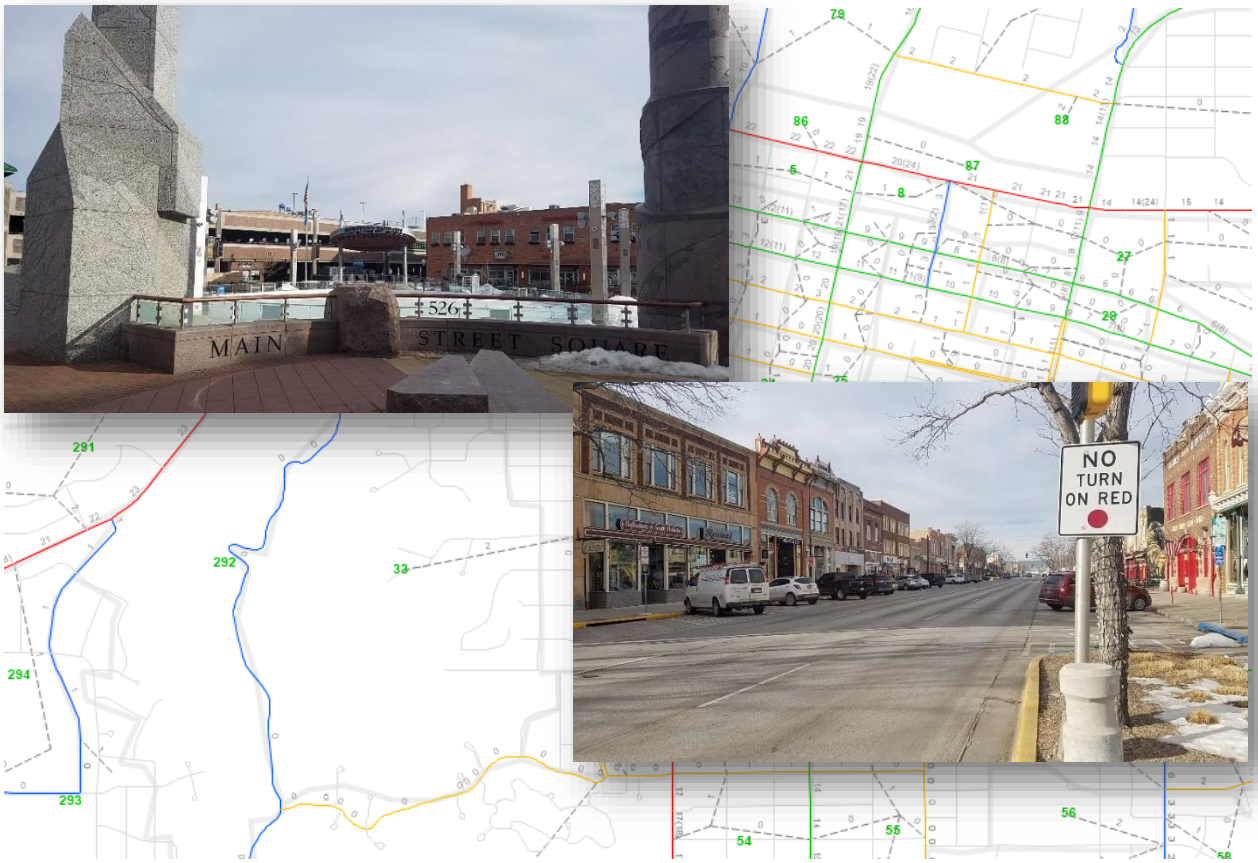
Appendix A.
Travel Demand Model



Rapid City Area MPO
2045 Travel Demand Model
Documentation and Validation Report

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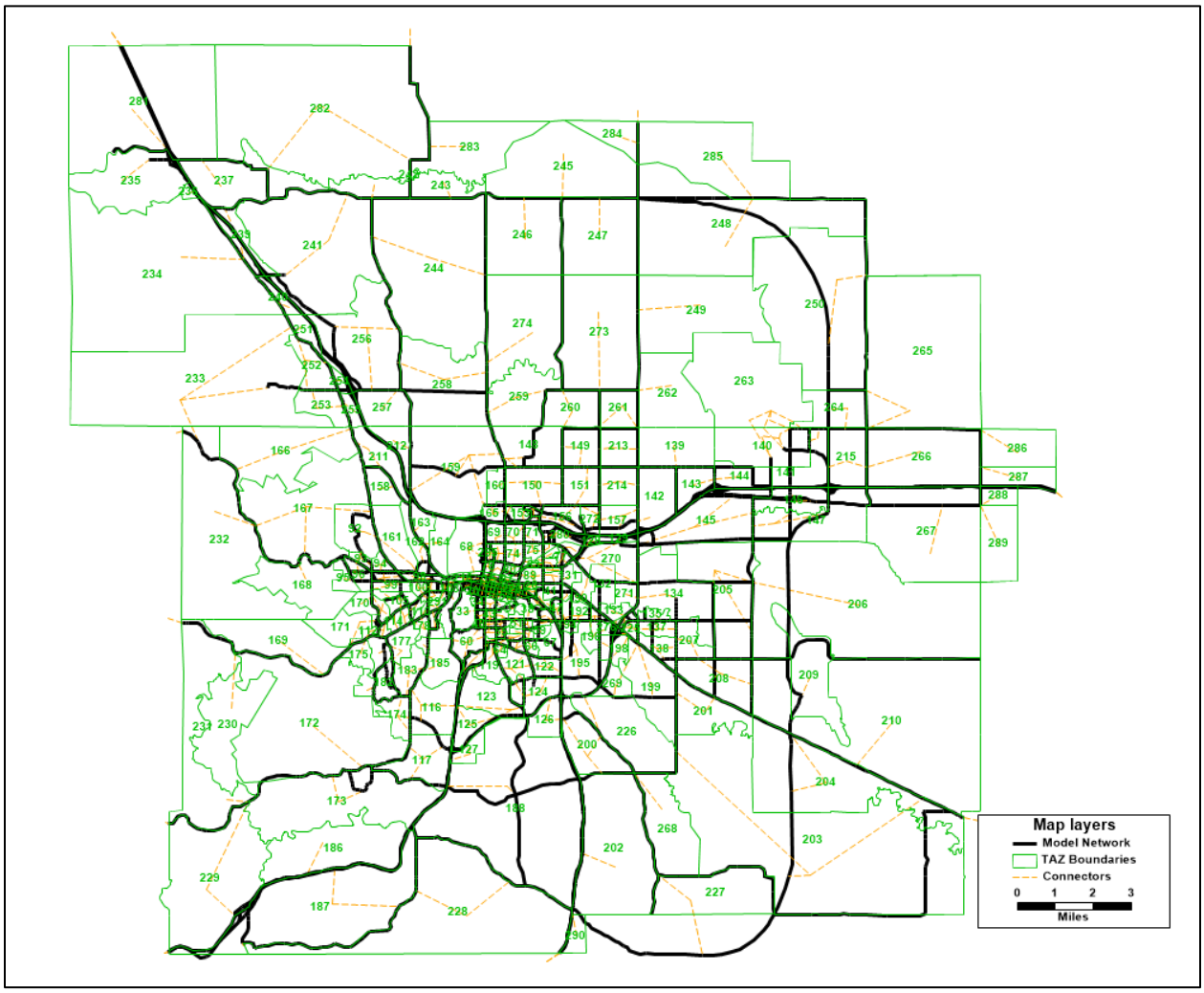
Introduction

This document provides a summary of the Rapid City Area Metropolitan Planning Organization (RCAMPO) 2045 travel demand model (TDM). A TDM is an important tool for transportation planning. The TDM estimates and distributes an area's trips across its street and highway network. The modeling process attempts to replicate existing traffic levels and forecast future traffic volumes based on anticipated population and employment growth. One of the primary purposes of the TDM is to support the development of RCAMPO's Long-Range Transportation Plan (LRTP). The model can be used to identify potential future deficiencies in the road network. It can also be used to estimate the impacts of various scenarios such as adding new roads, changing the capacity of existing roads, or removing roads from the network.

Data Updates

Current or base year traffic conditions are calibrated to the year 2018 data. Using a single year of data to build and calibrate the base model allows the model to attempt to replicate known traffic conditions. Next, the best guess at future year socioeconomic and road network information is placed in the model to predict traffic conditions in the future. The RCAMPO TDM is built to forecast traffic conditions to a 2045 horizon year. A map of the model area is shown in **Figure 1**.

Figure 1. Study Area



Network Updates

Base year road network attributes were updated to 2018 conditions using a road centerline shapefile provided by the South Dakota Department of Transportation (SDDOT). The primary model road network inputs are listed in **Table 1**. These field names are consistent with the 2040 TDM. However, the definition of the "CTLMED" field was revised to include both center turn lanes *and* left-turn lanes. The reason for adding left-turn lanes to the network is to more accurately estimate the capacities of roadways.

Table 1. Road Network Fields

Field	Description
Dir	Link direction of flow
FT	Facility type
AT	Area type
AB_LN	AB direction lanes
BA_LN	BA direction lanes
SPLM	Speed limit
CTLMED	Presence of a center turn lane or median, or a left-turn lane

Numerous roads, particularly several I-90 ramps, required realignment because of recent road projects that had not yet been accounted for by the model road network. Aerial photos from 2018 were used as the data source for the realignments.

In addition to the realignment of roads, there were a number of non-local roads that were not in the model. Typically, an urban model would include most or all federal functional classification 1-6 roads, while local roads (federal functional class roads 7) are represented by centroid connectors. While not all non-local roads may be necessary for more accurate routing of traffic, in general most would likely help to represent traffic in a more realistic way.

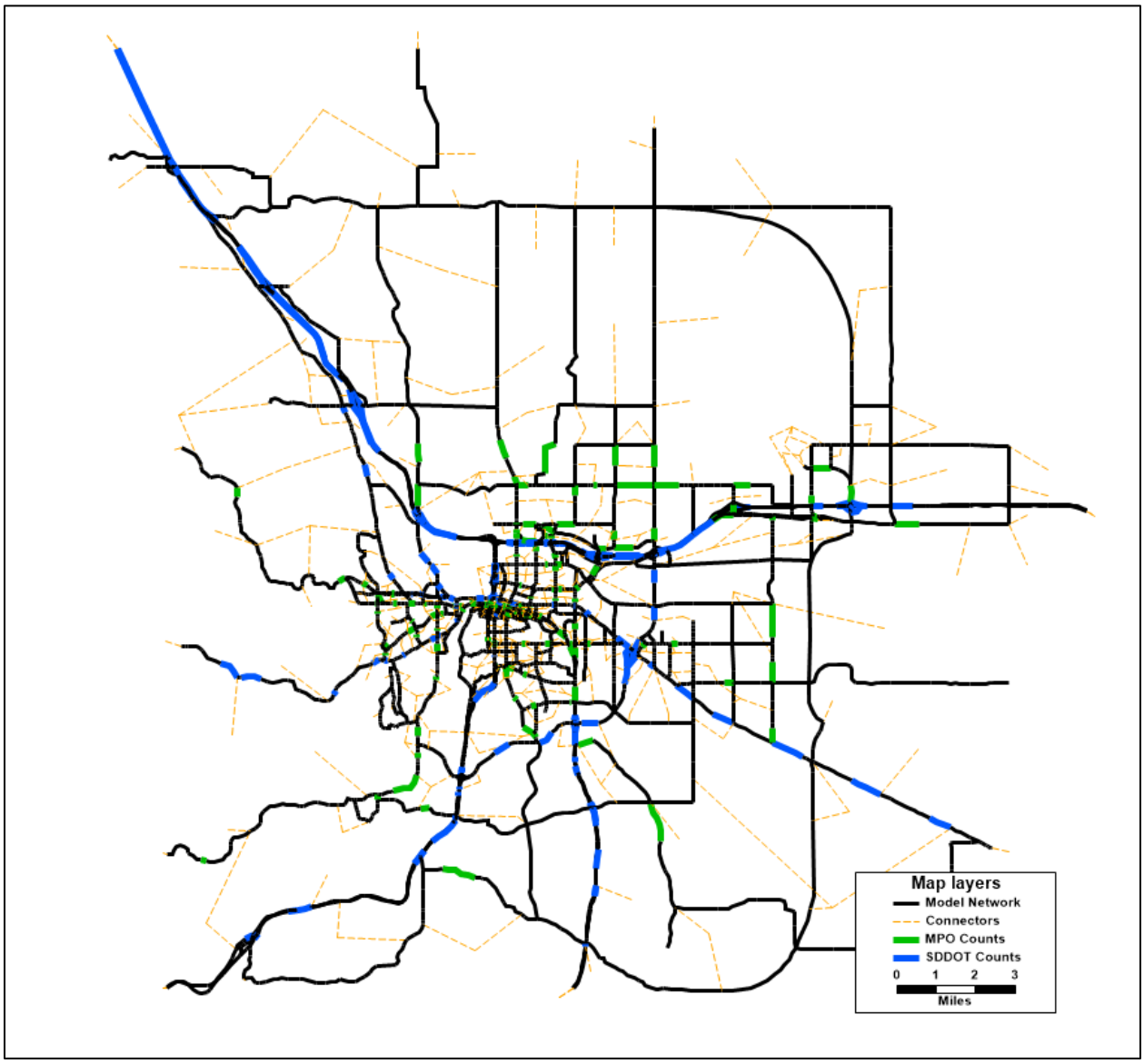
New capacity definitions and a capacity lookup process were added to the 2045 TDM. The capacities are based on the Florida Department of Transportation Quality Level of Service (LOS) Manual as shown in **Table 2**. The capacities vary by facility type, number of lanes by direction (AB_LN or BA_LN), and the presence of a center or left turn lane (CTLMED). A capacity lookup table was added to the RapidCityDatabase.mbd Microsoft Access file that stores the majority of the data that is input into the model.

Table 2. Capacity Lookup Values

Cross-Section	Interstate—LOS E/F Daily Capacity	Principal Arterial—LOS E/F Daily Capacity	Minor Arterial—LOS E/F Daily Capacity	Collector/Local—LOS E/F Daily Capacity
2-lane	N/A	14,160	12,744	9,600
2-lane with LTs	N/A	17,700	15,930	12,000
4-lane	84,600	29,850	26,865	20,237
4-lane with LTs	N/A	39,800	35,820	26,983
6-lane with LTs	130,600	59,900	53,910	N/A
8-lane	176,600	N/A	N/A	N/A

Another essential input to the TDM is traffic counts. Counts from the RCAMPO count program were used as a primary input. However, these counts occur primarily on minor arterial or lower functional classification roads. It is important for the model to be calibrated for the entire set of roads and not just the lower functional classification roads. Therefore, a sample of counts from the SDDOT were used for state roads, which are primarily interstate and principal arterial functional classification. The counts by data source are shown in **Figure 2**.

Figure 2. Count Locations

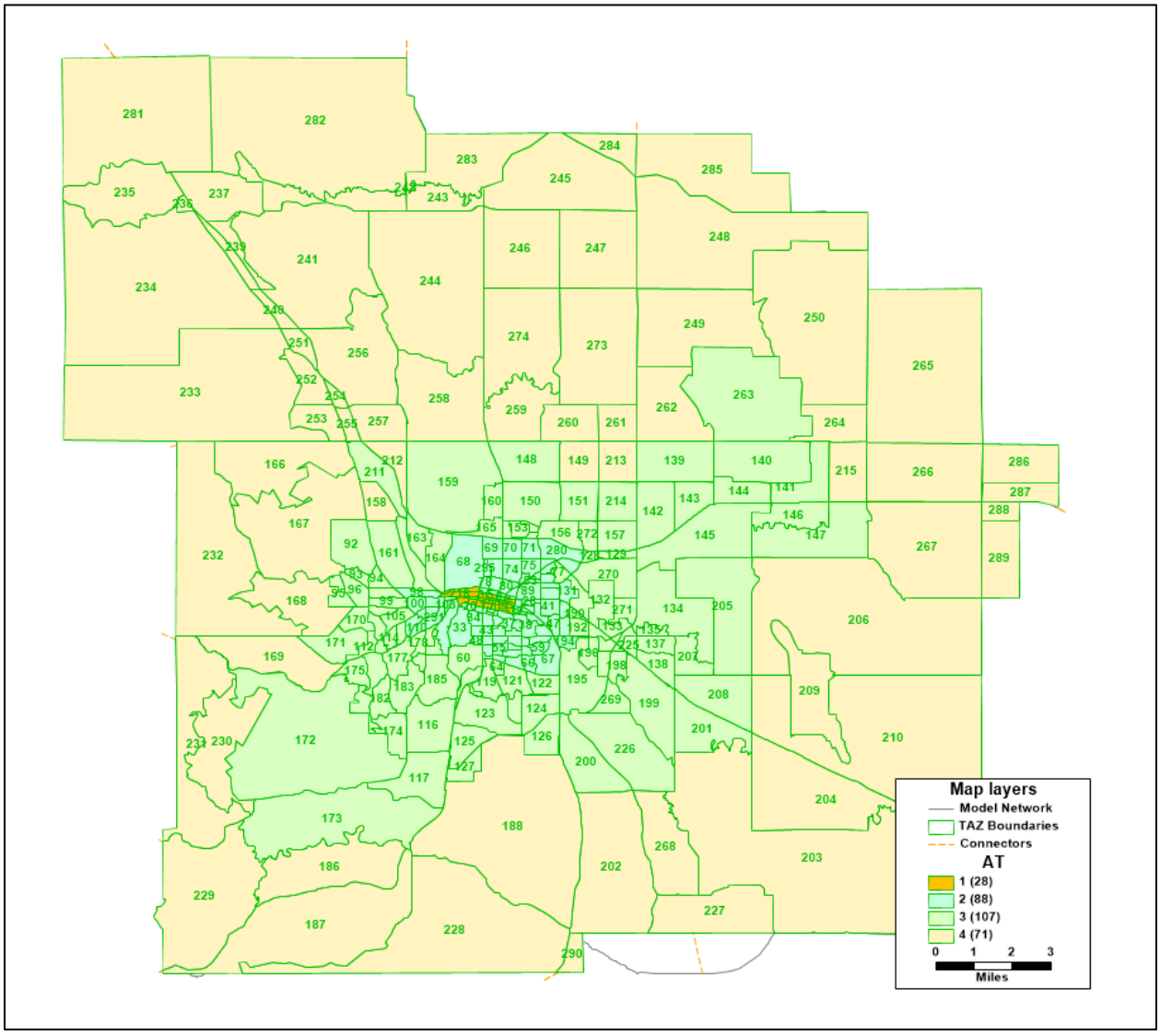


TAZ Updates

The model area is divided up into a number of Traffic Analysis Zones (TAZs). TAZs are geographical areas that represent groups of socioeconomic data that have somewhat similar trip making behavior. The TAZ can then be used as the unit in which the model generates and distributes trips. The RCAMPO TDM has 294 TAZs, which are shown in **Figure 3**. The majority of input data that relates to the TAZs is stored in the RapidCityDatabase.mbd Microsoft Access file, and can be joined to the TAZ file for mapping or analysis.

The TAZs are split into four area types (Central Business District, Urban, Suburban, and Rural). The area types of TAZs are naturally changing over time as the MPO area changes. These areas types were updated using aerial photos.

Figure 3. TAZs and Area Types



Database Updates

The RapidCityDatabase.mbd Microsoft Access file is used to store the majority of the model input data, as well as lookup tables and parameters that are used by the script when running the model. The benefits of storing inputs in the Access database are discussed in the 2035 Model User's Guide. A decision was made to continue using the Access database to manage the data. This allowed for continuity with previous model versions. The tables were updated as summarized in **Table 3**.

Table 3. Database Updates Summary

Table	Use	Updates Made
aRegBivarPct	Household auto ownership and household size cross-classification percentages by TAZ	Complete revision of household disaggregation process
aSEData	Household and employment by TAZ	Updated to 2018 base year and 2045 horizon year
aSpecialGen	Special generator TAZs for unique land uses	Updated to 2018 base year and 2045 horizon year
aZoneData	Additional TAZ information (area type and external designation)	Updated to 2018 base year and 2045 horizon year
bAttractionRates	Trip attraction rates	Combined Other-Based Other and Work-Based Other trip purposes into Non-Home Based.
bProductionRates	Trip production rates	Combined Other-Based Other and Work-Based Other trip purposes into Non-Home Based. Combined size four and size five plus households into a size four plus households category to match available trip rate data
bTripRateFactors	Trip generation factors by area type and trip purpose	Central business district increased to 1.15. All others increased to 1.05. (See calibration section)
aEETrips	Through trip (external-external) trip table	Updated to 2018 base year and 2045 horizon year
aIETrips	External-internal/internal-external trips by trip purpose	Updated to 2018 base year and 2045 horizon year
aFrictionFactors	Gamma coefficients for gravity model friction factor curves	Updated to National Cooperative Highway Research Program 716 industry standards
aTerminalTime	Additional time by area type for each trip	No edits
aPeriodFactors	Factors that convert daily trips to time-period trips.	No edits
bRoadwayLookup	Capacity and alpha/beta lookup table	Complete revision of capacity lookup process

TAZ = Traffic Analysis Zones

The majority of input tables were updated to a new base year. Some tables that provide input factors were left unedited because the values are industry standards; however, they could be updated in the future with a household travel survey or other data sources. Minor updates were made to the trip rate tables to combine Other-Based Other (OBO) and Work-Based Other (WBO) trip purposes into Non-Home Based (NHB). As discussed in the 2040 TDM documentation, validation data typically does not distinguish these trip purposes. Additionally, industry standard input parameters are generally more available for a combined NHB trip purpose category. Thus, combining these trip purposes makes the use of the model simpler without jeopardizing performance. The four trip purposes used in the 2045 model area listed in **Table 4**.

The two structural updates to the input tables were to the capacity lookup table (discussed above in the Network Updates section) and the household disaggregation process. The updated household disaggregation process uses a 2016 polygon shapefile from the Census Transportation Planning Products Program (CTPP) that provides the Census surveyed number of households within each household size and auto ownership category from 1-4+ household sizes and 0-3+ autos owned. These percentages are then multiplied by the household data in the TAZs to split each TAZ into household size and auto ownership groups that can be multiplied by the trip production rates.

Table 4. Trip Purposes

Trip Purpose Abbreviation	Trip Purpose
HBW	Home-Based Work
HBS	Home-Based Shopping
HBO	Home-Based Other
NHB	Non-Home Based

Non-structural updates were made to several other tables. aSEData, aSpecialGen, and aZoneData represent the TAZ and socioeconomic data updates to the new base year. The special generator productions and attractions were updated using employment figures and Institute of Transportation Engineers trip rates. These were then revised if the quantity of trips mismatched the nearby counts. The special generators are shown in **Table 5**. The socioeconomic data for 2018 and 2045 are shown in **Attachment 1**.

Table 5. Special Generator Productions and Attractions

Special Generator	TAZ	2018 Productions	2018 Attractions	2045 Productions	2045 Attractions
Hospital	64	2,525	14,916	5,049	21,129
Civic Center	79	555	2,353	832	3,528
Ellsworth Air Force Base	140	1,189	2,927	1,189	2,927
Ellsworth Air Force Base	263	3,740	8,699	4,984	11,593

The other group of data updates in the Access file is for the external trips. Both aEETrips and aIETrips were updated to a new base and horizon year. The 2040 model update relied on the *Rapid City Area Origin-Destination Study (June 2014)*, with data collected by AirSage. The distribution of external trips to other externals was used as input to the external analysis. These are External-External (E-E) trips. The trips that have one end at an external station and do not have the other trip end at another external station are External-Internal (E-I) trips.

The E-E and E-I distribution was kept the same as the 2040 model. The trip purpose split for E-I trips was also kept the same. Counts were updated to the new model base year. E-E trips were then fratared for new input totals. The forecast volume targets for the horizon year were provided by the SDDOT for the majority of the stations. A linear trendline forecast was attempted for the remaining stations; however, because of a lack of data a 10 percent growth assumption was made in some cases. A map of the external stations is shown in **Figure 4**. A summary of the external stations and counts is presented in **Table 6**.

