mobility Limited Annual Demand	11,526	12,127	13,058	14,050	15,801
Persons aged 64 or under, residing in households with incomes below the poverty level.	8,241	8,677	9,361	10,085	11,399
Service Factor	0.000633	0.000633	0.000633	0.000633	0.000633
TCRP Factor	1200	1200	1200	1200	1200
Est. Low Income Annual Demand	6,258	6,589	7,108	7,658	8,656
Estimated Total Annual Demand	20,890	21,953	23,642	25,442	28,636
Estimated Daily Demand (365.25 Service Days)	80	84	91	98	110

Source: Lima & Associates, Inc.

FIGURE 5. ALTERNATE TCRP METHOD DEMAND



Source: Adapted from: TCRP Report 3, Workbook for Estimating Demand for Rural Passenger Transportation, Figure 6, pg 45.

TABLE 11. ESTIMATION OF TRANSIT DEMAND USING ALTERNATE TCRP PROCEDURE

	2000	2010	2015	2020	2030
Total Rail-served population	41,632	43,789	52,671	56,720	63,871
Persons aged 65 or over.	5,240	5,461	5,863	6,299	7,050
Trip Rate (from Figure 5)	2.06	2.06	2.06	2.06	2.06
Est. Over 65 Annual Demand	10,794	11,250	12,078	12,976	14,523
Persons aged 16 to 64 with mobility limitations	8,901	9,365	10,084	10,850	12,202
Trip Rate (from Figure 5)	2.4	2.4	2.4	2.4	2.4
Est. Mobility Limited Annual Demand	18,158	19,105	20,571	22,134	24,892
Persons aged 64 or under, residing in households with incomes below the poverty level.	8,241	8,677	9,361	10,085	11,399
Trip Rate (from Figure 5)	1.6	1.6	1.6	1.6	1.6
Est. Low Income Annual Demand	13,168	13,883	14,976	16,136	18,238
Estimated Total Annual Demand	42,138	44,237	47,627	51,246	57,653
Estimated Daily Demand (365.25 Service Days)	115	121	130	140	158

Source: Lima & Associates, Inc.

4. RIDERSHIP SUMMARY

The consultant estimates that the 2010 annual ridership of the proposed service would be between a low of 21,953 and a high of 49,281 persons annually as shown in Table 12-A.

TABLE 12-A. SUMMARY OF RIDERSHIP DEMAND ESTIMATION

	2000	2010	2015	2020	2030
Parallel Highway Traffic Method	Not Calculated	49,281	56,813	62,204	72,974
TCRP Method I	20,890	21,953	23,642	25,442	28,636
TRCP Method II	42,138	44,237	47,627	51,246	57,653

Source: Lima & Associates, Inc.

The TCRP methodology emphasizes the demand among transit-dependent persons, while the parallel highway traffic methodology looks at all trips in the area. As minimal transit service currently exists in the study area, many transit-dependent persons depend on friends or relatives with access to motor vehicles for essential shopping, medical, or other trips.

Moreover, the TCRP methodology does not take tourism into consideration, and tourists are a significant component of travel in the study area, given the presence of a National Park, two popular excursion rail operations, nearby ski resorts, and other year-round attractions. A likely potential ridership scenario is presented in Table 12-B, which combines the tourist component of the parallel highway traffic method with the lower of the two TCRP estimates.

TABLE 12-B. POTENTIAL RIDERSHIP SCENARIO

	2010	2015	2020	2030
Tourists from Parallel Highway Traffic Method	19,051	21,997	24,104	28,316
TCRP Method I (Local Ridership)	21,953	23,642	25,442	28,636
Total Annual Ridership	41,004	45,639	49,546	56,952

Source: Lima & Associates, Inc.

5. FARES AND ESTIMATED REVENUE

This chapter presents a suggested fare structure and estimated revenue using the fare structure presented below and the ridership estimates documented in the previous chapter. First, draft fare zones were assigned based on the stations the railroad plans to serve and the anticipated travel patterns of future passengers. Table 13 depicts the fare zone assignment.

TABLE 13. FARE ZONE ASSIGNMENT

Stations	Zone	Avg. Zone Length (miles)
South Fork Del Norte Monte Vista	1	25
Alamosa West Alamosa	2	25
La Jara Romeo Antonito	3	25

Source: Lima & Associates

In order to develop proposed fares, the consultant reviewed the practices of peer commuter rail systems. In the strictest sense, no peer systems exist that operate in a small urban/rural setting analogous to that in which the proposed SLRG service will operate. Hence the fare structures of the three closest commuter rail systems in the West were reviewed. These systems are the New Mexico RailRunner, which operates between Belen, Albuquerque, and Santa Fe, New Mexico, the Utah Transit Authority (UTA) Front Runner, which operates between Ogden and Salt Lake City, Utah, and the Trinity Railway Express, which operates between Fort Worth and Dallas.