Figure 4. External Station Locations

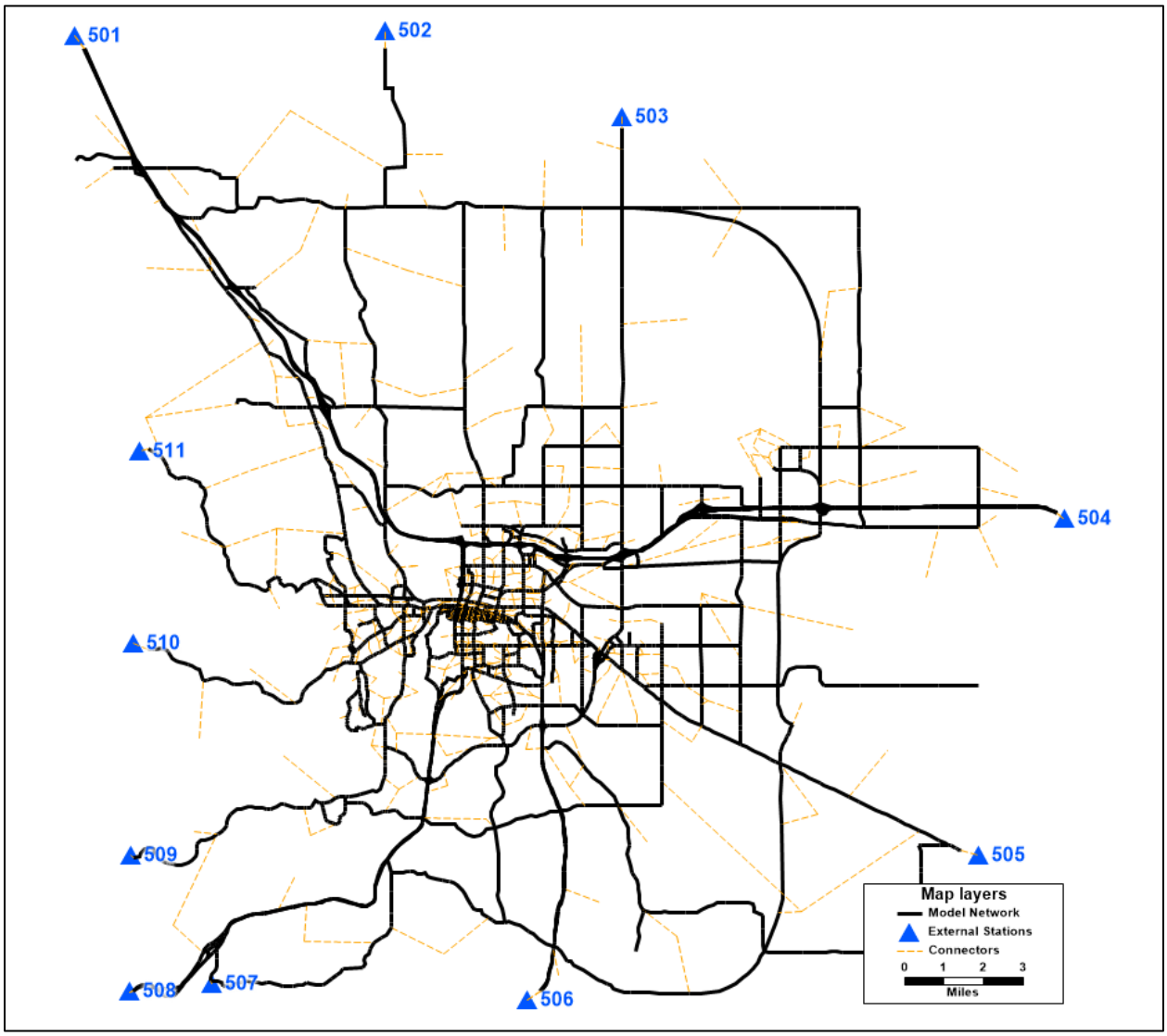


Table 6. External Station Summary

TAZ	2018 Count	2018 Source	2045 Forecast	Forecast Source
501	19,150	SDDOT Count	26,120	Traffic.shp Adt25YrPro*
502	40	No Data	44	10% growth
503	80	No Data	88	10% growth
504	10,640	SDDOT Count	16,300	Traffic.shp Adt25YrPro*
505	2,280	SDDOT Count	3,748	Traffic.shp Adt25YrPro*
506	7,470	SDDOT Count	9,771	Traffic.shp Adt25YrPro*
507	1,231	Sum of two nearby counts	1,354	10% growth
508	8,600	SDDOT Count	14,138	Traffic.shp Adt25YrPro*
509	1,111	MPO Count	1,222	10% growth
510	2,851	SDDOT Count	4,687	Traffic.shp Adt25YrPro*
511	1,576	MPO Count	2,009	Trendline using historic counts

*Linear growth from 2043 to 2045

Model Version Update

The RCAMPO TDM user interface and script that was used by the 2040 model was transitioned from version 5 to version 8 of TransCAD. Each button was reviewed and if necessary edited to remove any glitches that resulted from the version update. Additional updates were made to the default parameters in the Advanced tab of the Scenario Editor to allow for the revised components in the 2045 model. For example, the default trip purposes were edited to accommodate the merging of the OBO and WBO to a single NHB trip purpose. Full details on using the RCAMPO TDM user interface can be found in the 2040 model documentation.

One utility button in the user interface that was not updated was the Performance Report button. This report provides validation statistics; however, the feature was not working in TransCAD version 5. Therefore, the button was completely removed from the user interface to prevent confusion. The script still contains the Performance Report lines of code; therefore, the button can easily be added back to the user interface in the future if there is a desire to fix the procedure. In lieu of the automated Performance Report, spreadsheet templates were used to gather validation statistics.

Calibration and Validation

The goal of a model is to create as realistic picture of travel as possible. As such, development of a model is not done until the model is calibrated to match local travel conditions. For example, numerous non-local inputs and parameters are often borrowed from industry standards during the development of a model. Yet, travel is dynamic and unique in each

community. Therefore, results need to be reviewed in detail and potentially adjustments need to be made to inputs or parameters to match local conditions. Each adjustments need to be done without unreasonably modifying inputs to unrealistic values.

Validation refers to the statistical and non-statistical reasonableness checks used to assess the accuracy of the model. There are numerous validation checks that could be performed, oftentimes depending on the availability of data to use for the checks. The best practice is to perform validation checks on each major step of the model process. This helps to ensure that data and model structure errors are limited or completely omitted throughout the process, and that the model will be flexible enough to use as a forecasting tool. The main validation checks and calibration adjustments are discussed below.

Trip Generation Validation Checks

Two common validation checks for the trip generation step are the ratios of unbalanced productions and attractions by trip purpose and the total trips per household.

Because each trip has a beginning and an end, it is necessary for there to be an equal number of productions and attractions by the end of trip generation. While in practice, unbalanced productions and attractions are never completely balanced because of different data sources and trip rate sources, the ratios of productions and attractions by trip purpose should be reasonably close prior to balancing. If they are not, then it could be because of a data error or a model processing error.

The Travel Model Improvement Program (TMIP) Travel Model Validation and Reasonableness Checking Manual recommends a ratio of between 0.90 and 1.10 for unbalanced productions and attractions preferably. The ratios for the RCAMPO TDM are shown in **Table 7**. Each trip purpose, besides Home-Based Work (HBW), is within the recommended ratio. While HBW did not quite meet the 0.90 threshold, it should be pointed out that these ratios should be thought of as a spectrum. The HBW ratio is very close to 0.90, and thus no egregious error in the trip generation inputs is likely because other ratios are comfortably within the recommended range. Additionally, the overall ratio of 0.96 indicates that trip generation results are satisfactory.

Table 7. Unbalanced Production and Attraction Ratios

Purpose	Ps/As	Ratio
HBW_P	92,938	0.89
HBW_A	104,330	
HBS_P	113,604	0.92
HBS_A	123,462	
HBO_P	166,158	0.92
HBO_A	181,368	
NHB_P	268,877	1.03
NHB_A	261,384	
SUM P	641,577	0.96
SUM A	670,544	

The final step in trip generation is to balance these trips. Once trips are balanced, the average total number of trips per household can be calculated. While trips per household will naturally vary throughout the country, the expectation is that the model should produce an amount of trips per household that is reasonably close to national guidelines.

Original model results produced 10.29 balanced trips per household. TMIP recommends about 10.70 trips per household for metropolitan statistical area populations less than 250,000. While

10.29 is not significantly different, local knowledge and experience suggests that a smaller metropolitan planning organization (MPO) in the Great Plains region is likely to have slightly more trips per household than the national average, not less. Thus, trip rate adjustments were made to increase trips per household and generate more trips overall. The adjustments are presented in **Table 8**. The resulting trips per household for the calibrated model is 10.72 as presented in **Table 9**.

Table 8. Trip Rate Adjustments

Area Type	Trip Rate Adjustment
Central Business District	1.15
Urban	1.05
Suburban	1.05
Rural	1.05

Table 9. Balanced Trips per Household

Model Estimated*	MSA** population less than 250,000
10.72	10.70

*Model balanced trips

**Metropolitan Statistical Area

Source: TMIP

Trip Distribution Validation Checks

The trip distribution step takes the balanced trips and for each TAZ allocates them to other TAZs based on network travel times and friction factors. This is done using the gravity model within TransCAD.

Figure 5 through **Figure 8** show the friction factor curves for each trip purpose. The x-axis represents minutes and the y-axis represents the utility of making a certain distance trip. For example, the longer a trip is the less desirable it becomes. These vary by trip purpose, however, as people typically travel farther for a work trip than other trip purposes. This is represented by the flatter curve in **Figure 8** relative to the other curves.

The inputs for these curves come from the National Cooperative Highway Research Program Report 716 Travel Demand Forecasting: Parameters and Techniques, which is a primary source for travel demand modeling parameters and methods.

Figure 5. Home-Based Work Friction Factor Curve

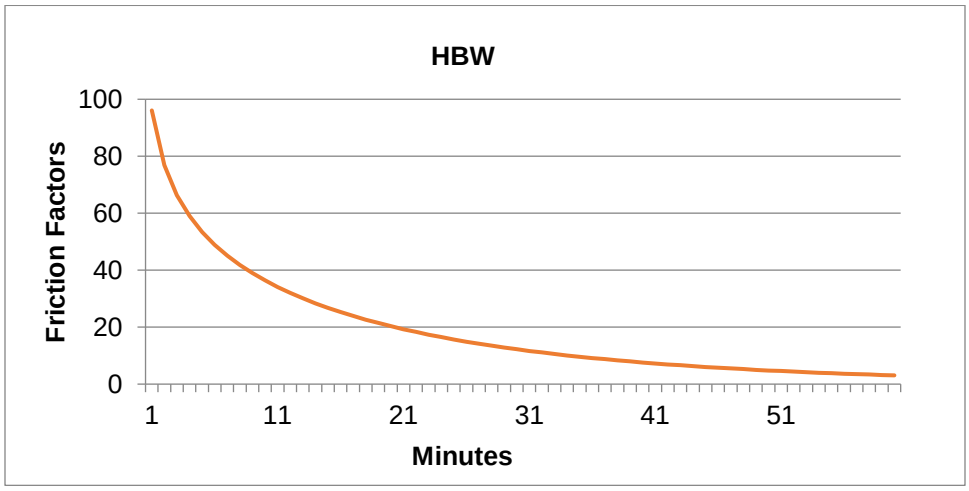


Figure 6. Home-Based Shopping Friction Factor Curve

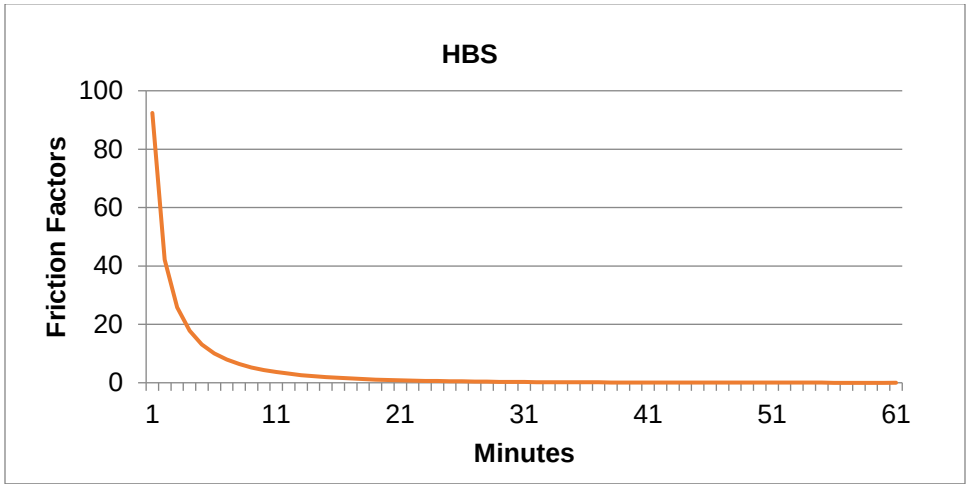


Figure 7. Home-Based Other Factor Curve

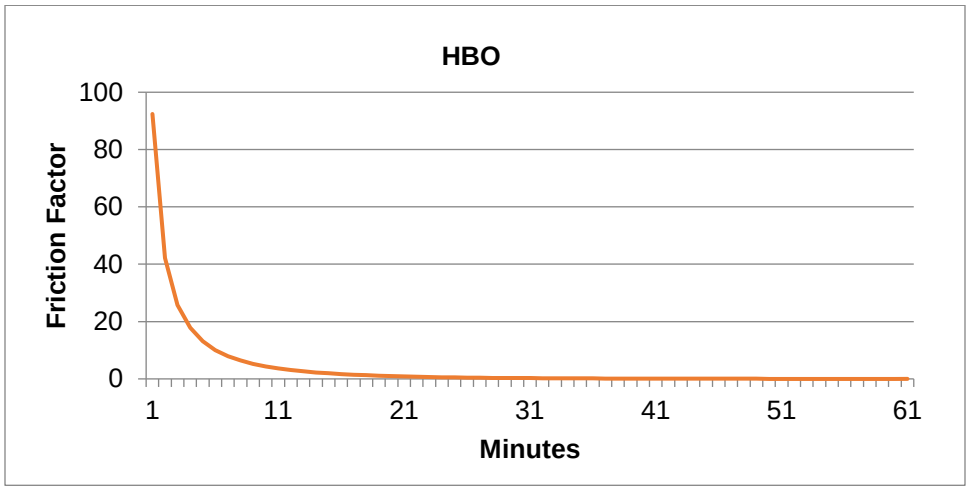
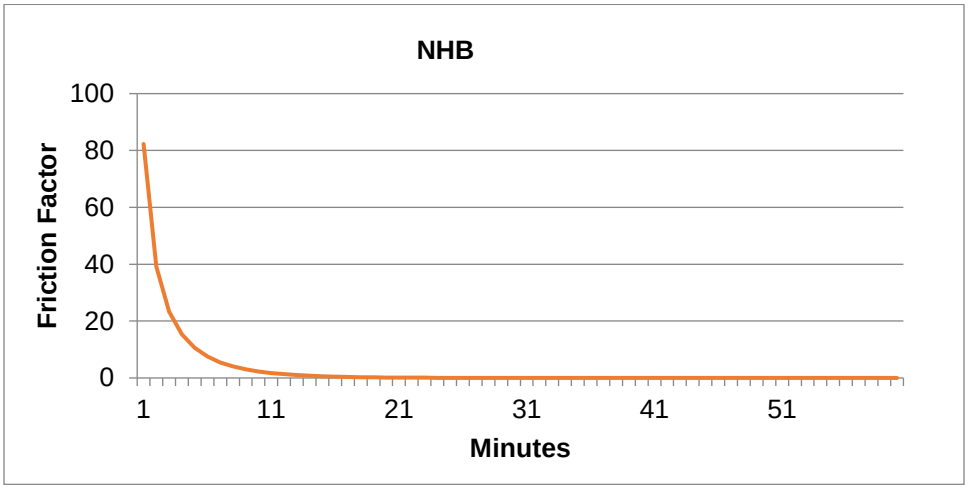
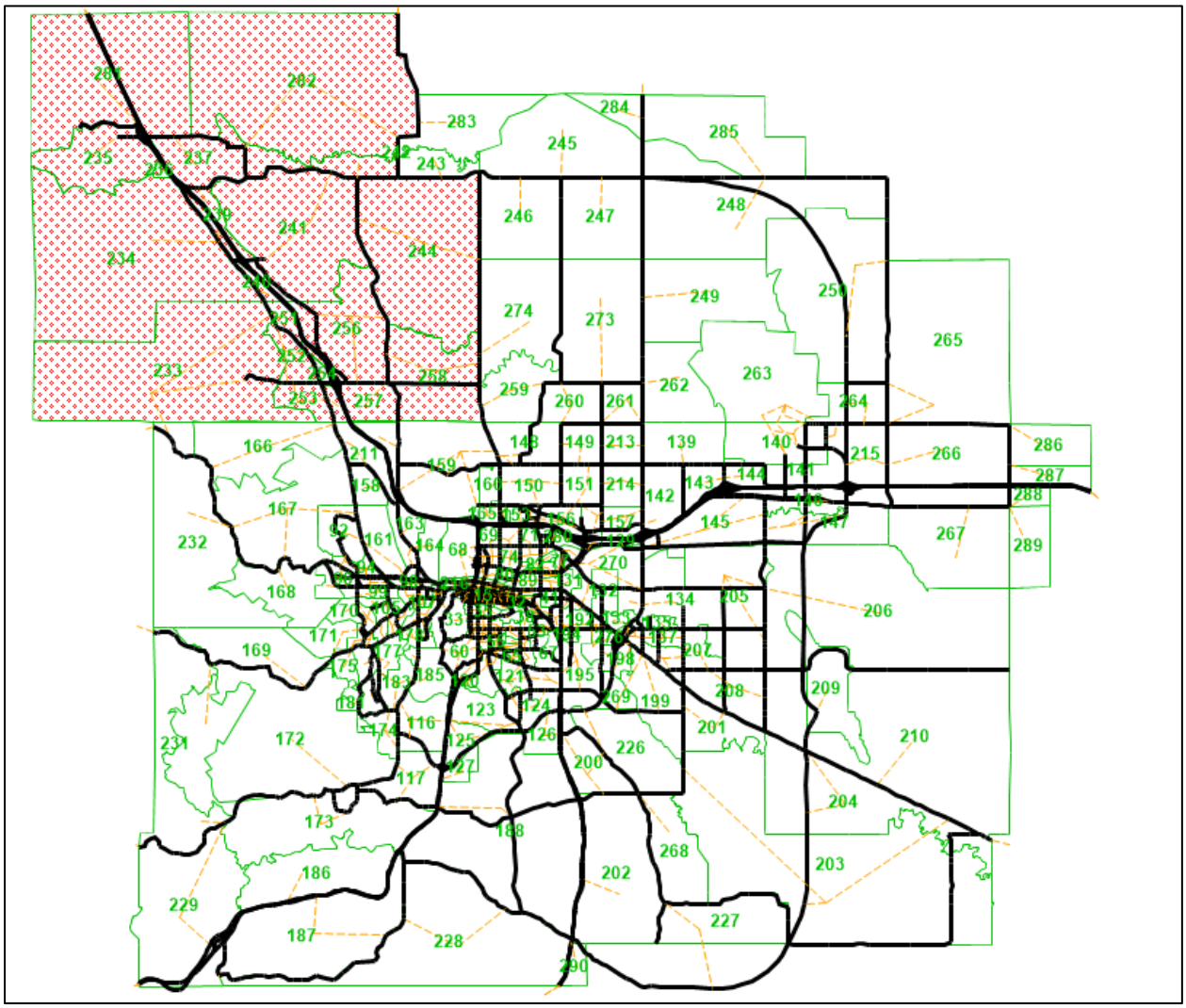


Figure 8. Non-Home Based Friction Factor Curve



During the trip distribution gravity model, K-factors can be added to reduce or enhance origin and destination pairs that the gravity model does not represent accurately. In the RCAMPO TDM, the amount of trips from the northwest portion of the model overestimated the amount of longer trips to the rest of the model. This was reflected in the overestimates of counts on the limited number of roads between those locations. A K-factor of 0.75 was added to and from the northwest TAZs shown in **Figure 9** to all other TAZs. The K-factor reduced the overestimate of traffic volumes along these roads and works because the nature of these trips is different because they are likely to draw from a more localized area. If a regionally significant development were to be modeled, it is recommended that the K-factor be revisited.

Figure 9. K-factored Northwest TAZs



Without a household travel survey, the only trip purpose that can be somewhat equally compared with another data source is HBW. CTPP provides average travel time for Journey-to-Work survey data. HBW trips from the AM (morning) time period in the model were used for the comparison because most HBW trips from home to work occur during that time period (**Table 10**).

Table 10. Average Travel Time

Model Estimated AM HBW Travel Time	CTPP Journey-to-Work Travel Time
12.78	13.90

One trips are distributed, some conversions need to be made to the trip table including the conversion of person trips to vehicle trips. This is done by applying auto occupancy factors. Without a household travel survey, auto occupancy factors must be borrowed from another

source. The one exception is for the HBW trip purpose, in which CTPP Journey-to-Work data was used to estimate. Then, because it is another MPO in the Great Plains region of the country with similar model trip purposes, the Grand Island MPO auto occupancies were borrowed for the other trip purposes. Finally, because the HBW trip purpose auto occupancies were lower for Rapid City, all of the other Grand Island auto occupancies were factored down equally. These slightly lower auto occupancies are reflective of community farther west and in a more rural part of the country than a national average community (**Table 11**).

Table 11. Auto Occupancy Factors

Trip Purpose	Auto Occupancy
HBW	1.06
HBS	1.58
HBO	1.58
NHB	1.52

Traffic Assignment Validation Checks

During the calibration of assigned vehicles on the roadway phase, numerous connectors were added and centroid locations were revised to ensure that traffic loads to the road network more realistically. These are localized adjustments that helped to balance out traffic on lower functional classification roads mostly.

One additional calibration adjustment that was made was a global speed adjustment to minor arterials and collectors of three miles per hour. Assignment results initially showed a large bias toward interstate and principal arterials when compared to traffic count data. The 3-mile per hour speed adjustment balances out traffic among all functional class roadways more evenly. This adjustment impacts the network shortest path travel times used to distribute trips, as well as the routes that traffic assignment assigns to the road network.

The goal of a TDM is to replicate travel patterns as accurately throughout each step of the model. Yet, ultimately, the model should have a strong correlation with count data. The count data in the RCAMPO TDM are a mixture of MPO and SDDOT counts, with the MPO counts generally representing minor arterials and collectors and SDDOT counts representing interstate and principal arterial.

A comparison of model estimated vehicle miles traveled (VMT) to VMT for available count locations shows that all functional class roads are within the validation goals provided by FHWA in 1990 **(Table 12**). Volumes are slightly underestimated on lower functional class roads compared to count data in terms of VMT, yet still within validation guidelines.

Table 12. Model-Estimated VMT by Functional Class Compared to Observed VMT

Functional Class	Number of Counts	Vehicle Miles Traveled (VMT)		Error		Validation Goal*
		Estimated	Observed	Difference	Percent	
Interstate	74	318,799	306,262	12,538	4.1%	+/-7%
Principal Arterial	72	144,686	155,990	-11,304	-7.2%	+/-10%
Minor Arterial	104	165,220	173,562	-8,342	-4.8%	+/-15%
Collector	59	26,796	32,207	-5,411	-16.8%	+/-20%
Total	309	655,502	668,021	-12,519	-1.9%	N/A

*FHWA-1990 goals

Percent Root Mean Squared Error (%RMSE) measures the average error between the model estimated volumes and count data. The lower the value, the less difference, or error, there is

between the model-estimated volumes and the counts. **Table 13** and **Table 14** show the %RMSE stratified in two different ways: by volume groups and by functional class. The %RMSE in the RCAMPO model is easily below the preferable validation target for most volume groups, and well below the acceptable validation target for all volume groups. No validation guidelines are listed by functional class; however, it is typical to expect a total model %RMSE to be at least under 35 percent and preferably under 30 percent.

Table 13. Percent Root Mean Squared Error by Volume Groups

Low	High	Number of Counts	% RMSE	Validation Goal*	
				Acceptable	Preferable
0	5,000	123	44.93%	100%	45%
5,001	10,000	87	24.85%	45%	35%
10,001	15,000	41	21.46%	35%	27%
15,001	20,000	39	18.47%	30%	25%
20,001	30,000	16	16.13%	27%	15%

*Florida Standard Urban Transportation Modeling Systems (FSUTMS)

Table 14. Percent Root Mean Squared Error by Functional Class

Link Type	Number of Counts	% RMSE
Freeway	74	23.24%
Principal Arterial	72	25.55%
Minor Arterial	104	20.64%
Collector	59	48.78%
Total	309	25.56%

Screenlines and cordon model estimated volumes compared to counts are another common check of assignment results. The benefit of checking screenlines and cordons is the more localized regions of the model can be reviewed for accuracy. The eight screenline and two cordons used are shown in **Figure 10** and results are summarized in **Table 15**. It is preferable for the model estimated volumes to be within +/- 10 percent of the counts, keeping in mind that these are a small subset of counts. Only one screenline is beyond the 10 percent threshold.

Figure 10. Screenline Locations

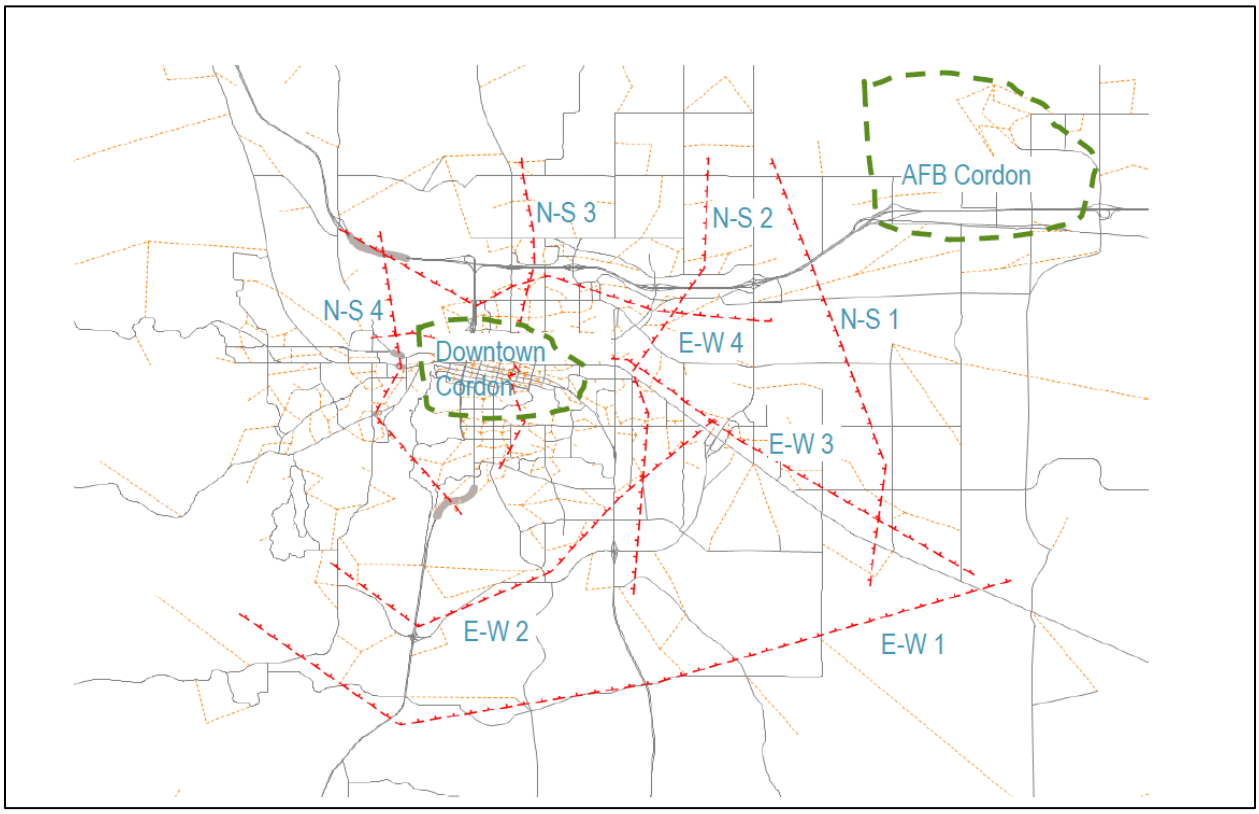


Table 15. Screenline Summary

Screenline/Cordon	Count Total	Model Volume Total	Percent Difference
E-W1	40,113	36,795	-9.0%
E-W2	75,472	68,999	-9.4%
E-W3	125,012	115,904	-7.9%
E-W4	109,615	95,579	-14.7%
N-S1	36,628	35,834	-2.2%
N-S2	77,799	78,096	0.4%
N-S 3	110,673	104,122	-6.3%
N-S4	88,350	97,397	9.3%
Downtown	207,309	189,481	-9.4%
South Air Force Base	17,408	16,523	-5.4%

While overall validation results for the RCAMPO TDM are very good, the ultimate goal of the model is to forecast traffic. Thus, the growth and future LOS can be reviewed for reasonableness to ensure the model is sensitive enough to be used as a forecasting tool. **Figure 11** and **Figure 12** show the growth (or decline) by TAZ in the RCAMPO TDM for households and employment. Growth is scattered around the model area; however, the TAZs to the west of the urbanized area show the least amount of growth.

Figure 11. Forecast Household Growth

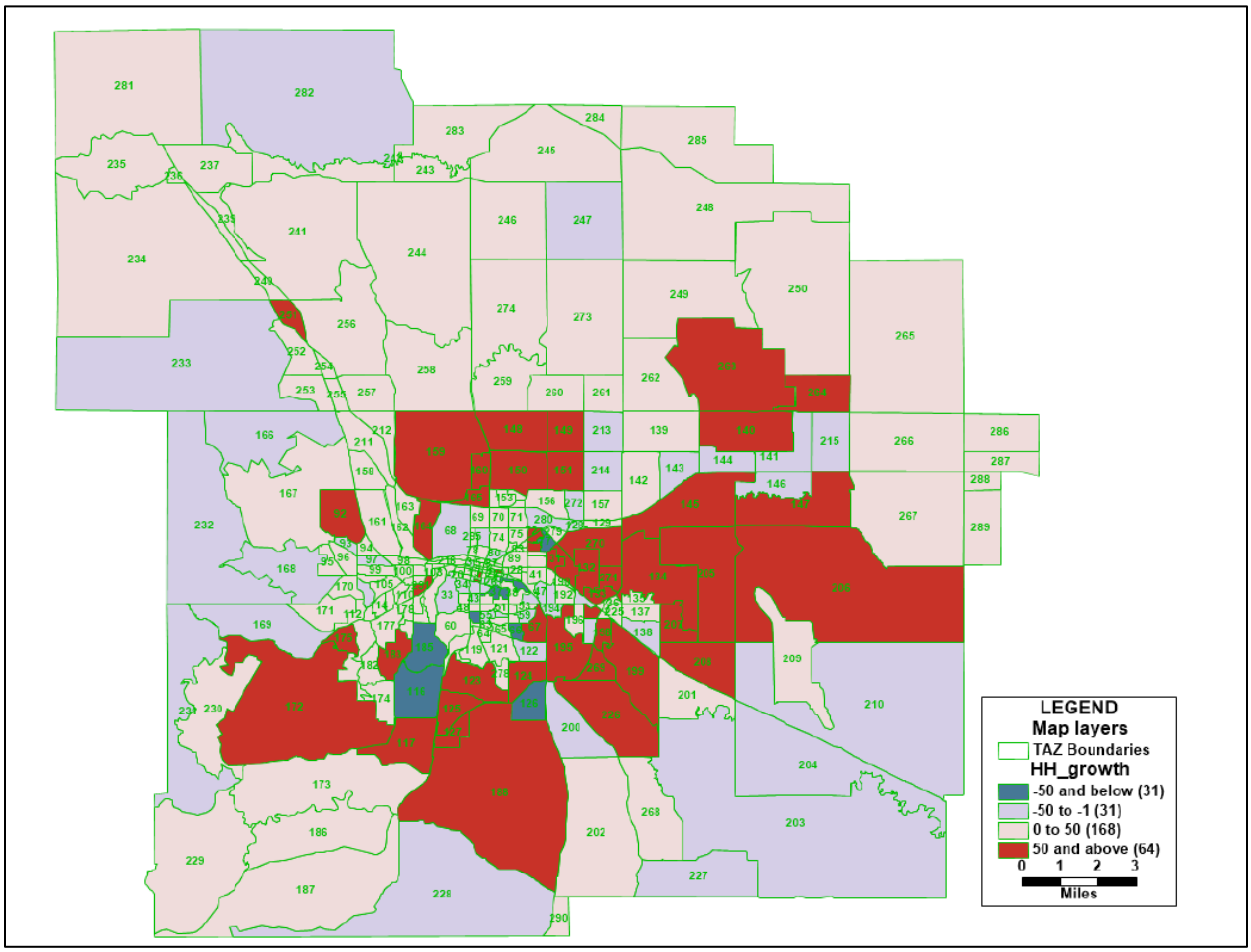


Figure 12. Forecast Employment Growth

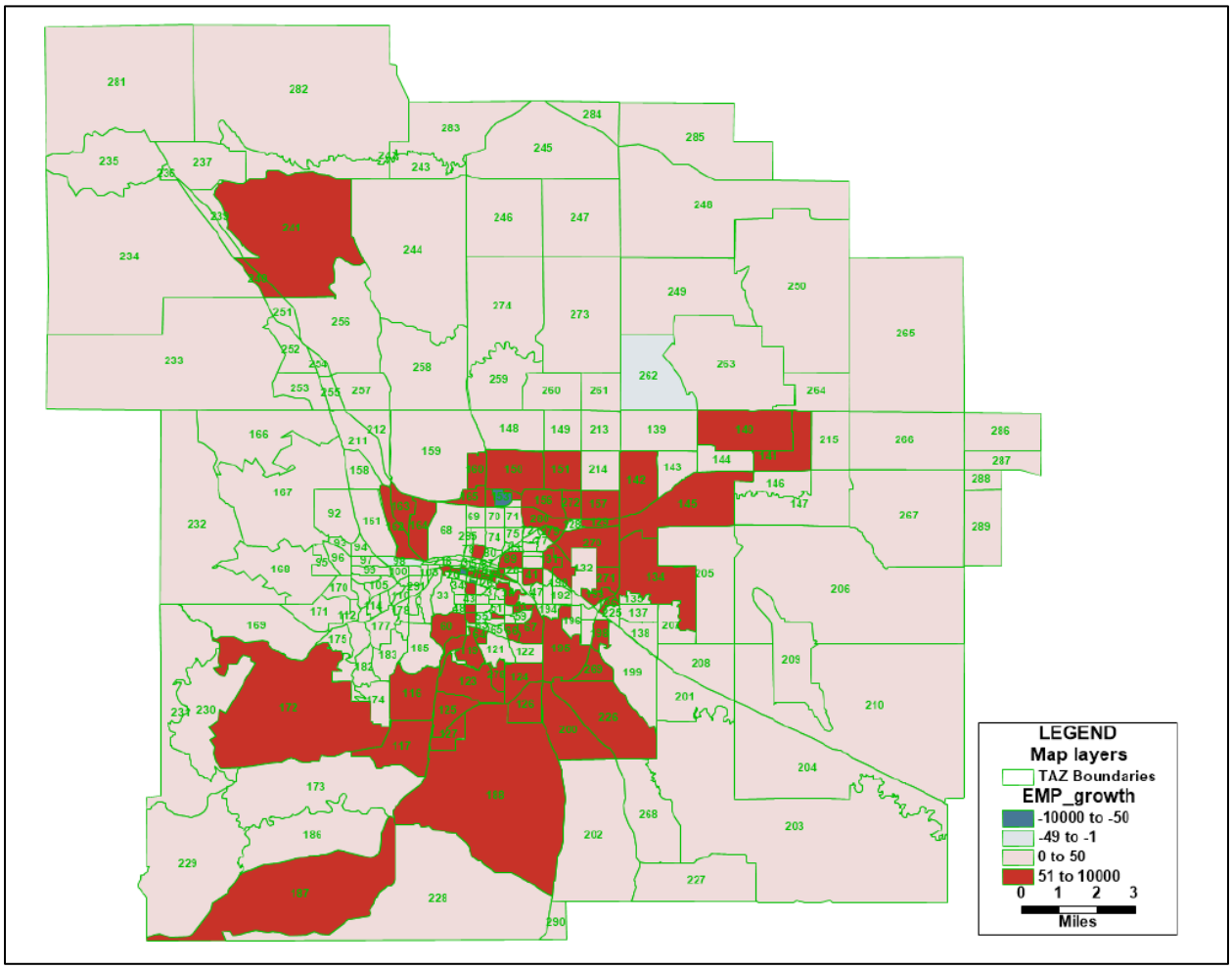


Figure 13 shows the magnitude of growth on the road network when comparing a base year 2018 model run to a 2045 forecast run with an existing (2018) road network. Similar to the household (**Figure 11**) and employment (**Figure 12**) growth, the least amount of growth on the road network is to the west of the urbanized area.

Figure 13. 2045 No Build Compared to 2018 Base Magnitude of Growth

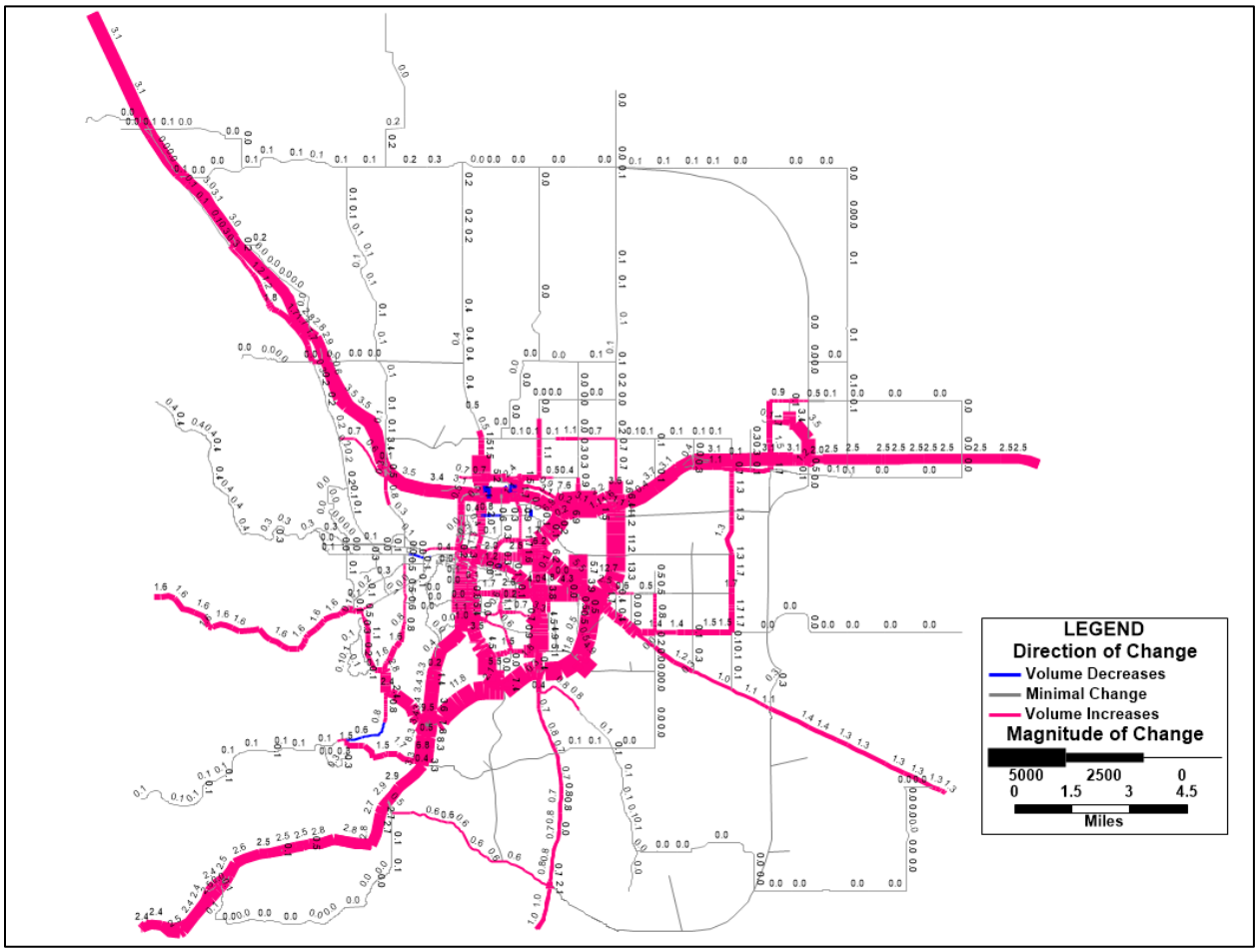


Figure 14 shows the predicted LOS for 2045. While congestion is very limited in the base year, more congestion starts showing up in spot locations in 2045. Similar to the household **(Figure 11)**, employment (**Figure 12**), and road network **(Figure 13**) growth, more LOS D to F roads are on the south, east, and northern portions of the urbanized area where more growth is expected.

Table 16 presents a summary of growth. Employment growth outpaces household growth, which is common in forecasts. Because the majority of trip purposes are balanced to households, the balanced trips grow closer to the percentage of household growth. Both VMT and vehicle hours traveled grow by slightly higher amounts, which can be expected as development occurs farther and farther from the city center and congestion increases. These overall results are reasonable for a small MPO growing at a moderate pace.

Figure 14. 2045 No Build Predicted Level of Service

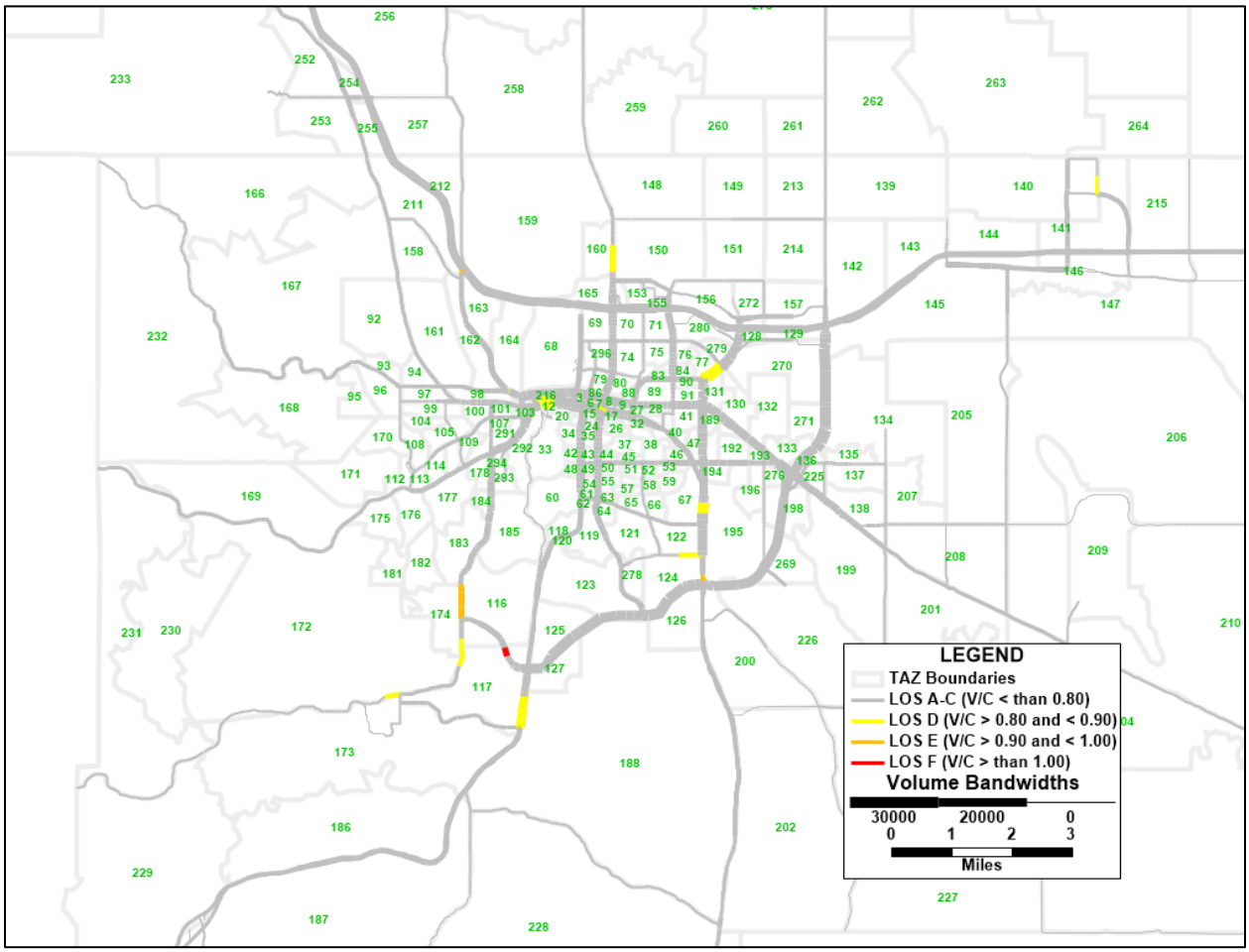


Table 16. Summary of Growth

	2018	2045**	Percent Growth
Households	49,008	59,456	21.3%
Employment	67,337	97,713	45.1%
Balanced Trips	527,910	649,244	23.0%
Vehicle Miles Traveled	2,239,928	2,874,895	28.3%
Vehicle Hours Traveled	48,225	62,493	29.6%

* No centroid connectors included

**Using existing road network

Conclusions and Next Steps

The major edits, updates, and adjustments that were made to the RCAMPO TDM are discussed in this document. The calibration process and validation results are also discussed in detail. The validation results indicate that the RCAMPO TDM is sufficiently accurate and useable for a forecasting tool.

While many edits were made to the data and model processing, ultimately the experience for the user remains mostly the same with the same graphical user interface and file structure as the previous model. This should allow for an easy transition to using the 2045 model.

While the accuracy and usability of the model is very good, improvements can always be made. Below are two recommendations for future model updates:

1. **TAZ Splits.** The TAZ size and structure does not always conform to recommended best practice. This can lead to improper loading of traffic onto the road network, making the calibration of certain roadways very difficult. It is recommended that TAZs be split along all modeled roads, and centroids and connectors be added.