As suggested in Table 13, the SLRG service would operate through three fare zones, assumed for simplicity sake to be approximately 25 miles in length each. The fare structure would need to provide for trips of 25 miles in length or less, trips of between 25 and 50 miles in length, and trips of between 50 and 75 miles in length.

For each of the peer systems, the mileage between the stations, both between the terminals and between each of the intermediate stops, was estimated. The fare zone structures of the systems were evaluated to identify the fares for trips of lengths most closely corresponding to those of the proposed SLRG service. Table 14 presents the findings.

TABLE 14. PEER SYSTEM FARES FOR ANALOGOUS DISTANCES

Length of Trip	Peer System								
	Rail Runner			Front Runner			Trinity Railway Express		
	One Trip	Reduced Fare	Day Pass	One Trip	Reduced Fare	Day Pass	One Trip	Reduced Fare	Day Pass
One Zone	$3.00	$2.00	$4.00	$5.00	$2.50	$13.75	$2.50	$0.75	$5.00
Two Zones	$5.00	$3.00	$7.00	$6.00	$2.75	$13.75	$3.75	$0.85	$7.50
Three Zones	$7.00	$5.00	$9.00	$7.50	$3.25	$13.75	N/A	N/A	N/A

Sources: New Mexico Rail Runner, UTA Front Runner, Trinity Railway Express

Note that the current routes of the Utah and Texas systems are shorter than the 75 mile-length of the South Fork – Antonito route. As the Trinity Railway Express line, in particular, is less than 39 miles long, it was not feasible to estimate what three-zone fares (for trips of between 50 and 75 miles in length) would be. The consultant decided to draft a fare structure following that of the New Mexico RailRunner. Although the RailRunner serves a much larger urban area, Albuquerque, than any of the SLRG communities, it has service area characteristics and a route length most closely resembling those of the proposed SLRG service. The RailRunner is also the closest existing system to the SLRG. Table 15 presents the draft fare structure adopted from the RailRunner fares.

TABLE 15. DRAFT SLRG ALL-SEASON FARES

Length of Trip	One Trip	Reduced Fare	Day Pass	Reduced Fare Day Pass
1 Zone	$3.00	$2.00	$4.00	$3.00
2 Zones	$5.00	$3.00	$7.00	$5.00
3 Zones	$7.00	$5.00	$9.00	$7.00

Source: Lima & Associates

Table 16 presents revenue estimates for the 2010, 2015, 2020, and 2050 horizon years. The following assumptions were made:

- Ridership estimates from Table 12-B are used, with the local riders represented by the TCRP Method II figures
- All passengers are traveling round trip on either full or discounted day passes, with one-half the applicable day pass fare used to calculate the revenue for each trip
- Seventy percent of the travelers are adults paying the full fare; 15 percent are seniors paying the reduced fare; and 15 percent are children paying the reduced fare