2. **National Household Travel Survey Add-on.** Input parameters have been borrowed from national publications or nearby models. Investing time in processing a NHTS Add-on sample would allow for local inputs as well as provide a valuable data source for calibration. Some of the local inputs that could be estimated using an NHTS Add-on for the current model structure include:

    - Attraction Trip Rates
    - Production Trip Rates
    - Time of Day Factors
    - Directional Factors
    - Auto Occupancy Factors

Attachment A. 2018 and 2045 Socioeconomic Data

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
1	0	9	11	27	5
2	0	13	1	9	16
3	7	419	13	27	0
4	59	41	4	120	109
5	0	76	22	9	160
6	0	60	125	184	0
7	0	74	0	5	0
8	0	122	0	14	0
9	0	33	80	45	0
10	0	21	16	33	0
11	142	0	0	3	66
12	79	8	4	27	0
13	115	30	6	63	26
14	9	34	2	842	0
15	24	122	20	331	254
16	3	13	2	165	0
17	0	0	0	0	593
18	129	0	0	0	116
19	112	0	0	0	258
20	119	0	0	0	0
21	83	23	4	141	0
22	13	11	0	78	25
23	17	0	0	54	0
24	8	0	0	0	276
25	79	0	0	60	8
26	89	0	0	20	0
27	0	25	80	89	0
28	0	46	75	60	14
29	1	0	3	9	182
30	46	17	14	34	0
31	0	0	172	18	0
32	345	0	2	37	30
33	264	0	0	0	88
34	363	25	19	57	85
35	277	24	0	19	0
36	126	3	0	0	11

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
37	382	0	0	5	0
38	184	27	3	4	60
39	177	0	0	0	0
40	13	0	56	40	0
41	0	111	75	55	328
42	123	23	0	12	60
43	221	18	0	27	7
44	183	0	0	7	0
45	161	0	0	0	0
46	101	30	117	109	0
47	159	62	39	40	0
48	76	31	0	3	0
49	66	80	2	145	35
50	194	4	0	0	0
51	211	0	0	0	34
52	125	36	0	0	0
53	49	229	78	10	0
54	175	106	0	71	0
55	173	0	0	23	69
56	31	0	0	16	239
57	140	0	0	0	30
58	120	0	0	0	81
59	348	0	0	0	0
60	345	104	44	43	0
61	291	52	2	72	0
62	0	9	0	45	0
63	19	0	0	0	127
64	64	0	0	1045	0
65	198	19	0	0	0
66	462	0	0	0	13
67	433	52	180	39	34
68	542	0	0	93	43
69	714	351	0	62	96
70	320	240	0	82	259
71	452	292	0	11	134
72	264	200	0	0	0
73	356	5	6	11	91
74	583	0	0	16	209

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
75	463	24	0	246	5
76	71	0	0	0	0
77	369	44	82	27	0
78	0	0	0	0	895
79	0	120	0	0	630
80	282	0	0	31	155
81	117	0	42	3	0
82	33	11	0	81	72
83	96	79	18	3	0
84	40	111	85	10	44
85	0	0	0	0	0
86	0	0	0	0	0
87	0	0	60	12	0
88	0	174	0	42	0
89	342	259	98	148	134
90	11	401	49	19	0
91	158	51	367	308	13
92	308	0	25	83	190
93	464	0	0	0	0
94	226	118	5	62	21
95	94	0	0	0	0
96	609	0	0	23	94
97	413	76	5	30	69
98	283	283	195	234	75
99	450	21	6	21	0
100	0	0	0	0	666
101	201	48	20	142	0
102	0	405	0	42	0
103	99	253	0	78	0
104	9	0	0	129	23
105	189	28	90	139	258
106	0	0	0	0	0
107	0	0	0	0	0
108	223	0	0	3	392
109	5	0	0	20	160
110	0	0	0	143	0
111	151	55	0	26	159
112	208	12	5	4	80

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
113	274	25	0	49	0
114	515	14	0	22	10
115	209	0	3	4	100
116	2110	105	35	327	93
117	14	6	185	419	122
118	5	0	0	69	0
119	298	7	0	665	0
120	33	0	0	0	0
121	1223	0	0	19	89
122	585	7	213	88	202
123	628	338	5	60	47
124	1242	34	0	131	38
125	153	14	0	27	0
126	60	0	46	0	15
127	126	101	0	442	0
128	1	0	63	0	147
129	0	80	404	6	0
130	254	99	128	32	545
131	1	101	213	125	41
132	166	0	32	5	0
133	97	31	455	170	0
134	1046	57	55	25	379
135	356	0	0	0	15
136	16	0	70	93	0
137	643	0	9	0	0
138	744	26	71	23	103
139	202	0	0	0	0
140	0	0	0	0	0
141	343	37	174	17	18
142	4	98	145	42	0
143	142	0	70	0	0
144	335	0	0	0	0
145	489	783	445	11	141
146	266	21	71	11	26
147	505	3	35	14	0
148	464	0	0	0	14
149	129	0	2	0	0
150	29	2	196	28	0

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
151	214	0	213	13	0
152	0	361	329	0	0
153	0	1380	0	0	12
154	0	362	0	110	0
155	0	418	0	0	0
156	0	539	108	0	15
157	0	539	715	79	28
158	0	0	91	0	0
159	686	50	29	41	31
160	450	16	45	0	0
161	0	74	580	108	0
162	0	106	806	296	0
163	0	26	1137	1289	5
164	226	0	634	330	152
165	309	567	54	15	10
166	134	0	14	5	0
167	91	0	53	0	0
168	77	0	0	0	0
169	91	3	35	0	0
170	0	0	0	0	0
171	42	0	0	0	176
172	936	0	239	20	11
173	619	48	31	33	71
174	235	0	0	8	90
175	431	53	7	3	28
176	169	0	0	44	0
177	327	0	0	0	130
178	462	0	0	0	18
179	106	4	3	18	5
180	275	149	37	240	48
181	146	0	0	0	0
182	246	0	0	0	245
183	405	70	28	3	19
184	205	0	0	0	0
185	750	4	2	35	0
186	196	138	43	7	18
187	130	25	36	0	9
188	181	0	70	0	0

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
189	0	94	243	45	0
190	0	69	224	118	0
191	1	241	24	0	0
192	16	0	358	0	12
193	1	14	188	13	121
194	74	32	540	184	0
195	9	7	2059	59	49
196	72	7	23	0	0
197	0	0	0	0	0
198	58	27	0	0	60
199	194	39	6	0	0
200	3	0	221	84	0
201	312	0	0	0	0
202	146	0	2	5	0
203	118	0	0	0	384
204	66	0	13	0	0
205	436	0	49	2	0
206	63	0	7	18	0
207	266	0	14	0	8
208	182	0	0	0	19
209	0	0	0	0	500
210	73	10	84	3	0
211	259	40	77	87	1
212	0	8	84	72	0
213	8	0	0	0	0
214	2	0	497	0	0
215	3	0	1	0	0
216	0	223	224	119	0
217	0	284	13	0	0
218	20	400	18	201	0
219	10	83	6	144	0
220	0	49	18	24	15
221	0	29	14	47	0
222	6	17	0	89	0
223	0	18	4	166	0
224	15	11	0	53	23
225	131	29	11	0	13
226	19	0	782	37	0

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
227	10	0	0	0	0
228	186	62	27	13	118
229	104	38	38	0	0
230	15	0	0	0	0
231	126	0	0	2	0
232	323	0	0	0	22
233	531	0	0	0	0
234	287	19	26	0	22
235	172	0	7	11	193
236	59	28	19	7	60
237	43	23	8	0	18
238	124	100	32	3	84
239	249	17	11	0	11
240	77	42	63	7	21
241	527	25	447	22	19
242	52	0	0	0	0
243	42	0	0	0	0
244	141	0	46	0	0
245	12	0	64	0	0
246	9	0	0	0	0
247	4	0	0	0	0
248	50	0	0	0	0
249	40	0	0	0	0
250	52	0	14	0	0
251	324	54	25	0	0
252	506	66	233	12	34
253	599	69	118	14	116
254	10	0	0	0	14
255	383	14	576	8	0
256	125	0	0	0	0
257	19	0	51	10	0
258	191	7	0	0	17
259	31	0	0	0	0
260	6	0	0	0	0
261	14	0	11	0	0
262	35	0	39	4	9
263	0	0	0	0	0
264	346	0	0	2	7

2018 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
265	61	0	0	0	0
266	17	0	0	0	0
267	8	0	0	0	0
268	11	0	0	0	0
269	498	0	7	0	34
270	0	492	112	1	0
271	115	0	607	513	0
272	3	261	176	40	0
273	74	0	0	0	0
274	3	0	0	0	0
275	213	0	0	0	0
276	31	0	0	60	0
277	0	12	0	0	22
278	235	0	0	241	0
279	0	20	14	0	0
280	2	2678	0	0	0
281	114	43	241	33	6
282	58	0	0	0	0
283	38	0	0	0	0
284	0	0	0	0	0
285	2	0	0	0	0
286	7	0	0	0	0
287	4	0	0	0	0
288	5	0	0	0	0
289	7	0	0	0	0
290	1	0	0	0	0
291	191	0	0	0	0
292	193	76	0	0	0
293	6	33	27	28	0
294	0	17	90	59	0

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
1	0	16	10	31	4
2	0	12	1	19	16
3	5	419	13	27	0
4	75	74	4	142	108
5	7	92	21	9	159
6	23	60	43	184	0
7	0	74	0	5	0
8	0	122	0	14	0
9	0	40	79	44	0
10	20	11	12	59	0
11	225	148	0	383	0
12	79	40	40	70	0
13	115	30	6	134	25
14	9	34	1	564	0
15	24	164	42	330	253
16	130	203	1	197	0
17	1	0	0	0	712
18	138	0	0	0	185
19	65	33	0	171	257
20	122	0	0	0	0
21	83	21	3	149	0
22	12	14	0	78	25
23	38	0	0	75	0
24	114	17	0	0	0
25	50	0	0	60	8
26	78	0	0	20	0
27	0	32	142	88	0
28	0	54	75	59	14
29	0	0	2	64	181
30	11	15	0	426	0
31	0	0	172	18	0
32	0	0	1	89	21
33	257	0	0	0	88
34	356	25	19	57	85
35	264	48	0	50	0
36	90	3	0	0	11
37	307	0	0	5	0
38	185	26	2	3	427

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
39	1	0	0	0	0
40	13	0	56	40	0
41	0	182	74	55	328
42	123	23	0	12	60
43	214	44	0	23	6
44	183	0	0	7	0
45	161	0	0	0	0
46	98	30	117	109	0
47	149	62	39	40	0
48	76	31	0	3	0
49	67	79	2	199	34
50	194	4	0	0	0
51	211	0	0	0	34
52	125	36	0	0	0
53	49	295	78	9	0
54	109	105	0	164	0
55	172	0	0	22	69
56	21	0	0	15	348
57	140	0	0	0	30
58	120	0	0	0	81
59	345	0	0	0	0
60	365	103	44	97	0
61	291	52	2	0	72
62	0	9	0	45	0
63	20	0	0	0	127
64	64	0	0	1294	0
65	203	19	0	0	0
66	397	0	0	106	13
67	500	547	180	38	33
68	540	0	0	93	43
69	714	368	0	62	96
70	335	240	0	82	259
71	452	308	0	10	133
72	344	200	0	0	0
73	348	5	6	11	91
74	610	0	0	16	209
75	464	24	0	246	5
76	150	0	0	0	0

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
77	154	44	82	27	0
78	0	0	0	0	895
79	0	119	0	0	975
80	270	0	0	31	155
81	117	0	42	3	0
82	33	11	0	81	72
83	99	123	18	3	0
84	103	124	85	10	44
85	0	0	0	0	0
86	0	0	0	0	0
87	0	0	60	12	0
88	0	174	0	42	0
89	371	414	97	211	133
90	13	433	48	18	0
91	158	51	367	308	13
92	557	0	25	83	190
93	463	0	0	0	0
94	232	118	5	62	21
95	105	0	0	0	0
96	609	0	0	23	94
97	395	76	5	30	69
98	302	307	173	228	74
99	450	21	6	21	0
100	0	0	0	0	666
101	201	48	20	142	0
102	0	405	0	42	0
103	99	253	0	78	0
104	9	0	0	129	23
105	189	28	90	139	258
106	0	0	0	0	0
107	0	0	0	0	0
108	214	0	0	3	421
109	5	0	0	20	160
110	0	0	0	143	0
111	203	55	0	26	159
112	215	12	5	4	80
113	275	25	0	49	0
114	517	14	0	22	10

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
115	209	0	3	4	100
116	2027	393	34	966	93
117	225	287	186	1227	121
118	18	0	0	325	0
119	307	6	0	857	0
120	37	0	0	0	0
121	1235	0	0	19	89
122	561	7	213	88	202
123	759	1007	5	679	342
124	1625	388	0	559	38
125	352	137	0	198	0
126	1	0	591	0	15
127	301	256	0	1145	0
128	0	0	110	0	147
129	0	409	450	6	0
130	319	479	191	32	545
131	228	349	479	125	41
132	1358	33	31	4	0
133	257	31	454	266	0
134	2545	255	55	24	378
135	356	0	0	0	15
136	16	537	69	93	0
137	677	0	9	0	0
138	708	26	71	23	103
139	218	0	0	0	0
140	240	498	80	0	1025
141	331	730	877	16	17
142	23	511	145	42	0
143	105	0	70	0	0
144	330	0	0	0	0
145	562	1475	445	10	140
146	229	21	71	11	26
147	558	3	35	14	0
148	637	0	0	0	14
149	405	0	2	0	0
150	551	60	196	28	0
151	270	0	369	12	0
152	0	369	392	0	0

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
153	0	859	0	0	12
154	0	445	0	109	0
155	0	418	0	0	0
156	0	1365	107	0	14
157	0	1529	1650	78	28
158	0	0	91	0	0
159	860	50	29	41	31
160	586	346	45	0	140
161	0	106	579	108	0
162	0	105	883	295	0
163	0	26	1448	1288	4
164	301	0	867	330	151
165	397	666	54	14	10
166	133	0	14	5	0
167	100	0	53	0	0
168	76	0	0	0	0
169	90	3	35	0	0
170	0	0	0	0	0
171	42	0	0	0	176
172	996	66	239	20	11
173	647	48	31	33	71
174	240	0	0	8	90
175	496	53	7	3	28
176	177	0	0	44	0
177	331	0	0	0	130
178	462	0	0	0	18
179	106	4	3	18	5
180	275	149	37	240	48
181	147	0	0	0	0
182	258	0	0	0	245
183	486	70	28	3	19
184	205	0	0	0	0
185	685	4	2	35	0
186	197	138	43	7	18
187	139	157	35	0	9
188	1020	1238	70	320	0
189	0	116	243	45	0
190	0	69	224	118	0

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
191	0	241	24	0	0
192	16	0	358	0	12
193	0	14	204	13	121
194	50	41	556	184	0
195	209	7	2215	59	49
196	85	7	23	0	0
197	0	25	0	0	0
198	219	135	0	0	60
199	367	39	6	0	0
200	0	0	1781	84	0
201	318	0	0	0	0
202	153	0	2	5	0
203	117	0	0	0	384
204	62	0	13	0	0
205	733	0	49	2	0
206	254	0	7	18	0
207	460	0	14	0	8
208	261	0	0	0	19
209	0	0	0	0	500
210	71	27	84	3	0
211	261	40	77	87	1
212	0	8	116	72	0
213	7	0	0	0	0
214	0	0	544	0	0
215	0	41	1	0	0
216	0	231	224	119	0
217	0	292	13	0	0
218	20	400	18	201	0
219	31	104	6	187	0
220	0	49	18	24	15
221	15	79	14	93	0
222	6	17	0	89	0
223	40	94	3	303	0
224	35	35	0	139	23
225	138	29	11	0	13
226	406	0	1484	37	0
227	1	0	0	0	0
228	181	62	27	13	118

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
229	104	38	38	0	0
230	15	0	0	0	0
231	121	0	0	2	0
232	321	0	0	0	22
233	530	0	0	0	0
234	288	36	26	0	22
235	192	0	7	11	193
236	63	28	19	7	60
237	43	23	8	0	18
238	169	100	39	3	121
239	287	17	11	0	11
240	77	291	63	7	128
241	544	42	603	22	19
242	60	0	0	0	0
243	82	0	0	0	0
244	184	0	46	0	0
245	12	0	64	0	0
246	10	0	0	0	0
247	3	0	0	0	0
248	74	0	0	0	0
249	44	0	0	0	0
250	62	0	14	0	0
251	502	54	25	0	0
252	506	83	233	34	34
253	605	93	118	14	116
254	10	0	0	0	14
255	385	14	576	8	0
256	135	0	0	0	0
257	25	0	51	10	0
258	206	7	0	0	17
259	37	0	0	0	0
260	6	0	0	0	0
261	19	0	11	0	0
262	41	0	0	4	0
263	645	0	0	0	0
264	411	0	2	0	7
265	68	0	0	0	0
266	22	0	0	0	0

2045 Socioeconomic Data

TAZ	Total Households	Retail Employment	Basic Employment	Service Employment	Public Employment
267	11	0	48	0	0
268	12	0	0	0	0
269	669	363	195	298	34
270	120	855	456	104	0
271	270	0	1231	513	0
272	0	756	410	40	0
273	81	0	0	0	0
274	3	0	0	0	0
275	211	0	0	0	0
276	84	0	0	60	0
277	6	12	0	0	22
278	262	0	0	667	220
279	0	103	170	0	0
280	0	3027	0	0	0
281	124	43	241	33	6
282	54	0	0	0	0
283	68	0	0	0	0
284	0	0	0	0	0
285	2	0	0	0	0
286	7	0	0	0	0
287	4	0	0	0	0
288	5	0	0	0	0
289	7	0	0	0	0
290	1	0	0	0	0
291	191	0	0	0	0
292	193	76	0	0	0
293	6	33	27	28	0
294	0	17	90	59	0

Appendix B.
Public Engagement

Public Meeting - Open House No.1 Meeting Summary

October 29, 2019

Rapid City Area MPO Metropolitan Transportation Plan & Bicycle/Pedestrian Plan Update

Rapid City Area MPO

November 21, 2019

Table of Contents

Public Meeting/Open House No. 1 Overview

Meeting Details

Date: Tuesday, October 29, 2019

Time: 4:00 PM to 5:45 PM

Location: Rapid City Council Chambers, City Hall
300 6th Street, Rapid City, SD 57701

Advertisements: Rapid City Journal (10/16/19 and 10/19/19), Native Sun News (10/16/19), project website, MPO website, and Facebook Event post. Additionally, a meeting flyer was emailed to RCAMPO Stakeholders.

The project team hosted a public meeting/open house for the Rapid City Area MPO Metropolitan Transportation Plan (MTP) and Bicycle/Pedestrian Plan Update to present an overview of the project and gather feedback from the public and stakeholders. Approximately 47 attendees signed in for the meeting, including members of the consultant team, City staff, FHWA, and SDDOT staff. It is estimated approximately 15 additional attendees also attended the meeting, however entered through a second entrance after the presentation was underway and did not sign in. An attendance sheet for the public meeting/open house can be found in Appendix A.

A brief presentation was provided to present the details and scope of the project and review the existing analysis completed to date. A copy of the presentation is included in Appendix B. Following the presentation an interactive maps and markers exercise was conducted to gain public feedback on the existing and future transportation system needs. Comments from the public could be provided in multiple forms, including submission of a comment form, notes attached to the maps/markers exercise, email, or via the project website. Written comments received via comment cards, emails, and website submissions are noted in the Written Comments section of the meeting summary. Notes/suggestions provided via the maps/markers exercise have been consolidated and summarized in a table for reference.

In general, discussions focused on transit and bicycle and pedestrian issues/needs. Concerns were also presented regarding the Highway 16/16B/Catron Boulevard intersection, Highway 16/Neck Yoke Road intersection, and intersections near the South Dakota School of Mines campus.

Project Website

www.rapidtrip2045.com

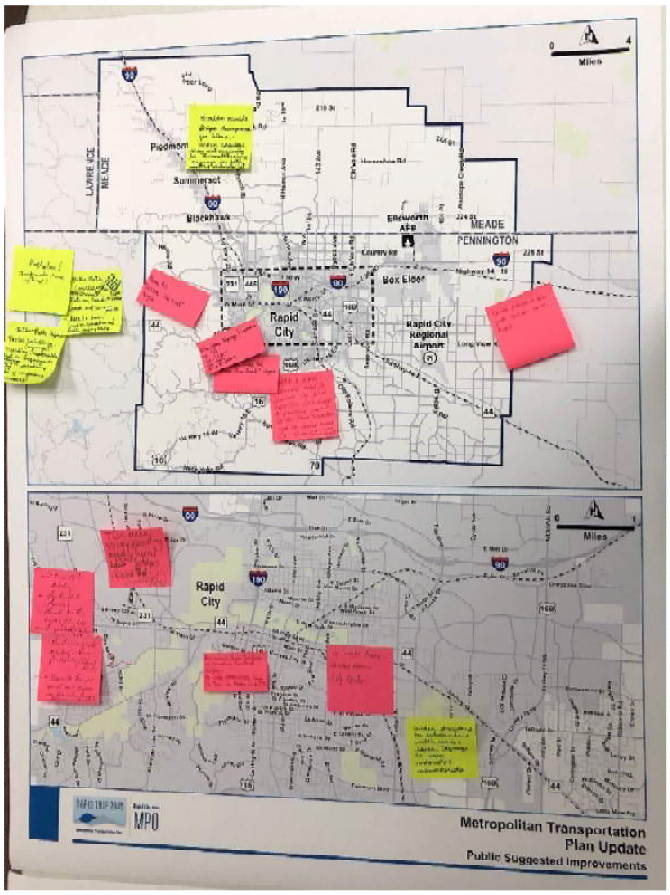
Written Comments

The written comment period associated with Public Meeting/Open House No. 1 began the evening of the meeting/open house and lasted through November 15, 2019. A total of four comment cards were received. Additionally, a type-written comment was received, multiple text messages to the MPO as well as an email submission. Two comments were also received via the project website. The written comments are attached in Appendix C.

In summary, the written comments focused on bicycle/pathway connections, traffic calming near the South Dakota School of Mines campus, improved transit/public transportation routes/stops, and a request to coordinate planning efforts with a proposed project located near Canyon Lake Drive/Soo San Drive.

Project website comments pertained to bike/pedestrian count methods, bike lane signing suggestions, bike/ped crossing suggestions, public meeting displays, and suggestions relating to bus stops and how they tie to pedestrian accessibility.

The maps and markers exercise generated approximately 56 comments/suggestions. A table summary of the comments associated with the maps/markers exercise is also included in Appendix C.



Appendix A – Sign-in Sheets

Sign – In Sheet

RAPID CITY AREA Metropolitan Planning Organization

HDR

Subject:	**Rapid City Area Metropolitan Transportation Plan and Bike-Pedestrian Plan Update**
Meeting:	Public Information Meeting and Open House
Date:	Tuesday, October 29, 2019
Meeting Location:	City of Rapid City Community Room

Please print clearly. Thank you.

	NAME/REPRESENTING	ADDRESS	BEST CONTACT PHONE	E-MAIL
1	CJ Means / GPTCHB Oyate Health Ctr	3200 Canyon Lake Dr	605-355-2405	cj.means@gptchb.org
2	Chuck Henrie	405 N Cleveland St	605 415 2963	Hen56@outlook.com
3	Mark Hoines	116 E. Dakota Ave	605-776-1010	mark.hoines@dot.gov
4	Sarah Gilkerson	700 E. Broadway	605.773.3093	sarah.gilkerson@state.sd.us
5	Dustin Hamilton	703 Main St.	605-791-6103	dustin.hamilton@hdrinc.com
6	Julie Godbe	4930 Ireland Pl RC, SD	605-209-5886	juliegodbe@gmail.com
7	Deanna Becket	1008 Willmington Somerset	605-390-6965	deanna@rcymca.org
8	Paul Bains	1844 Lombardy Dr	605-877-4145	Paul.Bains@rwsdcam.org
9	Willis Sutliff	4819 Steamboat	605 718-0359	dr.w.sutliff@gmail.com
10	Rob Pettigrew	1203 ST Cloud	939-9940	PettigrewRob@gmail.com
11	Kelly Hlavec	3602 Ranch Road	343-4550	Khlavec@bhws.com
12	Dennis Berg	3775 Cambell	355-3707	Dennis.Berg@k12.sd.us
13	Jason Lambert	405 Founders Park	480-0619	jlambert2@regionalhealth.org
14	Richard Schmeier	3700 Sturgis Rd	342-4105	rschmeier@fmgeng.necoxmail.com
15	Chris Hunt	3008 Stockade	970-901-5120	CShunt@gmail.com
16	Bill Kopp	15567 Hy 146	430-2182	
17	Julie Kopp	"	"	
18	Bill Evans			
19	Ritchie Nordstrom			
20	Eltina Three Stars	2611 Elderberry Blvd	605-858-5881	eltina.threestars@gptchb.org

Sign – In Sheet

Subject:	**Rapid City Area Metropolitan Transportation Plan and Bike-Pedestrian Plan Update**		
Meeting:	Public Information Meeting and Open House		
Date:	Tuesday, October 29, 2019	Meeting Location:	City of Rapid City Community Room

Please print clearly. Thank you.

	NAME/REPRESENTING	ADDRESS	BEST CONTACT PHONE	E-MAIL
1	Gloria Pluimer	730 E. Watertown Street	gpluimer@lcdcbh.org	641-3108
2	Corinne Perkins	2040 W. Main Street	605.348.8010	corinne.perkins@adeccona.com
3	Rachel Caesar	3418 Nicklaus Ct		rachel.l.caesar@gmail.com
4	Ted Johnson	300 Sixth St Rapid City SD	605-394-4154	Tedjohnson@rcgov.org
5	Kumar Vemswamy	625 9th St Rapid City, SD		
6	Brad Haupt	5015 Longhorn CT	605 381-2065	bhaupt@RegionalHealth.org
7	JAY ERICKSON	226 48th Rapid City SD	605-431-9536	jericksm@rushmore.com
8	Andrea Serna	514 Mt. Rushmore Rd	718-6204	aserna@bhws.com
9	Michael Huot	3001 Stockade Dr	585-831-6922	mwhuot@gmail.com
10	Lysann Zeller	912 9th St., #6	605-209-6797	lysann@hotmail.com
11	Ellen Erickson	703 Main St. RC, SD 57701	605-791-6100	ellen.erickson@hdrinc.com
12	Jasin Carbee	HDR Omaha		
13				
14				
15				
16				
17				
18				
19				
20				

Sign – In Sheet

Subject:	**Rapid City Area Metropolitan Transportation Plan and Bike-Pedestrian Plan Update**
Meeting:	Public Information Meeting and Open House
Date:	Tuesday, October 29, 2019
Meeting Location:	City of Rapid City Community Room

Please print clearly. Thank you.

	NAME/REPRESENTING	ADDRESS	BEST CONTACT PHONE	E-MAIL
1	Carrie Dirr / BHWC	3650 Range Rd.	605.718.6209	cdirr@bhws.com
2	Teri Schmidt	9135 Emerald Rdg Rd.	281-222-9829	schmidtsinscotland@yahoo.com
3	Stephenie Rittberger	730 E. Watertown St	605-440-0034 cell 605-394-5120 wk	srittberger@dcbh.org
4	Melissa Hurley	619 Fairlawn Dr.	605-840-5002	melissa.hurley2@geappliances.com
5	Melissa Petersen (Parks + Rec)	3905 Pointe West Pl #332	605-391-0749	
6	MATT Schumacher	3712 Locust St.	605-391-5638	schu5638@hotmail.com
7	Ken Young Rapid City	300 6th St.		City
8	James Lovericky	23950 S Rockerville Rd	605 431 3640	james.lovericky@gmail
9	LUCAS HAAN	2402 JANET	605 389 1361	lucas.haan@gmail.com
10	Jerilyn Roberts	501 E Saint Joseph	605-393-7345	jerilyn.roberts@sdsmt.edu
11	Kelli Aarstad	10A Glendale Lane	605-881-3385	
12	Garth Wadsworth	10A Glendale Lane	605 641 0961	
13	GRANT SERNA	24510 Juniper Rd Hermosa	605 718-4068	
14	STACIA SLOWEY	1103 12th st	605 791 6109	stacia.slowey@hdrinc.com
15				
16				
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Sign – In Sheet

Subject:	**Rapid City Area Metropolitan Transportation Plan and Bike-Pedestrian Plan Update**
Meeting:	Public Information Meeting and Open House
Date:	Tuesday, October 29, 2019
Meeting Location:	City of Rapid City Community Room

Please print clearly. Thank you.

	NAME/REPRESENTING	ADDRESS	BEST CONTACT PHONE	E-MAIL
1	Kent Penney / KLJ	330 Knollwood	605.721.5553	kent.penney@kljeng.com
2				
3				
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Appendix B – Presentation

RAPID TRIP 2045

Metropolitan Transportation Plan

Rapid City Area MPO

PUBLIC MEETING / OPEN HOUSE #1

October 29, 2019

HDR

RAPID CITY AREA Metropolitan Planning Organization

South Dakota DOT

U.S. Department of Transportation Federal Highway Administration

PURPOSE OF THE MEETING

- Involve the public in the planning process
  - Brief Presentation to explain project followed by interactive discussion
- Provide a Project Overview
  - Background
  - Project Scope
  - Project Schedule
- Gather Input and Feedback on Future Transportation Needs for Rapid City Area

PROJECT TEAM

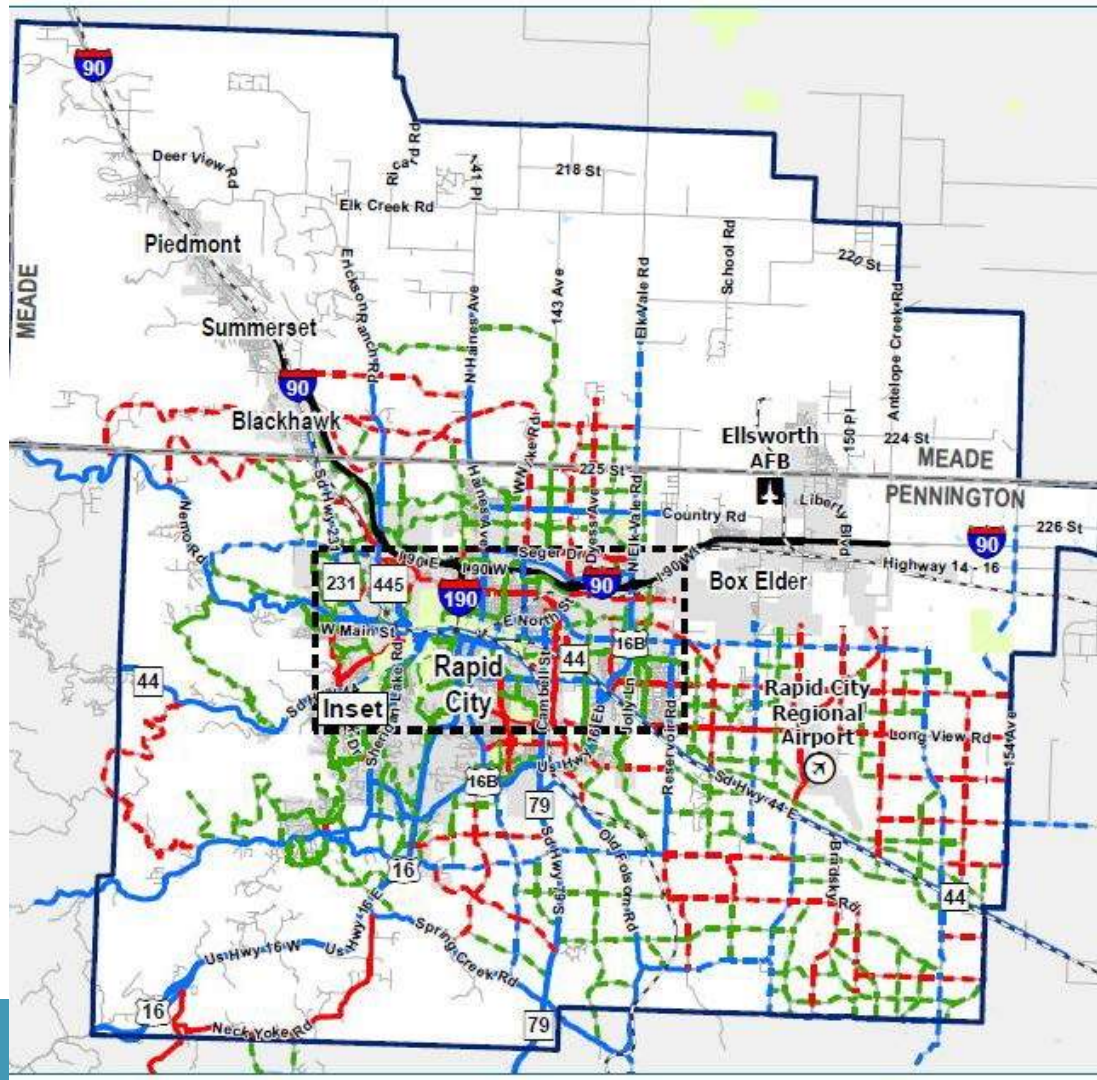
Kip Harrington
RCAMPO Project Manager

Dustin Hamilton, PE
Consultant (HDR) Project Manager

- Rapid City MPO Staff
- SDDOT Staff
- Study Consultant

BACKGROUND INFORMATION

- Metropolitan Transportation Plan (MTP) - Formerly known as Long Range Transportation Plan
- MPOs must update every five years
  - Plan to accomplish transportation goals
- Includes all modes of travel
  - Highway, Bicycle, Pedestrian, Transit, Freight
- Projects must be in the MTP to be included in Transportation Improvement Program (TIP)
- Must be fiscally constrained
- Promotes regional performance measures and targets
- This MTP targets goals, strategies, etc. for the year 2045 planning horizon

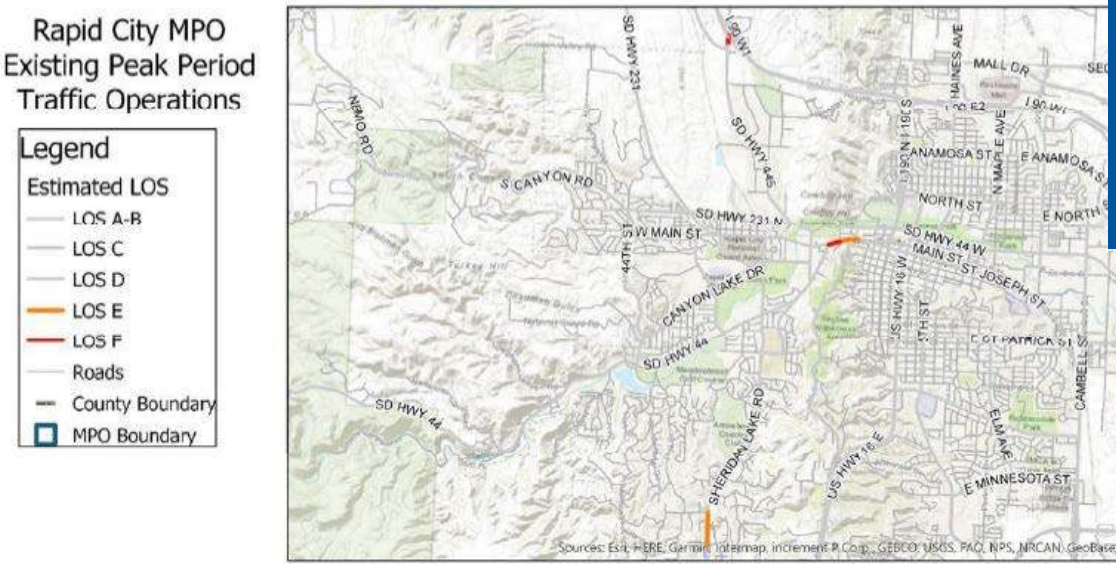


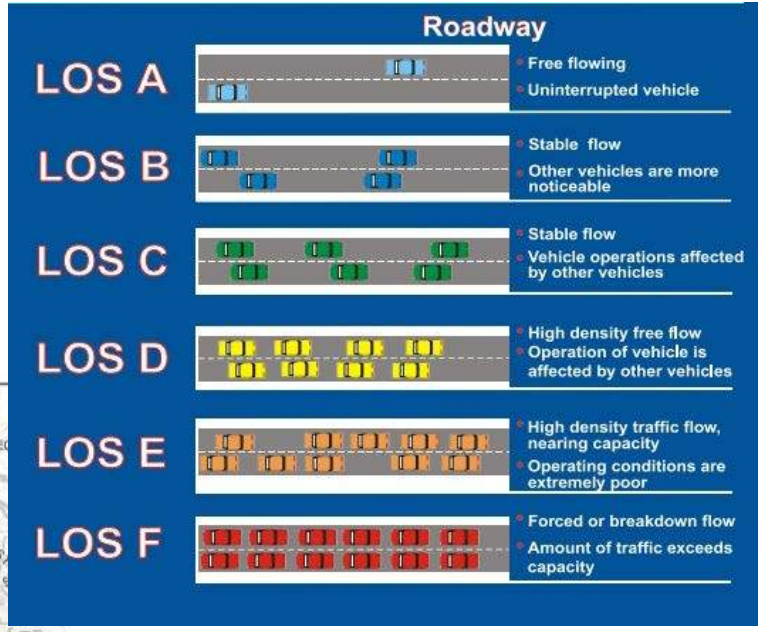
PROJECT SCOPE/TASKS

- Travel Demand Model Development and Validation
- Existing System Review (Capacity, Safety, multi-modal)
- Year 2045 Transportation Needs Plan and Fiscally Constrained Plan
- Major Street Plan Update
- Bicycle and Pedestrian Plan Update

MTP – PLANNING LEVEL TRAFFIC OPERATIONS

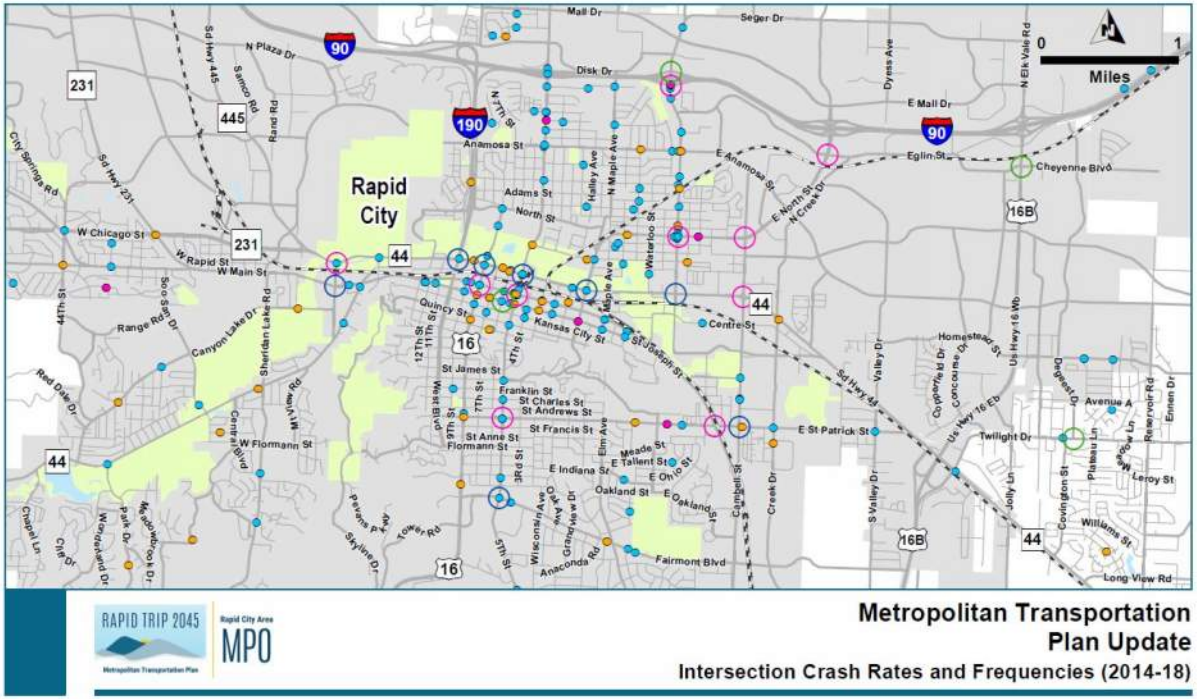
- Looks at existing segment traffic volumes and compares to capacity of facility





MTP – EXISTING SAFETY ANALYSIS

- Looks at prior five years of crash data (2014 -2018)
  - Identified top frequency and crash rate intersections



MTP – MULTI-MODAL

- Planning Level Review of: transit/bus, air, freight

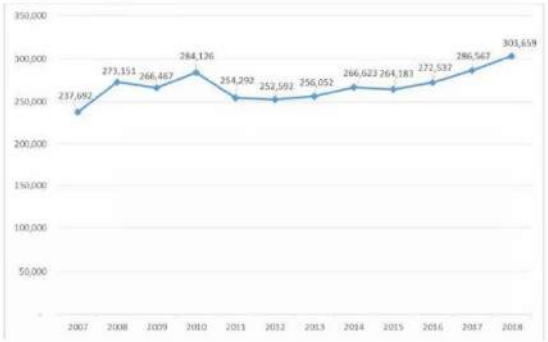
Table 8: Fixed Route Operating Statistics, Rapid Transit[5]

Measure	2013	2014	2015	2016	2017
Passenger Trips	304,599	287,623	291,206	295,060	348,210
Revenue Hours	20,328	19,490	19,452	19,755	21,043
Revenue Miles	294,439	294,080	290,101	289,699	289,031
Operating Expense	941,516	986,199	1,009,286	988,280	997,384
Passenger Revenue	239,430	251,235	229,542	226,710	174,897

Table 9: Demand Response Service Operating Statistics, Rapid Transit

Measure	2013	2014	2015	2016	2017
Passenger Trips	83,572	79,261	84,594	87,280	87,409
Revenue Hours	25,785	25,750	25,655	22,148	22,056
Revenue Miles	279,165	247,369	268,521	271,425	269,557
Operating Expense	1,061,779	1,112,051	1,115,526	1,107,993	1,042,327
Passenger Revenue	187,160	176,674	192,552	207,756	203,037

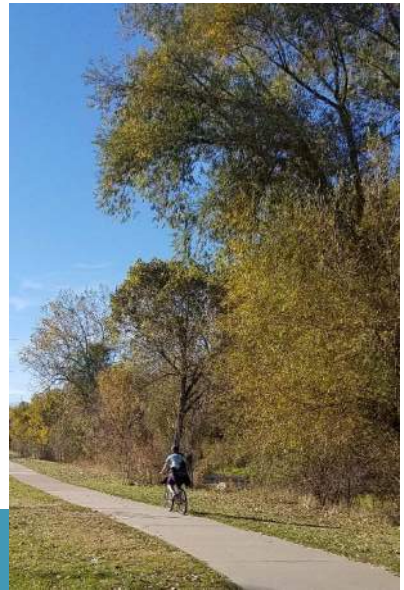
Figure 11: Annual Enplanements for the Rapid City Regional Airport, 2007-2018[7]



[6]Seasonal flights to Newark, NJ, Los Angeles, CA, and San Francisco, CA
[7] Federal Aviation Administration, Air Carrier Activity Information System (ACAIS) data

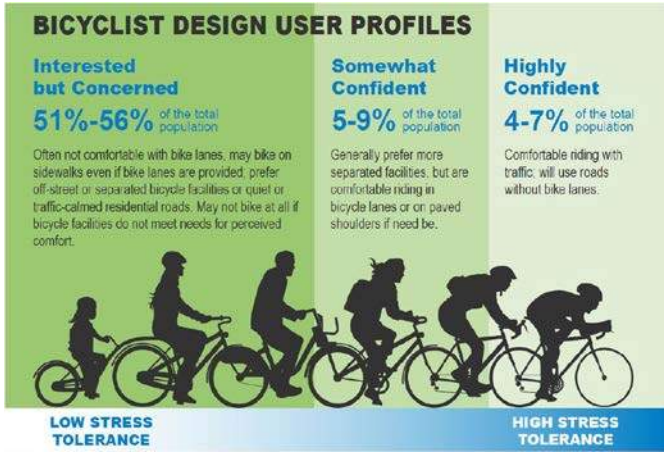
BIKE/PEDESTRIAN PLAN UPDATE

- Assessment of 2011 Plan Progress
- Level of Traffic Stress (LTS)
- Equity Analysis
- Bike/Ped. Demand Analysis
- Network Planning Methods

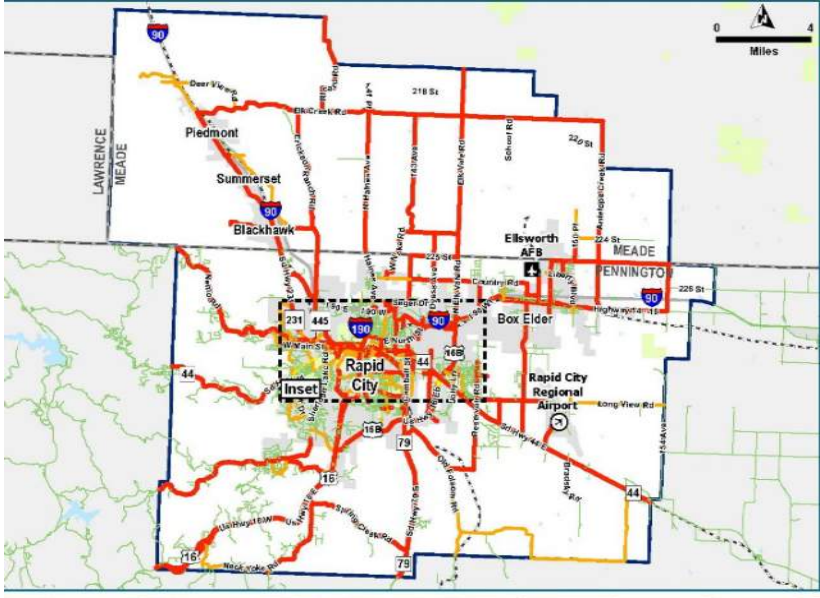


BICYCLE LEVEL OF TRAFFIC STRESS

1. All Ages & Abilities
2. Interested but Concerned
3. Somewhat Confident
4. Highly Confident

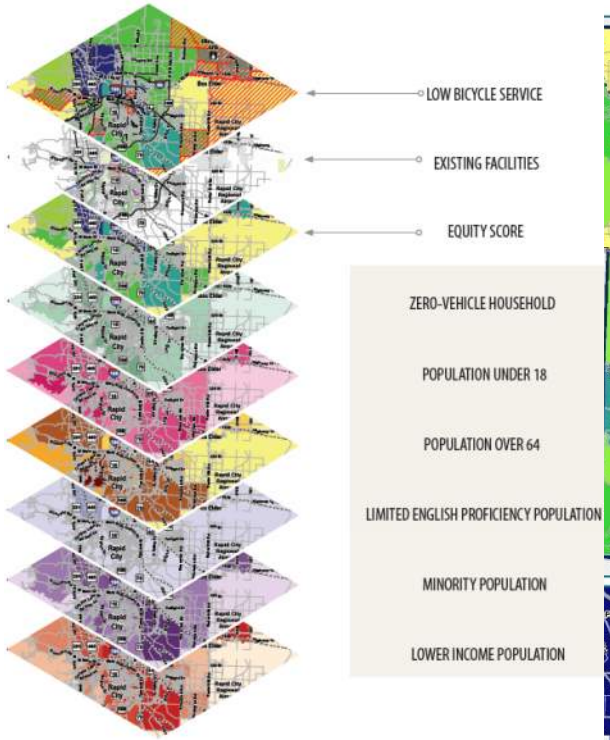


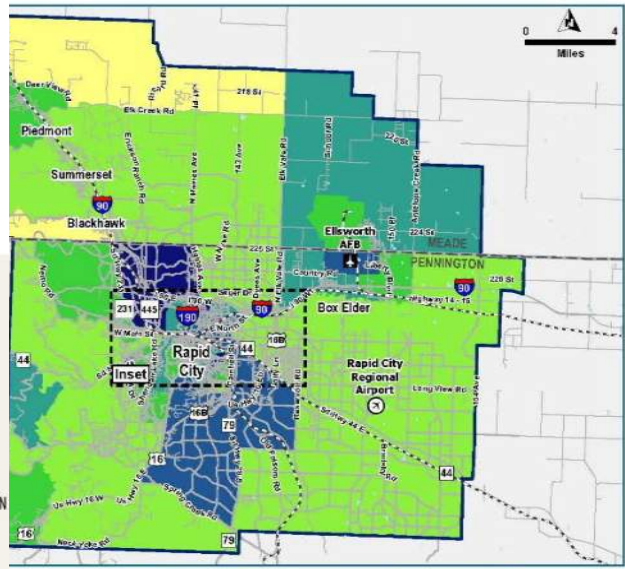
Source: FHWA Bicycle Facility Selection Guide