TABLE 16. DRAFT SLRG REVENUE PROJECTIONS

	2010	2,015	2,020	2,030
Projected Tourist Ridership	19,051	21,997	24,104	28,316
Adults (70%)	13,336	15,398	16,873	19,821
Seniors (15%)	2,858	3,299	3,616	4,247
Children 12 and under (15%)	2,858	3,299	3,616	4,247
Three Zone Fare for all tourists				
Full (1/2 day pass)	$4.50	$4.50	$4.50	$4.50
Reduced(1/2 day pass)	$3.50	$3.50	$3.50	$3.50
Projected Tourist Revenue				
Adults (70%)	$60,011	$69,289	$75,929	$89,197
Seniors (15%)	$10,002	$11,548	$12,655	$14,866
Children 12 and under (15%)	$10,002	$11,548	$12,655	$14,866
Total Tourist Revenue	$80,015	$92,386	$101,239	$118,929
Projected Local Ridership	21,953	23,642	25,442	28,636
Single Zone Riders (10%)	2,195	2,364	2,544	2,864
Adults (70%)	1,537	1,655	1,781	2,005
Seniors (15%)	329	355	382	430
Children 12 and under (15%)	329	355	382	430
Single Zone Full (1/2 day pass)	$2.00	$2.00	$2.00	$2.00
Siingle Zone Reduced (1/2 day pass)	$1.50	$1.50	$1.50	$1.50
Projected Single Zone Revenue				
Adults (70%)	$3,073	$3,310	$3,562	$4,009
Seniors (15%)	$494	$532	$572	$644
Children 12 and under (15%)	$494	$532	$572	$644
Total Single Zone Revenue	$4,061	$4,374	$4,707	$5,298
Two-Zone Riders (80%)	17,562	18,914	20,354	22,909
Adults (70%)	12,294	13,240	14,248	16,036
Seniors (15%)	2,634	2,837	3,053	3,436
Children 12 and under (15%)	2,634	2,837	3,053	3,436
Two Zone Full (1/2 day pass)	$3.50	$3.50	$3.50	$3.50
Two Zone Reduced (1/2 day pass)	$2.50	$2.50	$2.50	$2.50
Projected Two Zone Revenue				
Adults (70%)	$43,028	$46,338	$49,866	$56,127
Seniors (15%)	$6,586	$7,093	$7,633	$8,591
Children 12 and under (15%)	$6,586	$7,093	$7,633	$8,591
Total Two Zone Revenue	$56,200	$60,524	$65,132	$73,308
Three-Zone Riders (10%)	2,195	2,364	2,544	2,864
Adults (70%)	1,537	1,655	1,781	2,005
Seniors (15%)	329	355	382	430
Children 12 and under (15%)	329	355	382	430
Three Zone Full (1/2 day pass)	$4.50	$4.50	$4.50	$4.50
Three Zone Reduced (1/2 day pass)	$3.50	$3.50	$3.50	$3.50
Projected Three Zone Revenue				
Adults (70%)	$6,915	$7,447	$8,014	$9,020
Seniors (15%)	$1,153	$1,241	$1,336	$1,503
Children 12 and under (15%)	$1,153	$1,241	$1,336	$1,503
Total Three Zone Revenue	$9,220	$9,930	$10,686	$12,027
Total Local Revenue	**$69,481**	**$74,827**	**$80,524**	**$90,633**
Total Projected Gross Revenue	**$149,496**	**$167,212**	**$181,763**	**$209,562**
Less Cost of Sales/Discounts	**(37,374)**	**(41,803)**	**(45,441)**	**(52,390)**
Total Projected Net Revenue	**$112,122**	**$125,409**	**$136,322**	**$157,171**

Source: Lima & Associates

- All tourists are making three-zone trips
- The gross revenue for each horizon year is reduced by a 25 percent "Cost of Sales/Discounts" amount to allow for the sale of multi-ride tickets, agency sales, and other discounts

The Net Revenue figures for the four horizon years do not include marketing expenses or any other operating expenses.

APPENDIX

US 160 AND US 285 TRAFFIC COUNT DATA

TABLE A-1. 2008 TRAFFIC COUNTS ON US 160, SOUTH FORK TO ALAMOSA

Route	Ref Point	End Ref Point	Start Point Description	Annual Average Daily Traffic	AADT Year	AADT Derivation	AADT Single Trucks	AADT Comb. Trucks	Percent Trucks	20 Year Factor	Design Hour Vol (% of AADT)	Daily Vehicle Miles Traveled
160A	184.659	186.123	ON SH 160 SW/O SH 149, SOUTH FORK	4,000	2008	Actual	120	280	10.00%	1.44	12	5,480
160A	186.123	188.889	ON SH E/O SH 149, E/O SOUTH FORK	5,300	2008	Factor	150	410	10.50%	1.36	11	14,851
160A	188.889	196.06	ON SH 160 E/O CR 19	4,200	2008	Actual	110	300	9.70%	1.4	13	30,311
160A	196.06	201.556	ON SH 160 W/O PINOS RD, CR 14	4,600	2008	Actual	170	450	13.40%	1.4	12	25,217
160A	201.556	201.776	ON SH 160, GRAND AVE W/O ALDER AVE, DEL NORTE	5,500	2008	Actual	190	420	11.10%	1.35	13	1,205
160A	201.776	201.927	ON SH 160, GRAND AVE W/O COLUMBIA AVE, DEL NORTE	7,700	2008	Factor	170	450	8.00%	1.35	12	1,163
160A	201.927	202.082	ON SH 160, GRAND AVE W/O SH 112, OAK ST, DEL NORTE	7,900	2008	Factor	170	480	8.30%	1.32	13	1,225
160A	202.082	202.373	ON SH 160, GRAND AVE E/O SH 112, OAK ST, DEL NORTE	7,000	2008	Actual	140	210	5.00%	1.32	10	2,051
160A	202.373	207.096	ON SH 160, GRAND AVE E/O FRENCH AVE, DEL NORTE	6,500	2008	Actual	140	220	5.50%	1.29	10	29,276
160A	207.096	213.094	ON SH 160 NW/O STOEBER LN, CR 27 @ MONTE VISTA CANAL	5,300	2008	Factor	170	310	9.10%	1.28	11	32,844
160A	213.094	215.121	ON SH 160, 1ST ST W/O CHICO CAMINO ST, MONTE VISTA	5,900	2008	Factor	210	310	8.80%	1.26	11	11,918