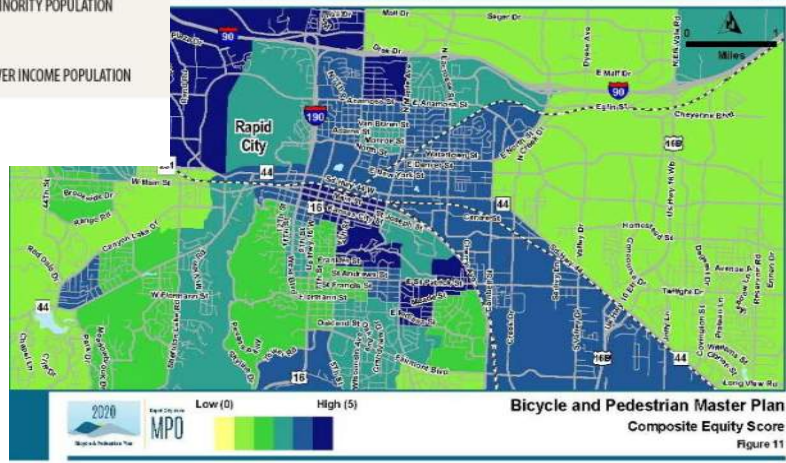


EQUITY ANALYSIS

- Spatial Analysis of Key Demographic Patterns
- Compile Resulting Maps to Develop Overall Equity Scores for Areas within MPO
- Use Equity Scores Maps and Existing Facilities to Identify Areas of Low Bicycle Service
- Darker areas on composite map signify locations with concentrated socio-economic indicators



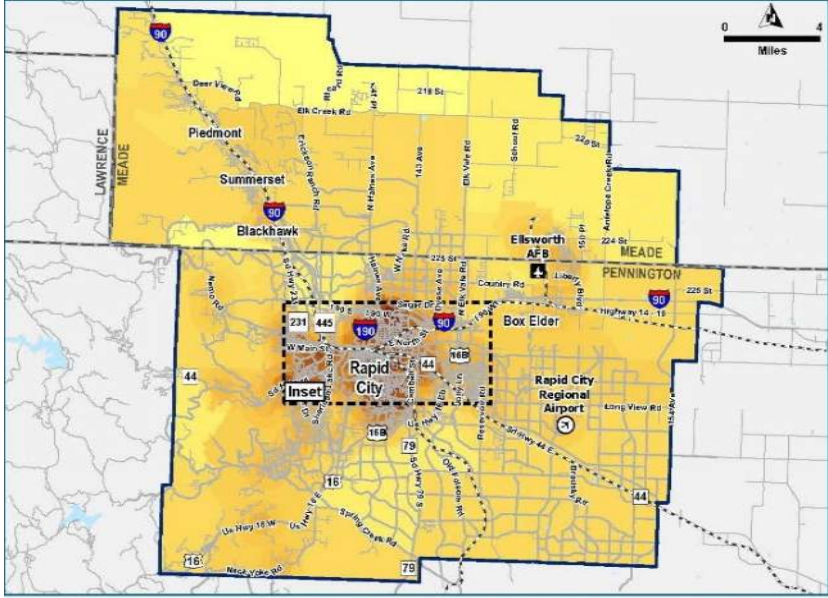


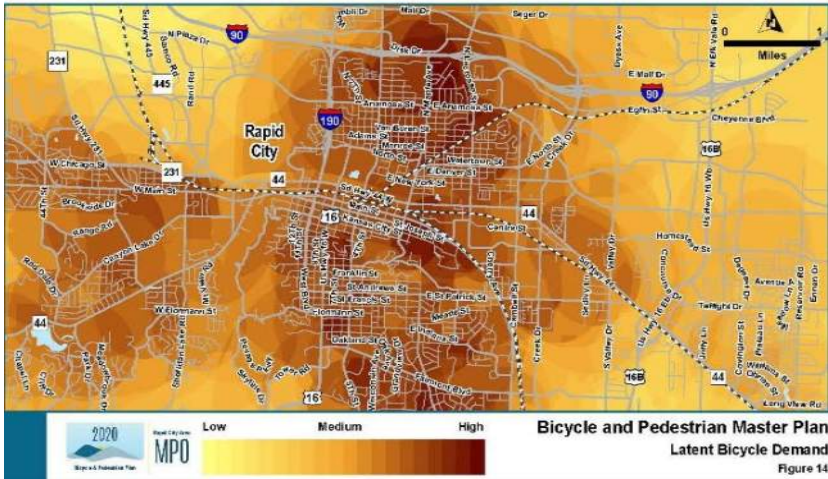


BIKE/PEDESTRIAN DEMAND ANALYSIS

- Three Components:
  - Population + employment density & employment / population ratio
  - Proximity to key destinations & typical walk & bike trip lengths
  - Composite equity score (census block)

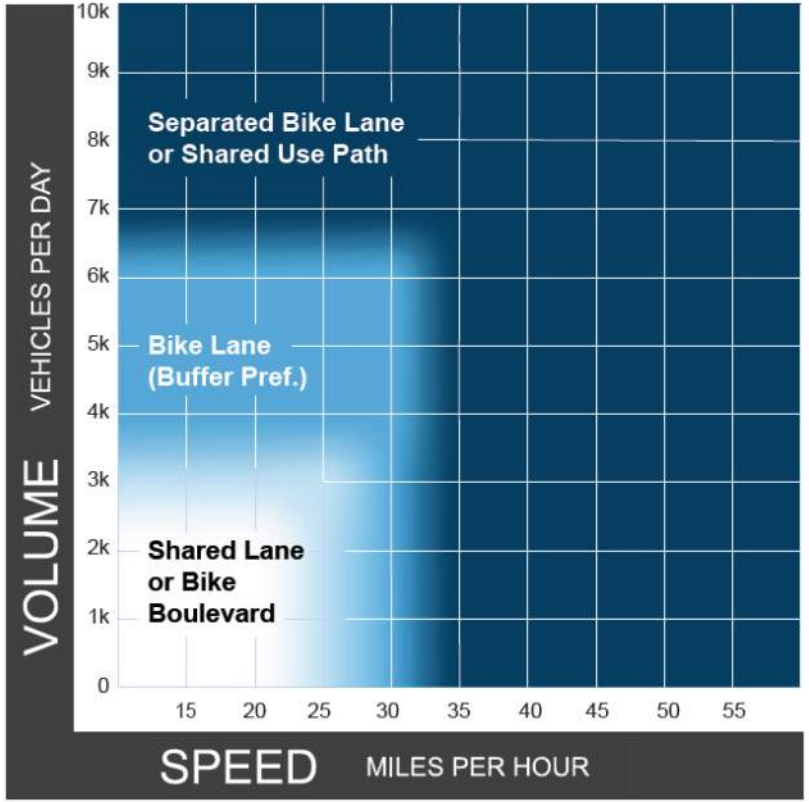
Facility Type	Length
Bike Lane	9.68
Bike Path	16.42
Cycle Track	0.28
Shared Lane	1.79
Shoulder Bikeway	18.47
Side Path	26.33
Total Existing Mileage	72.97





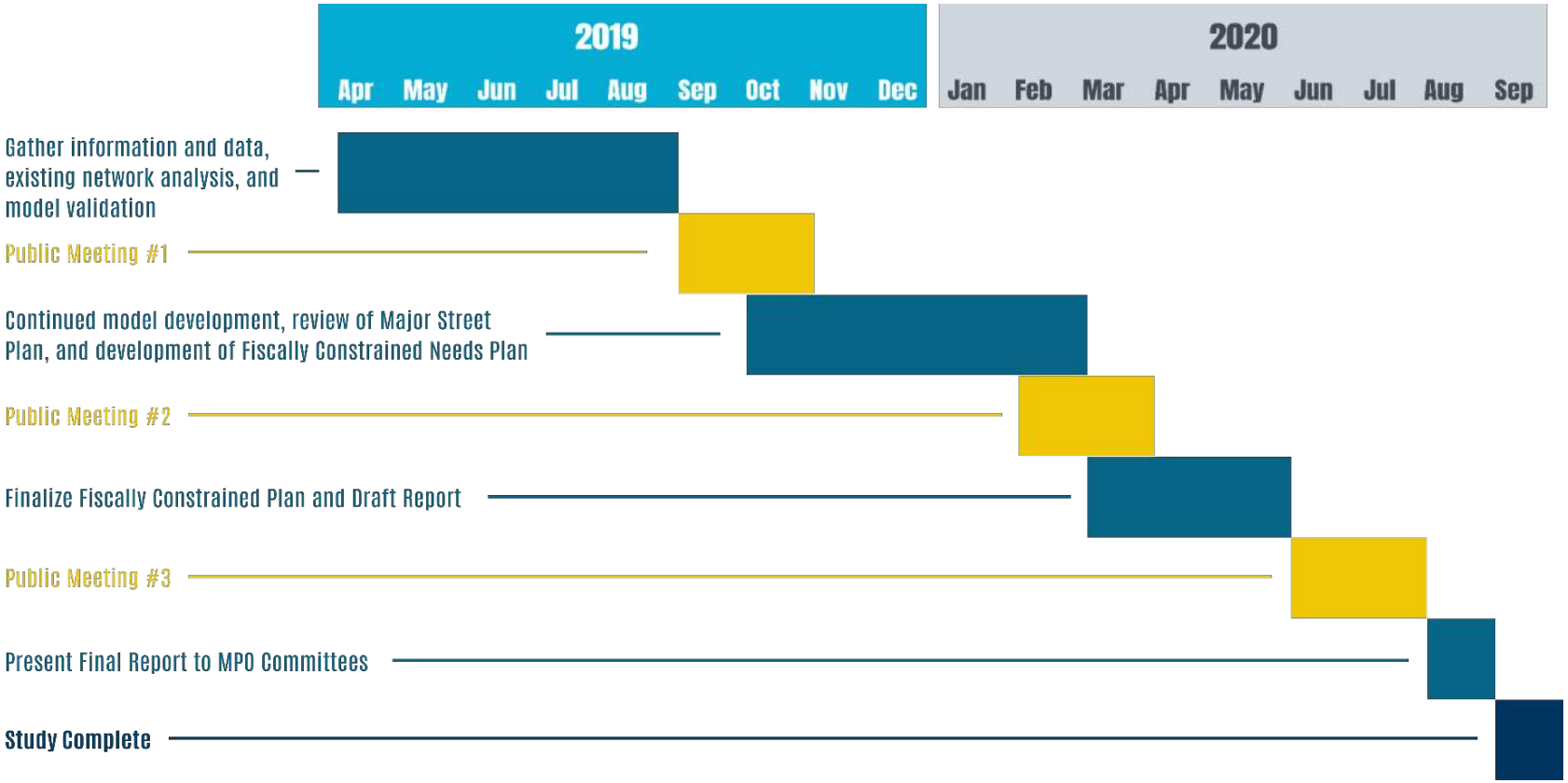
BIKE/PEDESTRIAN NETWORK PLANNING

- Review 2011 Plan projects – keep, remove, modify
- FHWA Bicycle Facility Selection Guide
  - Separated facilities at low volumes and speeds
  - Latest industry standard; AASHTO update will also contain same chart
- Identify / close network gaps
- Focus on low-stress facilities and crossings



Source: FHWA Bicycle Facility Selection Guide

PROJECT SCHEDULE



OPEN HOUSE GOALS

Public Participation

- Gather your input and ideas to shape the future transportation network and needs in Rapid City Area for the next 25 years
- Provide your ideas through:
  - Maps/Markers Exercise
  - Comment Sheets
  - Project Website: www.rapidtrip2045.com

THANK YOU!

Your attendance and input is appreciated!

- We look forward to seeing you at the next meeting next spring!

Follow the project at:

- www.rapidtrip2045.com

RAPID TRIP 2045

Metropolitan Transportation Plan

Rapid City Area MPO

HDR

RAPID CITY AREA Metropolitan Planning Organization

U.S. Department of Transportation
Federal Highway Administration

South Dakota DOT
Connecting South Dakota and the Nation

Appendix C – Public Comments

RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

PUBLIC COMMENT SHEET

RAPID CITY AREA MPO METROPOLITAN TRANSPORTATION PLAN

Your suggestions and comments are important to the Metropolitan Transportation Plan planning process. Please feel free to provide your comments regarding the overall Metropolitan Transportation and Bike and Pedestrian Plans. Some of the issues under review include the Major Street Plan, improvements and needs for the transportation/bicycle/pedestrian networks, multi-modal systems including transit, air, freight/rail, and other transportation related issues for the year 2045 planning horizon. Please send your written comments by mail, email, website, or fax until November 15, 2019 and address your comments to:

HDR Engineering, Inc.
Attn: Dustin Hamilton
703 Main Street, Suite 200
Rapid City, SD 57701

Phone: 605.791.6103
Fax: 605.791.6161
email: dustin.hamilton@hdrinc.com
website: www.rapidtrip2045.com

I work for Black Hills Works. We have a location off of Deadwood which houses 80-100 ppl w/ Developmt Disabilities. We also have folks working just off of Deadwood Ave. in the Valley. Currently there is NO public transportation to either. We are hoping the City change the rules to accomodate these areas.

There is also very limited public transportation on the weekends to folks who work in all areas.

We appreciate all you do!

(Optional)
Participant information

(Name) Kelly Hedges
(Address) Black Hills Works | Black Hills AFCU
(Phone) 605-343-4550
(Email) KHedges@BHWS.com

RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

PUBLIC COMMENT SHEET

RAPID CITY AREA MPO METROPOLITAN TRANSPORTATION PLAN

Your suggestions and comments are important to the Metropolitan Transportation Plan planning process. Please feel free to provide your comments regarding the overall Metropolitan Transportation and Bike and Pedestrian Plans. Some of the issues under review include the Major Street Plan, improvements and needs for the transportation/bicycle/pedestrian networks, multi-modal systems including transit, air, freight/rail, and other transportation related issues for the year 2045 planning horizon. Please send your written comments by mail, email, website, or fax until November 15, 2019 and address your comments to:

HDR Engineering, Inc.
Attn: Dustin Hamilton
703 Main Street, Suite 200
Rapid City, SD 57701

Phone: 605.791.6103
Fax: 605.791.6161
email: dustin.hamilton@hdrinc.com
website: www.rapidtrip2045.com

- kudos to Parks Dept for maintaining bike path
1. like to have under pass so bikes don't cross auto traffic on main path.
2. Need plans for a bike loop around down town & a bike loop around entire city like Sioux Falls has
3. Tie a bike path to centenial trail up HW 44
4. Tie bike path to Mickelson Trail from centenial trail.
5. Use railroad bed to Kadoka & chamberlin
6. Good bike path (for bikes) from Mines to downtown & tie into main bike path.

(Optional)
Participant information

(Name) Willis Sutliff
(Address) 4819 Streamside Rd.
(Phone) 605 718 0559
(Email dr.w.sutliff@gmail.com

RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

PUBLIC COMMENT SHEET

RAPID CITY AREA MPO METROPOLITAN TRANSPORTATION PLAN

Your suggestions and comments are important to the Metropolitan Transportation Plan planning process. Please feel free to provide your comments regarding the overall Metropolitan Transportation and Bike and Pedestrian Plans. Some of the issues under review include the Major Street Plan, improvements and needs for the transportation/bicycle/pedestrian networks, multi-modal systems including transit, air, freight/rail, and other transportation related issues for the year 2045 planning horizon. Please send your written comments by mail, email, website, or fax until November 15, 2019 and address your comments to:

HDR Engineering, Inc.
Attn: Dustin Hamilton
703 Main Street, Suite 200
Rapid City, SD 57701

Phone: 605.791.6103
Fax: 605.791.6161
email: dustin.hamilton@hdrinc.com
website: www.rapidtrip2045.com

At Western South Dakota CAA at 1844 Lombardy Dr. we have a large population of people using what transportation. More access to bus stops on S. Plaza near Cook will be a great improvement for people easy to ride, we service over 5,000 people yearly.

(Optional)
Participant information

(Name) _____
(Address) _____
(Phone) _____
(Email) _____

RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

PUBLIC COMMENT SHEET

RAPID CITY AREA MPO METROPOLITAN TRANSPORTATION PLAN

Your suggestions and comments are important to the Metropolitan Transportation Plan planning process. Please feel free to provide your comments regarding the overall Metropolitan Transportation and Bike and Pedestrian Plans. Some of the issues under review include the Major Street Plan, improvements and needs for the transportation/bicycle/pedestrian networks, multi-modal systems including transit, air, freight/rail, and other transportation related issues for the year 2045 planning horizon. Please send your written comments by mail, email, website, or fax until November 15, 2019 and address your comments to:

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SDSM+T just recently completed a ~10 yr master plan. Growth is planned to the west of campus. There is a need to calm traffic past campus to provide a safe environment for students, staff + faculty. Birch + St Joseph and Steele + Saint Joseph are both extremely dangerous ~~crossings~~ intersections. We have had an individual hit on a bike at Birch + St. Joseph + multiple close calls.

- We also would like to see better biking connections from campus to the bike path + through campus.
- Public transportation availability at a more frequent service level is also a need for students
- Our master plan looks at a connection from St Patrick to St. Joseph. This could also be a biking connection w/ the road.

(Optional)
Participant information

(Name) Jerilyn Roberts - South Dakota School of Mines + Technology
(Address) 501 East Saint Joseph Street RC, SD 57701
(Phone) 605-393-7345
(Email) jerilyn.roberts@sdsmt.edu

Transportation Committee Statement

As the Rapid City community continues to grow there is a desperate need for our public transportation to grow with it. It has been multiple years since our public bus routes have been analyzed and extended. For some people, public transportation is the only reliable option for transportation. Could you imagine only being able to work in a certain area of town or visit certain areas of town because the bus doesn't go that way or doesn't stop anywhere near there. Also, image finding a really great job that will allow you to provide for you and your family but it's not feasible because you aren't able to drive or can't afford to drive and there isn't a bus stop within a mile or two.

The public transportation system is meant for the public to be able to get around Rapid City but with our current routes it is very limited. Limited routes affect people's way of life, their world of work and it also the businesses that strive to employ them. Some of Rapid City's largest employers are struggling finding quality workers, not because there isn't any workers out there but because there isn't enough workers that have reliable transportation to get to and from work each day. These businesses don't sit on a bus route, but with the size of their business a different location would almost be impossible.

There are several businesses impacted daily by the lack of transportation to the growing east side of town. It has been a staffing challenge for these businesses since there is not an option for employees to take the bus. As the Rapid City community grows and will continue to grow over the next several years, it's in the best interest of the Rapid City community to allow the public transportation to grow with it. There is a lot of cost, we get it and it's not going to be a flawless process, but it is a true need. Based on this need, a group of businesses came together to form a Transportation Committee. Our Committee has been in contact with Lisa Modrick, Ritchie Nordstrom, Kay Urban, Rich Sagen and Megan Gould.

Businesses in our community who joined our Transportation Committee and are impacted by the current bus system:

- Advance Services, Inc. (ASI)
- Fenske Media
- Synchrony Financial
- Open Bible Church
- Rapid City Community Impact
- Chris-Bro Hospitality (Several Locations)
- Granite Automotive
- Black Hills State University Rapid City Campus
- Qwest
- Great Plains Tribal Chairman's Health Board
- RPM and Associates
- My Place Rapid City

- Kids Kastle
- Adecco Staffing
- People Ready
- Black Hills Knowledge Network
- Goodwill of the Great Plains
- Kelly Services
- Liv Hospitality (Several Locations)
- Triple Crown Hotels
- H-S Precision
- Pioneer Credit
- McKie Automotive
- Rushmore Honda
- MDU
- Cambria Hotel and Suites
- Sleep Inn & Suites
- Rapid City Community Work Center
- Little Nest Preschool
- Western South Dakota Community Action
- Comfort Suites
- Rural American Initiative

The data collected from the businesses in 2018 calculated 100 employees/volunteers impacted by the bus system.

Melissa Hurley
ASI-Human Resource Manager
P: 605-388-4046
C: 605-415-6639
Melissa.hurley2@geappliances.com

Project Website Comments

Comment #1
10/25/2019 10:31:22
coachtschetter@gmail.com
Rob Tschetter

Good morning, I live in dark canyon, we have dozens of bike riders and runners daily running in the canyon. It's a great thing! The problem is to get to dark canyon they have to run against traffic on hwy 44 for about 1/4 mile on a dangerous curve. If the city would continue the bike path to the mouth of dark canyon it would be much safer. I see the Stevens cross country team run down there all the time. I cringe knowing they had to run near that hwy when a bike path on the other side of the guardrail could easily be created.

Thanks

Comment #2
10/30/2019 14:33:56
ghwadsworth1@gmail.com
Garth Wadsworth

Hi,

I want to preface this by saying that I missed the first several minutes of the introduction and some of my concerns may have been addressed already.

My first concern is with the methods used to measure the usage of bike lanes and paths and the conclusions drawn from them. It was my understanding that pedestrian and bike counts would be used as a metric for prioritizing investments new bike lanes and paths. Bike and pedestrian counts are insufficient measures alone. An equivalent to VMT is needed to fully interpret the use of a bike lane or path as well as the reduction in traffic congestion. An individual who commutes 10 miles by bike has the same effective use as 10 individuals who commute 1 mile each. The commuter riding 10 miles would be drastically underestimated by the current methods used to count users/ridership.

There are a number of apps that could be used to estimate bike and pedestrian miles traveled but they would be, at best, proxies.

There are a few corridors that would benefit greatly from small improvements. Simple signage and just a few feet of separated bike lanes would drastically improve safety.

The Jackson blvd bike lane needs to be extending from Mountain View Rd to Main. The road is plenty wide, even with the street parking. The street parking seems underused however should be surveyed to get numbers. The intersection of Jackson and W Main is a total nightmare but would require serious investments to fix. There is also no safe path to cross from W Main to Omaha, Cross st, or W Rapid St. Using Halley Park between Main and St. Joes would require significant improvements in access to the park from the Jackson-W Main intersection.

There seems to be the perception that the bike path is a suitable alternative to separated bike lanes for bike commuting. It's not. The bike path is a great recreational amenity, however, is not a useful means of transportation. The underpasses are either flooded (April - June) or iced over (October - March) which leaves an incredibly short commuting season. Bike lanes on the road are a cost effective means of reducing VMTs and will avoid the troubles of the bike path without increasing maintenance needs.

Final comment; I feel that the decision to use the future road plan maps for the public meetings created unnecessary confusion and distracted from a grounded conjversation.

I'd be happy to discuss things further and clarify anything if needed,

Thanks

Garth

Comment #3
11/6/2019 15:22:27
ghwadsworth1@gmail.com
Garth Hudson Wadsworth

I think the bus stops need to be revisited as a part of a pedestrian-oriented, multi-modal system. The physical bus stops themselves are severely lacking. They need to be more than a little sign next to a busy street.

It seems that 'accessibility' to bus transit was measured by the distance to a bus stop and the means to improve access was to increase the number of stops with little consideration for the accessibility or usability of the added stops themselves. The number of bus stops should be condensed and the accessibility of each stop should be improved by making stops a focal point of pedestrian plans.

Hamilton, Dustin

From: Harrington Kip <Kip.Harrington@rcgov.org>
Sent: Wednesday, October 30, 2019 1:51 PM
To: Hamilton, Dustin
Subject: Additional public input

I have received more input via text and facebook messenger as follows:

Shoulders on Spring Creek Road to allow for safer bicycle travel.

I feel that there is an urgent need for a crosswalk at the corner of South Canyon Road and Capital Street. There is heavy pedestrian traffic, especially Pinedale students/families as there is no public transportation beyond N 44th Street. I also want to point out the walking path "shortcut" that connects South Canyon to Wilderness Park. I apologize I didn't raise these concerns at the meeting, but I just saw that this group existed on the news.

An attendee voiced concerns about LOS on Park Drive and thought the LOS identified on the map was incorrect.

Kip Harrington
Planner III
Long Range Planning
Rapid City Community Development
300 6th Street
Rapid City SD 57701
(605) 394-4120
kip.harrington@rcgov.org

Hamilton, Dustin

From: CJ Means <cj.means@gptchb.org>
Sent: Thursday, October 31, 2019 7:48 AM
To: Hamilton, Dustin
Cc: Bernie Long; Jerilyn Church
Subject: RC Transportation Meeting (Oct 29th)

Good Morning Dustin (HDR Engineering Inc.),

It was nice meeting you and your staff at the RC Transportation meeting on October 29th. As I mentioned during the meeting, the Great Plains Tribal Chairman's Health Board (GPTCHB) / Oyate Health Center (OHC) along with the Indian Health Service (IHS) are in the final design phase and starting the pre-construction phase this fall of the new health care facility on the old Sioux San Campus. The tentative date of breaking ground for construction is the Spring of 2020, which will affect access to the old Sioux San Campus. We would like to sit down and have a table discussion soon to talk about any adverse effects this may cause for the OHC and IHS patients / staff along with any potential encumbrances for the public and surrounding schools during construction.

We can visit about the logistics during our visit.

Please let me know when we can visit.

Respectfully,

Cecil (CJ) Means II, BS, MHA
Director of Facilities & Support Services
Oyate Health Center / Great Plains Tribal Chairmen's Health Board
3200 Canyon Lake Drive
Rapid City, SD 57703
cj.means@gptchb.2
(P) 605.355-2405, (C) 605.200-0001

Hamilton, Dustin

From: Horton Patsy <Patsy.Horton@rcgov.org>
Sent: Thursday, October 31, 2019 10:54 AM
To: 'cj.means@gptchb.org'
Cc: 'bernie.long@gptchb.org'; 'jerilyn.church@gptchb.org'; Fisher Vicki; Young Ken; Harrington Kip; Brennan Kelly; Solon Brad; Hamilton, Dustin
Subject: RC Transportation Meeting (Oct 29th)

Mr. Means –

Thank you so much for participating in the Metropolitan Transportation Plan open house on October 29th. Dustin Hamilton from HDR, Inc. shared your email with me and I wanted to reach out to you in reference to your construction plans. We are excited about the new health care facility on the Sioux San Campus and the opportunity to visit with you and your staff about the plans for that facility.

We have worked with other public agencies in reviewing site plans before the building permit is issued and construction starts. This allows the city's Development Review Team to provide the agency with courtesy review comments from the various disciplines involved with site development. In the past we have found that a courtesy review of the proposed site plan and building plans, in many instances, reduces or eliminates redesign/reconstruction to address such things as handicap accessibility, fire protection, access locations, bus routing/stop accessibility, etc. This would also provide a sort of "laundry list" of items for you and your development team to consider to enhance your facility design and/or layout.

After we have had the opportunity to look at your plans, I can then schedule time for you to visit with the Development Review Team as you had suggested in your email to Dustin.

Additionally, as Kelly mentioned to you at the Open House, early next year we are also starting the Transit Development Plan update. We have already added your contact information to our stakeholder list so that you and your staff can participate in those discussions.

Thank you again Mr. Means for allowing our Development Review Team the opportunity to provide comments on your site plan/building plans. We look forward to visiting with you in the near future.

Patsy Horton, Manager
Long Range Planning Division
Department of Community Development
City of Rapid City
300 Sixth Street
Rapid City, South Dakota 57701
(605) 394-4120 fax: (605) 394-6636
patsy.horton@rcgov.org

Notable quote:

It is easier to do a job right than to explain why you didn't.
President Martin Van Buren

From: CJ Means [mailto:cj.means@gptchb.org]
Sent: Thursday, October 31, 2019 7:48 AM
To: Hamilton, Dustin <Dustin.Hamilton@hdrinc.com>
Cc: Bernie Long <bernie.long@gptchb.org>; Jerilyn Church <jerilyn.church@gptchb.org>
Subject: RC Transportation Meeting (Oct 29th)

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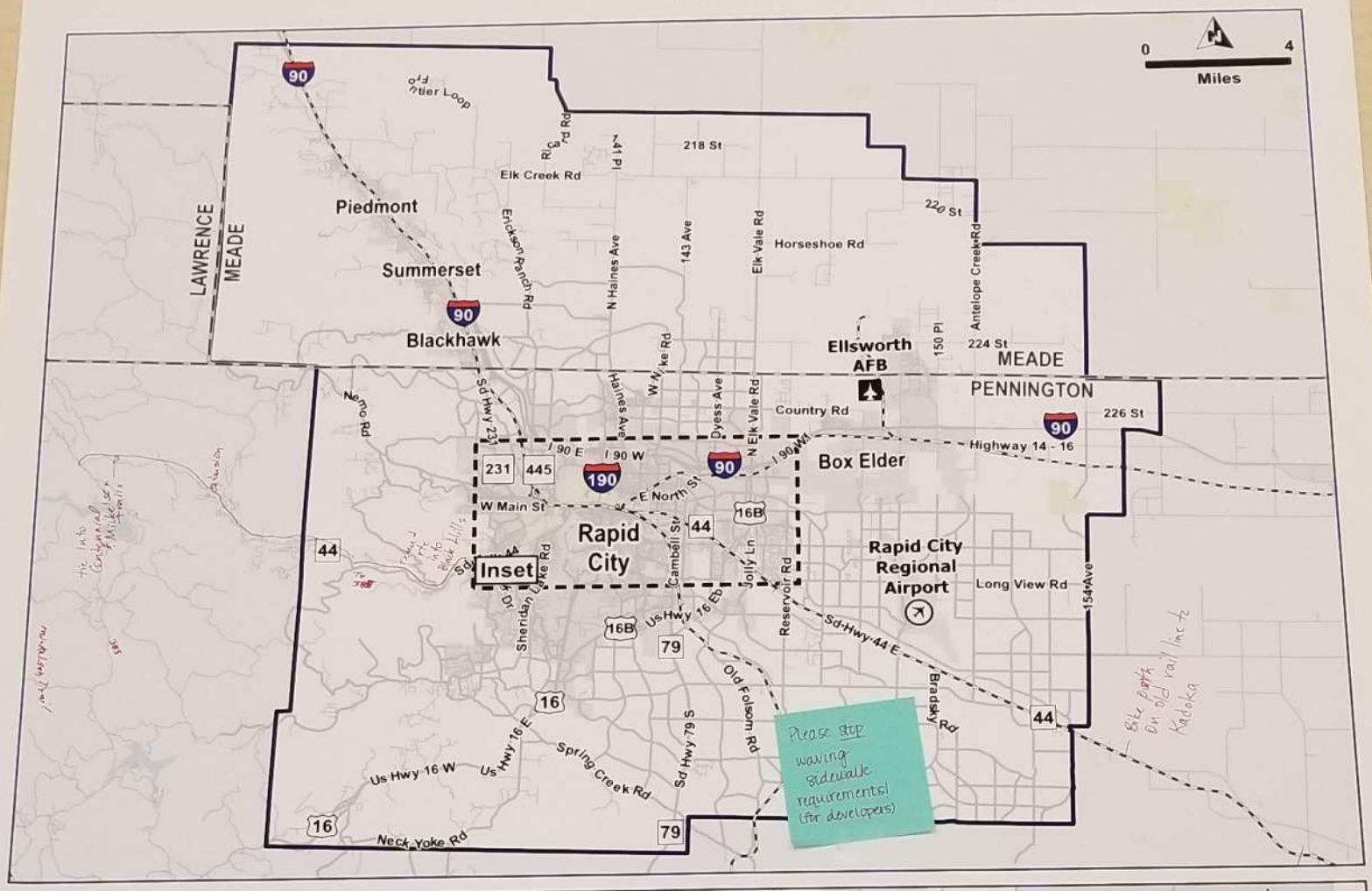
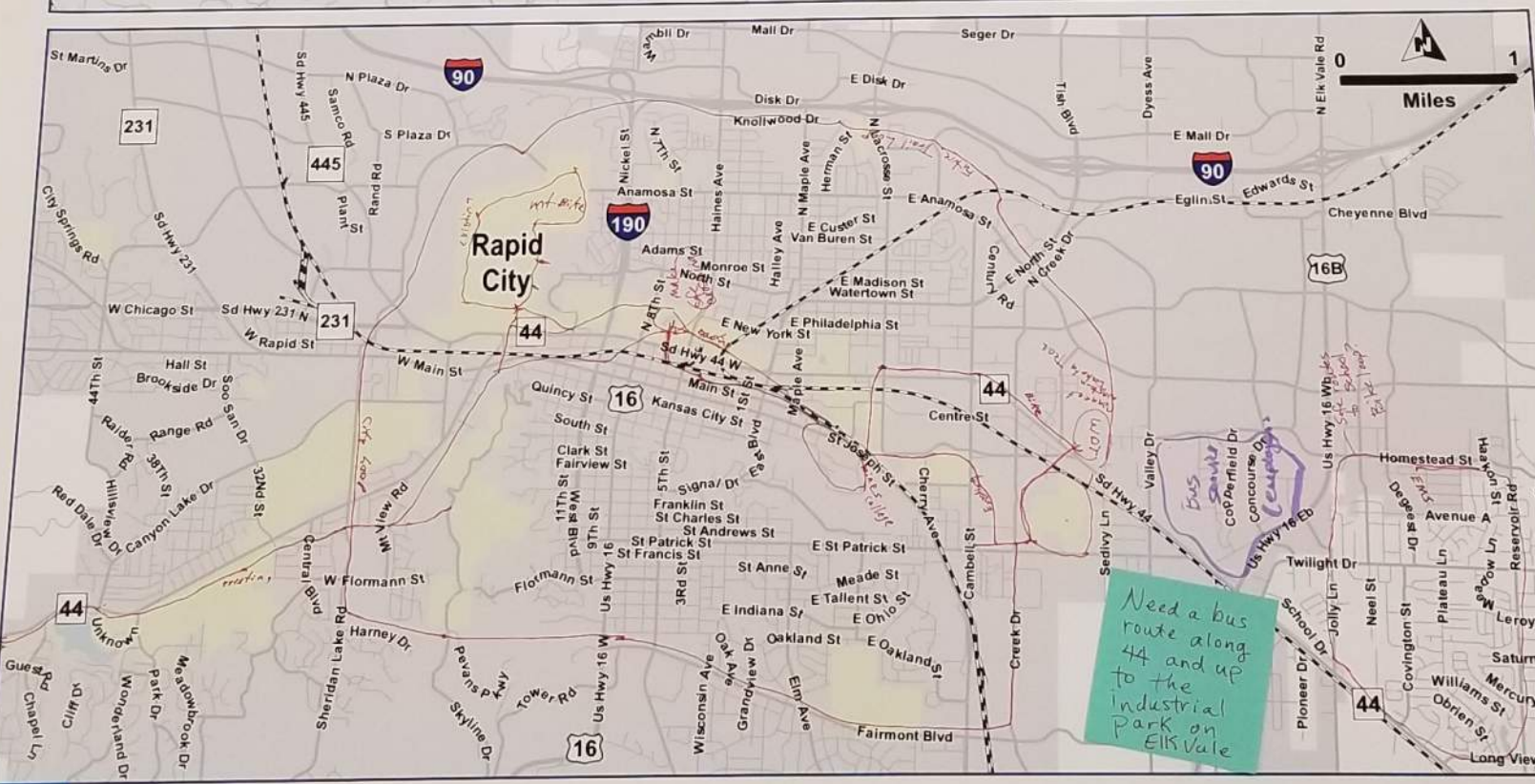
Director of Facilities & Support Services
Oyate Health Center / Great Plains Tribal Chairmen's Health Board
3200 Canyon Lake Drive
Rapid City, SD 57703
cj.means@gptchb.2
(P) 605.355-2405, (C) 605.200-0001

Comment #	Rapid City Location (if applicable)	Comment	Note
			MAP #1
1	NA	Bike Path around entire town/Loop	Red writing
2	NA	Please stop waiving sidewalk requirements for developers	Teal sticky note
3	Highway 44 to 385	Extend route in the Black Hills (out Hwy 44 to meet with 385) tie into Centennial Trail near pactola	Red writing
4		Bike path on old rail line to Kadoka	Red writing
5	North Elk Vale Area	Need a bus route along 44 and up to the industrial park on Elk Vale	Teal sticky note
6	Copperfield Dr and Concourse Drive near Elk Vale/Hwy 44	Bus Service (circled Copperfield/Concourse Drive)	Purple highlighter
7	Jolly Lane/Homestead/Reservoir Rd/Hwy 44	EMS (Jolly Lane/Homestead/Reservoir Rd/Hwy 44)	Red writing
8	Jolly Lane/Homestead/Reservoir Rd/Hwy 44	Safe routes to school Bike Loop?	Red writing
9	Fairmont/Sheridan Lake Rd/Knollwood Dr. Future Trail Loop/Sedivy Lane/Creek Drive	City Loop	Red writing
10		(Bike Trail to) Western Dakota Tech	Red writing
11		Bike Trail Connecting WDT and School of Mines	Red writing
12		Bike Trail connecting Mt. View area to West Main and Hwy 44	Red writing
13		Loop around M. Hill base (?)	Red writing
14	North Street/Hanes Area	Make safe crossing (North Street/Haines)	Red writing
			MAP #2
15	MPO Area Map	Bike Route around City	Fluorescent yellow sticky note
16	SDSMT	SDSMT Comment - safety concern for traffic flow on Ste. Joe - need to slow down	Fluorescent yellow sticky note
17	SDSMT	SDSMT Comment - Connect to bike path (Jerilyn Roberts 605.393.7395)	Fluorescent yellow sticky note
18		Intersections at Birch and St. Joe and Steele and St. Joe	Fluorescent yellow sticky note
19	Hwy 16/Neck Yoke	Highway 16 at Neck Yoke: (a) Deceleration lane on Hwy 16 North bound at Neck Yoke (b) Access lane from Neck Yok on to Hwy 16 (c) Deaccel lane south bound into Reptile Gardens (d) Stoplight at Hwy 16 and Neck Yoke	Fluorescent yellow sticky notes
20		Transportation to Western Dakota Technical Institute	Fluorescent yellow sticky notes
21		Bus transportation to Great Plains Tribal, Chairman's Health Board, BH State University Center	Fluorescent yellow sticky notes
22		Need for public transportation to Feeding South Dakota - 40 lb. of food average, no stop right there.	Fluorescent yellow sticky notes
23		Need for public transportation after 6PM	Fluorescent yellow sticky notes
24			**MAP #3**
25	Hwy 44 at Magic Canyon	At Hwy 44 and Magic Canyon Road the shoulder disappears going NE. There is a lot of bike traffic that this poses a danger to. It is a small section that seems like it could be fixed relatively easy.	Fluorescent yellow sticky note/green pen
26		"Build This" - highlighted Namless Cave Road to Nemo Road	Green highlighter on map
27		"Build This" - highlighted Falling Rock from Hwy 44 to Sheridan Lake Road	Green highlighter on map
28	North Elk Vale Soccer Fields	Sidewalks in soccer field and Cabela's area	Fluorescent yellow sticky note/Orange Highlighter
29		Need better shoulders on Nemo and Sheridan Lake Road	Fluorescent yellow sticky note/green pen
30	Gap (Hwy 44)	Gap is dangerous. No room on roadway and sidewalk is poor and business with Granite frequently blocks the sidewalk	Fluorescent yellow sticky note/red pen
31	Deadwood Ave/N. Plaza Drive	Sidewalks and bike on North Plaza and Deadwood Ave. Families are walking on road/streets	Fluorescent yellow sticky note/red pen/ Orange Highlighter on Plaza Drive/Deadwood Ave.
32	Range Road/Soo San	Complete 3-way stop crosswalks (including curbouts) at Range Road and Soo San Drive by West Middle School	Fluorescent yellow sticky note/green pen
33	Sheridan Lake Rd	Bike lane out Sheridan Lake Road - dangerous and demand	Fluorescent yellow sticky note/red pen
			MAP #4
34		Shoulder rumble strips dangerous for bikes. Wider shoulders may not originally be $ constraining.	
35		Signage for both motorists and non motorists	Yellow sticky note/blue writing
36	Bike Path	Bike Path Signs. Better labelling (signage) marking responsible department on signage to encourage reporting problems. Lots of confusing disconnects	Yellow sticky note/blue writing
37		Bike path courtesy: - enforcement or catch people being good and coast; - pets on leash; leash not across path; able to hear (not on headphones); polite signaling;	Yellow sticky note/blue writing
38	Nemo Road	Potholes - infrastructure upkeep!	Yellow sticky note/blue writing
39	Sheridan Lake Road	Nemo Road - "Share the road" signs	Pink sticky note
40	Highway 44	Sheridan Lake Rd "Share the road" signs	Pink sticky note
41	5th Street/Downtown	Bike lane signage and separators on 44 (44 & Chapel, 44 & Park, 44 & Sheridan)	Pink sticky note/blue pen
42		Need a user-friendly way to connect the new Frisbee golf course at Lacroix links to the downtown areas.	
43		5th Street headed north is scary and not family (bike) friendly	Pink sticky note/red pen
		Create dedicated bike path spur into north rapid	Pink sticky note/red pen
		Reroute trains away from City Center	Pink sticky note

44		Widen shoulders on substandard width roads and lanes. Signage to warn motorists and non motorists	Yellow sticky note/blue writing
45	St. Joe/5th and 6th.	No access from Jackson to downtown south of Omaha. No safe connections from St. Joe to Omaha West of Fifth	Pink Note/red writing. Red arrows pointing north from St Joe across Omaha, at 5th and 6th
46	Deadwood Ave Area	This area is expanding (circled Deadwood/Rand Area). Need fixed bus route/stops Rand Road and Deadwood Ave.	Pink sticky note
47	Canyon Lake Drive/Soo San Drive.	About 200 feet to building; controlled access; need traffic signs/lights on Canyon Lake and Soo San; No cross walk marking for patient/school kids; transit buses will not come on Sioux San property; Patients walk up hill.	Pink sticky note
48			
49			**Existing and Proposed Bicycle Facilities Map**
50		Extend Bike Path to Raider Park (near Stevens High)	Red writing on board
51		Tie in bike path from Plaza Drive to M-Hill	Purple highlighter
52		Bike path along Deadwood Avenue	Purple highlighter
53		Bike path to the downtown YMCA	Purple highlighter
54		Better crossing at Mt. View and Omaha	Purple highlighter
55		Bike access to Lakota Homes	Purple highlighter
56		Underpass on Canyon Lake Drive from Mary Hall Park to ball fields	Purple highlighter