TABLE A-1. 2008 TRAFFIC COUNTS ON US 160, SOUTH FORK TO ALAMOSA (Continued)

Route	Ref Point	End Ref Point	Start Point Description	Annual Average Daily Traffic	AADT Year	AADT Derivation	AADT Single Trucks	AADT Comb. Trucks	Percent Trucks	20 Year Factor	Design Hour Vol (% of AADT)	Daily Vehicle Miles Traveled
160A	215.121	215.698	ON SH 160, 1ST ST W/O SH 287 & SH 15, GUNBARREL RD, MONTE VISTA	8,100	2008	Actual	260	360	7.70%	1.32	10	4,674
160A	215.698	215.928	ON SH 160, 1ST ST E/O SH 287 & SH 15, GUNBARREL RD, MONTE VISTA	9,900	2008	Actual	330	460	7.90%	1.33	10	2,317
160A	215.928	216.781	ON SH 160, GRAND AVE NW/O FARADAY ST, MONTE VISTA	10,600	2008	Factor	320	360	6.40%	1.36	11	9,116
160A	216.781	216.908	ON SH 160, GRAND AVE NW/O SHERMAN AVE, MONTE VISTA	10,400	2008	Factor	310	350	6.40%	1.42	11	1,373
160A	216.908	219.093	ON SH 160, GRAND AVE SE/O SHERMAN AVE, MONTE VISTA	7,900	2008	Factor	270	370	8.10%	1.38	11	17,175
160A	219.093	222.548	ON SH 160, MAIN ST NW/O CRAFT DR, ALAMOSA	7,300	2008	Factor	150	370	7.10%	1.48	11	24,886
160A	222.548	227.056	ON SH 160 SE/O CR 4E	6,900	2008	ATR	100	350	6.50%	1.36	11	31,540
160A	227.056	229.703	ON SH 160, MAIN ST NW/O VICTORIA ST & 1ST ST, ALAMOSA	18,600	2008	Actual	350	740	5.90%	1.58	9	40,957
160A	229.703	231.507	ON SH 160, MAIN ST SE/O VICTORIA ST & 1ST ST, ALAMOSA	18,700	2008	Factor	450	500	5.10%	1.48	10	41,589
160A	231.507	231.851	ON SH 160, MAIN ST SE/O EDGEMONT AVE, ALAMOSA	19,100	2008	Factor	380	420	4.30%	1.58	9	6,647

TABLE A-1. 2008 TRAFFIC COUNTS ON US 160, SOUTH FORK TO ALAMOSA (Continued)

Route	Ref Point	End Ref Point	Start Point Description	Annual Average Daily Traffic	AADT Year	AADT Derivation	AADT Single Trucks	AADT Comb. Trucks	Percent Trucks	20 Year Factor	Design Hour Vol (% of AADT)	Daily Vehicle Miles Traveled
160A	231.851	232.373	ON SH 160, MAIN ST W/O LA VETA AVE, ALAMOSA	21,600	2008	Factor	430	500	4.30%	1.36	9	11,210
160A	232.373	232.743	ON SH 160, MAIN ST W/O SH 285, WEST ST, ALAMOSA	18,100	2008	Factor	360	420	4.30%	1.36	9	6,751
160A	232.743	233.234	ON SH 160, MAIN ST E/O SH 285, WEST AVE, ALAMOSA	14,200	2008	Factor	310	340	4.70%	1.38	9	6,844
160A	233.234	233.416	ON SH 160, MAIN ST E/O ROSS AVE, ALAMOSA	14,300	2008	Factor	340	400	5.20%	1.4	9	2,588
160A	233.416	233.485	ON SH 160, DENVER AVE N/O MAIN ST, ALAMOSA	12,600	2008	Factor	260	390	5.20%	1.4	9	907
160A	233.485	234.008	ON SH 160 SW/O SH 17, ALAMOSA	14,100	2008	Actual	210	420	4.50%	1.4	9	5,175
160A	234.008	234.281	ON SH 160 E/O SH 17, ALAMOSA	9,800	2008	Actual	390	440	8.50%	1.44	9	2,626
160A	234.281	235.093	ON SH 160 W/O BLANCA VISTA LN, CR 110.7	7,600	2008	Factor	370	410	10.30%	1.45	10	6,308
160A	235.093	235.928	ON SH 160 W/O HARMONY RD, CR 112	5,100	2008	Factor	180	360	10.70%	1.4	11	4,626

Source: Colorado Department of Transportation, Traffic Count for Highway 160A

TABLE A-2. 2008 TRAFFIC COUNTS ON US 285, NEW MEXICO LINE TO ALAMOSA

Route	Ref Point	End Ref Point	Start Point Description	Annual Average Daily Traffic	AADT Year	AADT Derivation	AADT Single Trucks	AADT Comb. Trucks	Percent Trucks	20 Year Factor	Design Hour Vol (% of AADT)	Daily Vehicle Miles Traveled
285A	0	4.677	ON SH 285 S/O CR 285 @ NEW MEXICO-COLORADO STATE LINE	1,300	2008	Actual	20	240	20.00%	1.35	15	6,133
285A	4.677	5.178	ON SH 285 SE/O SAN ANTONIO ST, ANTONITO	1,500	2008	Actual	80	160	15.90%	1.28	10	717
285A	5.178	5.211	ON SH 285 SE/O SH 17, MAIN ST, ANTONITO	2,100	2008	Factor	100	300	19.10%	1.35	11	124
285A	5.211	5.821	ON SH 285, MAIN ST NE/O SH 17, ANTONITO	3,700	2008	Factor	100	480	15.90%	1.36	11	2,320
285A	5.821	6.058	ON SH 285, MAIN ST N/O 5TH AVE, ANTONITO	5,600	2008	Factor	150	290	7.70%	1.36	11	1,182
285A	6.058	6.856	ON SH 285, MAIN ST N/O 10TH AVE, ANTONITO	4,000	2008	Factor	120	230	8.70%	1.35	11	3,088
285A	6.856	8.063	ON SH 285 N/O CR G.6, TO CONEJOS	3,800	2008	Factor	120	400	13.50%	1.35	11	4,815
285A	8.063	12.707	ON SH 285 SW/O SH 142, MAIN ST, ROMEO	3,900	2008	Factor	130	450	14.80%	1.28	11	18,143
285A	12.707	16.327	ON SH 285 NE/O SH 142, MAIN ST, ROMEO	4,700	2008	Actual	200	160	7.70%	1.34	9	16,972
285A	16.327	19.817	ON SH 285 SW/O SH 136, MAIN ST, LA JARA	4,900	2008	Factor	130	230	7.30%	1.42	11	17,116
285A	19.817	20.418	ON SH 285 SW/O SH 15 & CR X	5,500	2008	Factor	170	290	8.40%	1.36	11	3,322
285A	20.418	26.829	ON SH 285 NE/O SH 15 & CR X	5,100	2008	Factor	180	260	8.60%	1.38	11	32,411
285A	26.829	31.257	ON SH 285 NE/O SH 368 & CR 14S	5,000	2008	ATR	50	160	4.20%	1.37	11	22,270
285A	31.257	32.359	ON SH 285 NE/O SH 370 & CR 10S	6,400	2008	Actual	90	210	4.70%	1.3	10	7,085

TABLE A-2. 2008 TRAFFIC COUNTS ON US 285, NEW MEXICO LINE TO ALAMOSA (Continued)

Route	Ref Point	End Ref Point	Start Point Description	Annual Average Daily Traffic	AADT Year	AADT Derivation	AADT Single Trucks	AADT Comb. Trucks	Percent Trucks	20 Year Factor	Design Hour Vol (% of AADT)	Daily Vehicle Miles Traveled
285A	32.359	33.409	ON SH 285, RAILROAD AVE SW/O 17TH ST, ALAMOSA	6,700	2008	Factor	170	280	6.80%	1.4	11	7,042
285A	33.409	33.684	ON SH 285, RAILROAD AVE SW/O COOP ST, CR 8S, ALAMOSA	8,600	2008	Factor	280	270	6.40%	1.4	10	2,374
285A	33.684	33.842	ON SH 285, WEST AVE SW/O 8TH ST, ALAMOSA	11,900	2008	Factor	210	360	4.90%	1.33	10	1,880
285A	33.842	34	ON SH 285, WEST AVE S/O 6TH ST, ALAMOSA	12,700	2008	Factor	190	360	4.30%	1.39	9	2,261
285A	34	34.102	ON SH 285, WEST AVE S/O SH 160, MAIN ST, ALAMOSA	12,900	2008	Factor	210	250	3.50%	1.39	10	1,045

Source: Colorado Department of Transportation, Traffic Count for Highway 285A

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