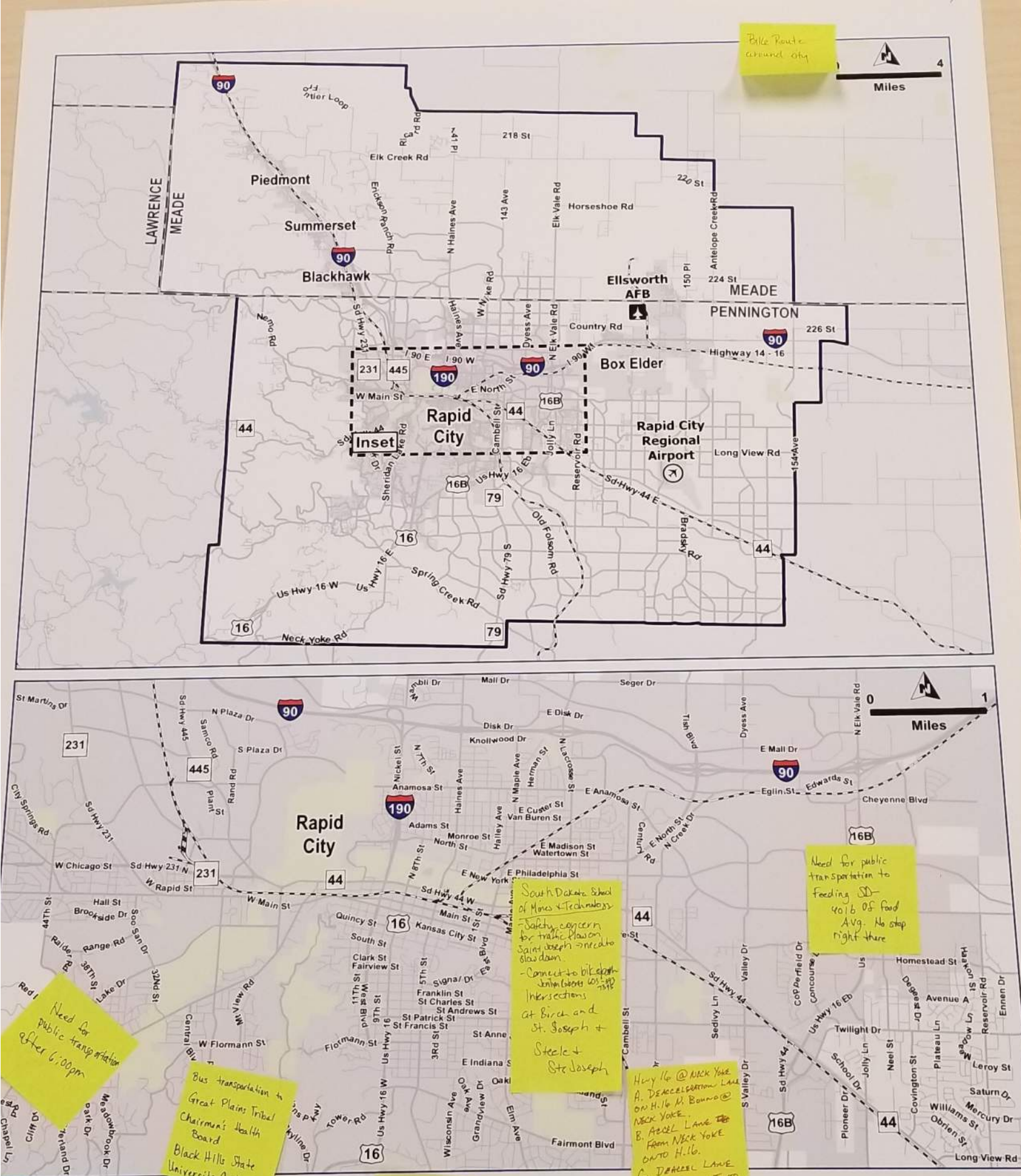


RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

#1

Metropolitan Transportati
Plan Upda
Public Suggested Improveme


Bike Route around city
0
4
Miles
LAWRENCE
MEADE
Piedmont
Summerset
Blackhawk
Elk Creek Rd
218 St
220 St
Horseshoe Rd
Erickson Ranch Rd
N Haines Ave
143 Ave
Elk Vale Rd
Antelope Creek Rd
Ellsworth AFB
150 Pl
224 St
MEADE
PENNINGTON
Country Rd
226 St
Highway 14 - 16
Box Elder
Nemo Rd
Sd Hwy 231
W Nike Rd
Hailey Ave
Dyess Ave
N Elk Vale Rd
I 90 E
I 90 W
231
445
190
90
W Main St
E North St
16B
44
Rapid City
Inset
Cambell St
Jolly Ln
Reservoir Rd
Rapid City Regional Airport
Long View Rd
154 Ave
Sheridan Lake Rd
Us Hwy 16 E
Sd Hwy 44 E
79
Old Folsom Rd
Bradsky Rd
16
Us Hwy 16 W
Spring Creek Rd
Sd Hwy 79 S
Neck Yoke Rd
St Martins Dr
Mall Dr
Seger Dr
N Plaza Dr
E Disk Dr
Disk Dr
Knollwood Dr
S Plaza Dr
Samco Rd
Sd Hwy 445
Rand Rd
Plain St
Nickel St
N 7th St
Anamosa St
Haines Ave
N Maple Ave
Herman St
Lacrosse St
Tish Blvd
E Mall Dr
Eglin St
Edwards St
Cheyenne Blvd
E Anamosa St
E Custer St
Van Buren St
Adams St
Hailey Ave
Monroe St
North St
E Madison St
Watertown St
E Philadelphia St
E New York St
N 8th St
Century Rd
N Creek Dr
City Springs Rd
Sd Hwy 231
W Chicago St
Sd Hwy 231 N
W Rapid St
W Main St
Sd Hwy 44 W
Hall St
Brookside Dr
44Th St
Range Rd
Raider Rd
38Th St
Lake Dr
32ND St
Quincy St
Kansas City St
Main St
1st St
South St
Clark St
Fairview St
5Th St
Signal Dr
Franklin St
St Charles St
St Andrews St
St Patrick St
St Francis St
St Anne St
W Flormann St
Flormann St
W View Rd
11Th St
West Blvd
9Th St
3Rd St
E Indiana St
Oak Ave
Grandview Dr
Wisconsin Ave
Elm Ave
Fairmont Blvd
Tower Rd
Us Hwy 16 W
Us Hwy 16
Sd Hwy 44
Valley Dr
Sedivy Ln
Cop Perfield Dr
Concourse
Homestead St
Avenue A
Degeest Dr
Twilight Dr
Jolly Ln
Neel St
School Dr
Plateau Ln
Reservoir Rd
Ennen Dr
Leroy St
Saturn Dr
Mercury Dr
Williams St
Obrien St
Covington St
Pioneer Dr
Long View Rd
0
1
Miles
Need for public transportation to Feeding SD— 40% of food Avg. No stop right there
South Dakota School of Mines & Technology
- Safety concern for traffic flow on Saint Joseph → need to slow down
- Connect to bike path
Intersections at Birch and St. Joseph & Steele & St. Joseph
Need for public transportation after 6:00pm
Bus transportation to Great Plains Tribal Chairman's Health Board
Black Hills State University Center
Transportation to Western Dakota Technical Institute
#2
Hwy 16 @ NECK YOKE
A. DECCELERATION LANE ON H.16 N. BOUND @ NECK YOKE.
B. ACCEL LANE FROM NECK YOKE ONTO H.16.
C. DECCEL LANE SOUTH BOUND INTO REAPTLE GARDENS.
D. STOPLIGHT @ H.16 & NECK YOKE
RAPID TRIP 2045
Metropolitan Transportation Plan
Rapid City Area
MPO
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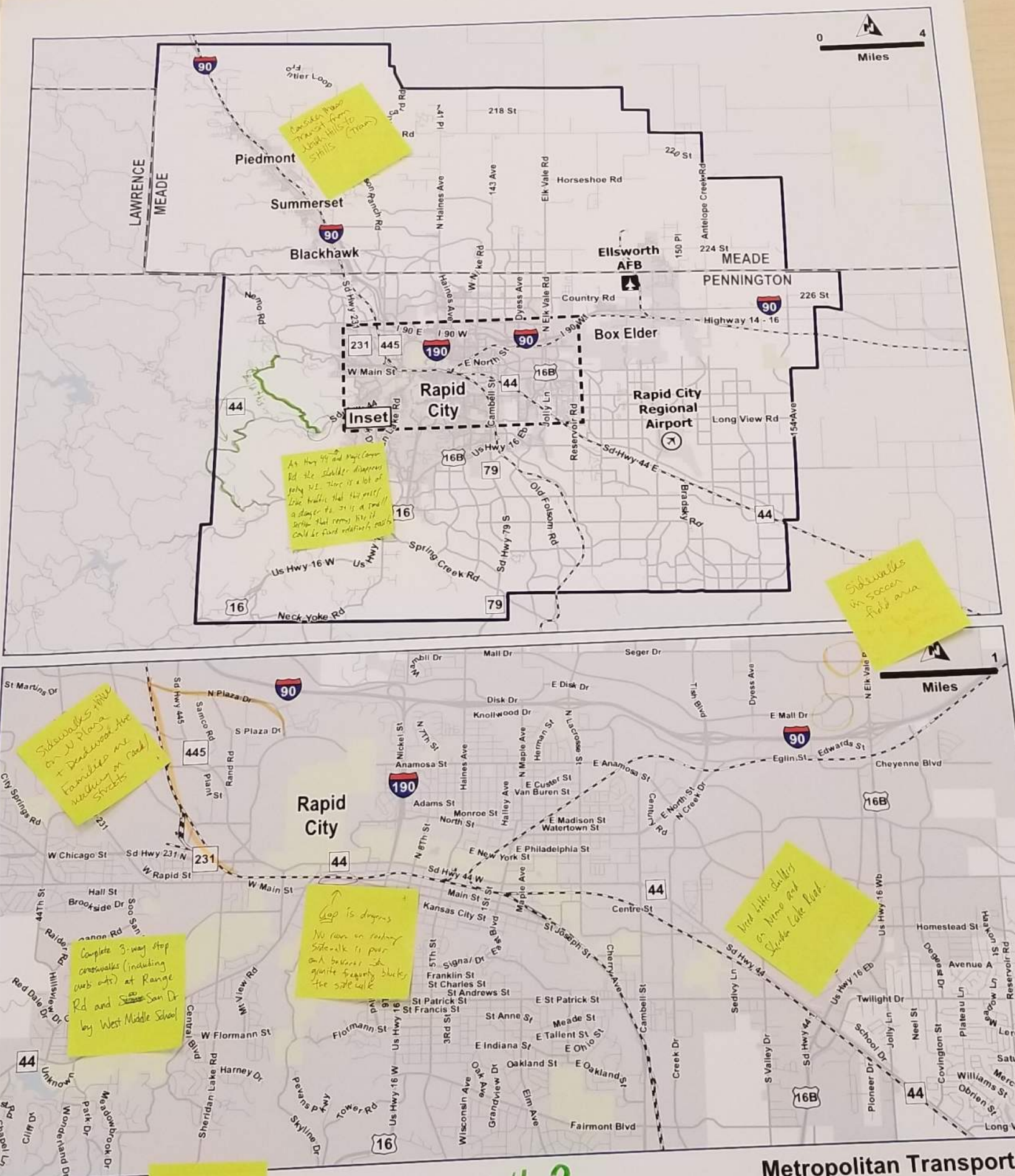
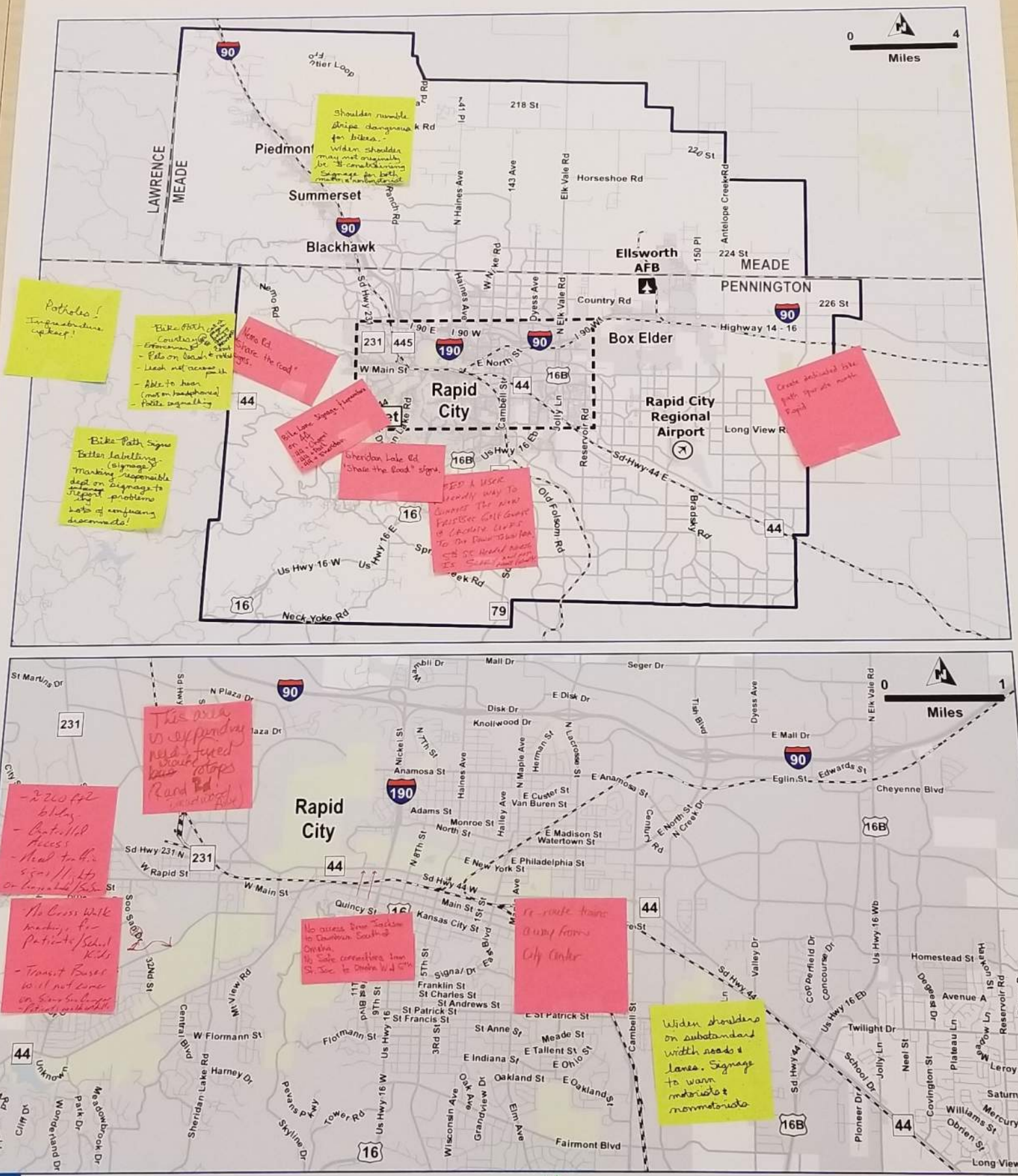

0
4
Miles
Piedmont
Summerset
Blackhawk
LAWRENCE
MEADE
Ellsworth AFB
PENNINGTON
Box Elder
Rapid City
Inset
Rapid City Regional Airport
Highway 14 - 16
Country Rd
Long View Rd
Horseshoe Rd
Elk Vale Rd
Reservoir Rd
Jolly Ln
Cambell St
Haines Ave
Dyess Ave
Antelope Creek Rd
Old Folsom Rd
Spring Creek Rd
Neck Yoke Rd
Us Hwy 16 W
Us Hwy 16 Eb
Sd Hwy 44 E
Sd Hwy 79 S
Bradley Rd
W Main St
E North St
I 90 E
I 90 W
218 St
220 St
224 St
226 St
154 Ave
150 Pl
143 Ave
231
445
190
90
44
16B
79
16
Transit from Northern Hills to Stills (Train)
As Hwy 44 and Nagle Canyon Rd the shoulder disappears really NE. There is a lot of bike traffic that they really a danger to. It is a road bridge that really like it could be fixed relatively easily
Sidewalks in Soccer field area
1
Miles
St Martins Dr
N Plaza Dr
S Plaza Dr
Samco Rd
Sd Hwy 445
Rand Rd
Plain St
Sidewalks-NPlaza + Deadwood Are Families are walking on road! Streets
City Springs Rd
W Chicago St
Sd Hwy 231 N
W Rapid St
Hall St
Brookside Dr
44th St
Raider Rd
Red Dale Dr
Hillsview Dr
Mt View Rd
Central Blvd
W Flormann St
Harney Dr
Sheridan Lake Rd
Meadowbrook Dr
Park Dr
Woodland Dr
Cliff Dr
Skyline Dr
Pevans Pkwy
Tower Rd
Us Hwy 16 W
Wisconsin Ave
Grandview Dr
Oak Ave
Elm Ave
Fairmont Blvd
Creek Dr
S Valley Dr
Pioneer Dr
School Dr
Twilight Dr
Homestead St
Avenue A
Degeest Dr
Covington St
Plateau Ln
Neel St
Williams St
O'Brien St
Sedivy Ln
Cherry Ave
Centre St
Kansas City St
Main St
W Main St
Sd Hwy 44 W
E New York St
E Philadelphia St
E Madison St
Watertown St
E Custer St
Van Buren St
Monroe St
North St
Adams St
Anamosa St
E Anamosa St
Nickel St
Maple Ave
Herman St
Lacrosse St
Halley Ave
Century Rd
E North St
N Creek Dr
E Mall Dr
Eglin St
Edwards St
Cheyenne Blvd
Knollwood Dr
Disk Dr
E Disk Dr
Seger Dr
Mall Dr
Tiger Blvd
Dyess Ave
N Elk Vale Rd
Rapid City
Complete 3-way stop crosswalks (including curb cuts) at Range Rd and Sam Dr by West Middle School
Gap is dangerous No room on roadway Sidewalk is poor and bordered by granite boulders the sidewalk
Need Litter Gutters on Nemo and Sheridan Lake Road.
Bike lane but Sheridan Lk Rd. Danger + Demand
#3
RAPID TRIP 204
Metropolitan Transportation Pl
Metropolitan Transport
Plan U
Public Suggested Improve

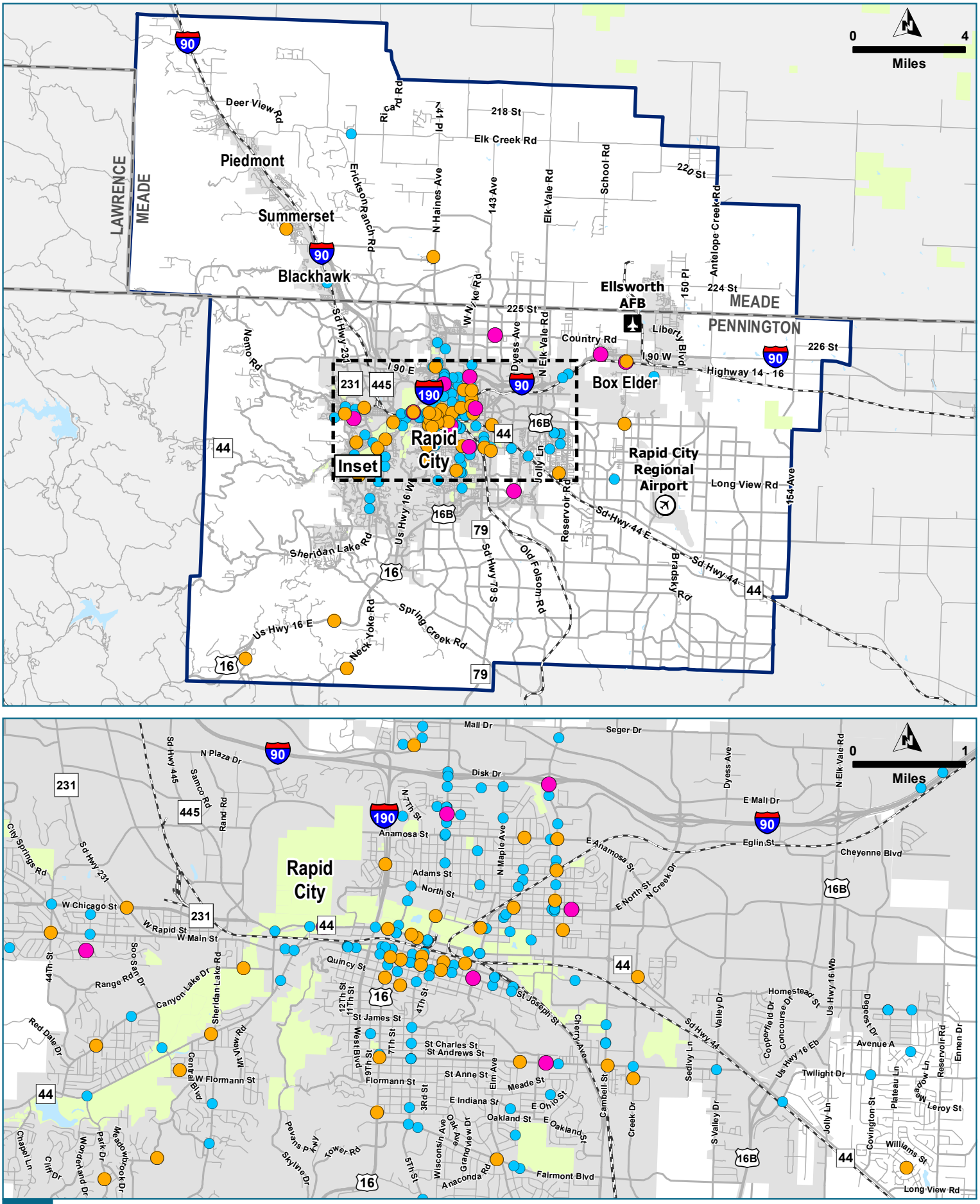


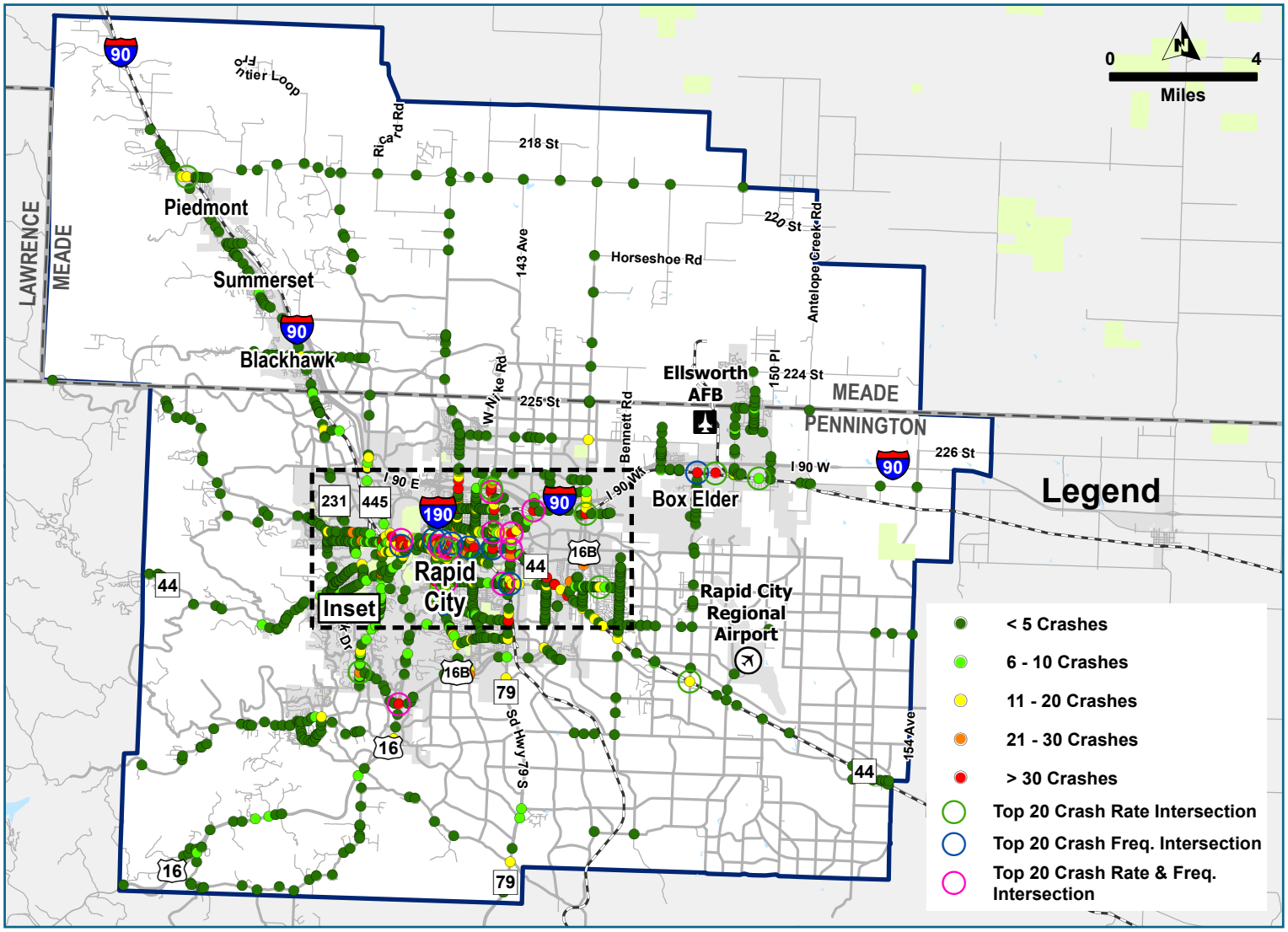
RAPID TRIP 2045
Metropolitan Transportation Plan
Rapid City Area MPO

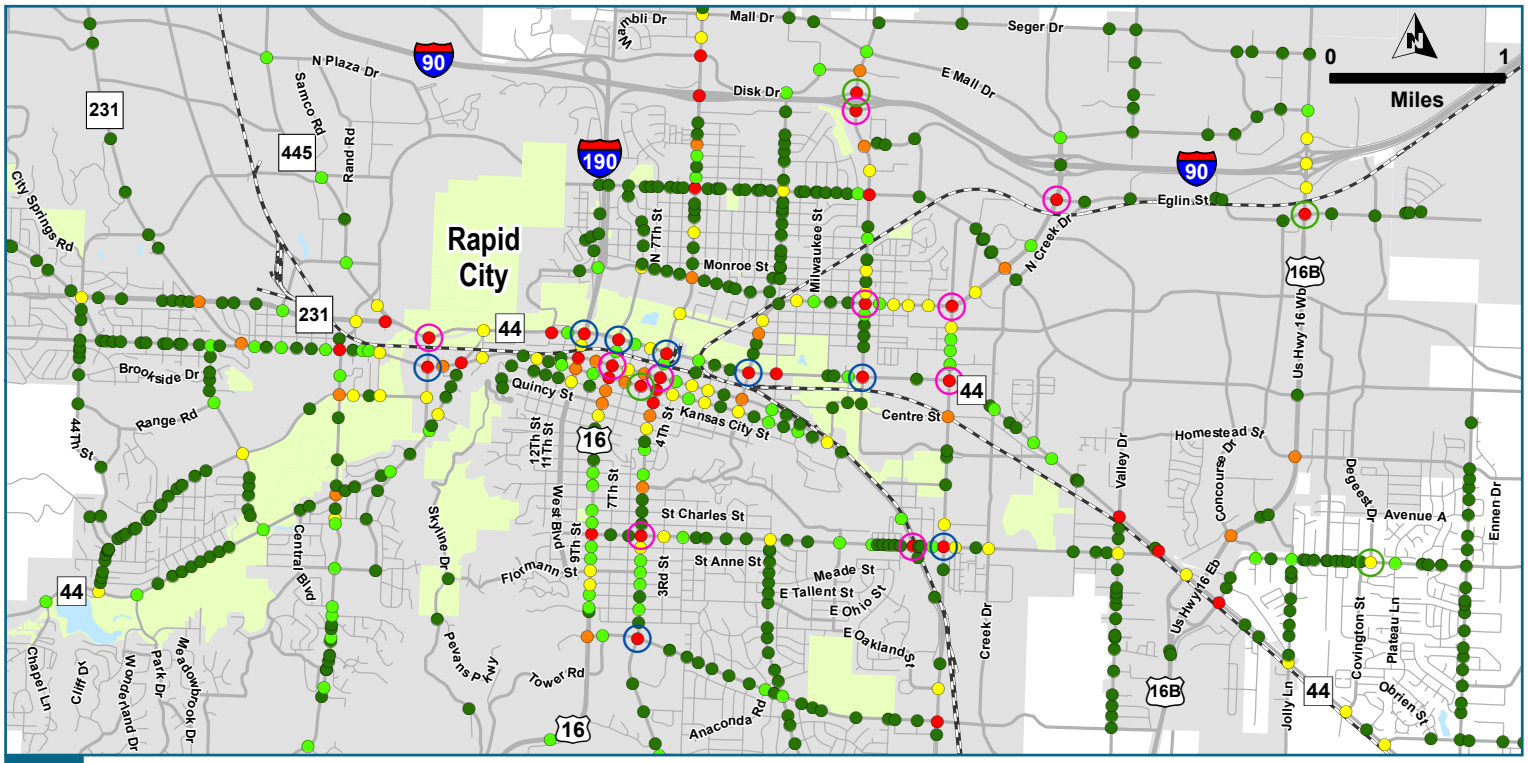
#4

Metropolitan Transportatio
Plan Updat
Public Suggested Improvemen

Appendix D – Meeting Displays


0
4
Miles
LAWRENCE
MEADE
PENNINGTON
Piddmont
Summerset
Blackhawk
Ellsworth AFB
Box Elder
Rapid City
Inset
Rapid City Regional Airport
Deer View Rd
Elk Creek Rd
218 St
220 St
224 St
225 St
226 St
Ericksons Ranch Rd
N Haines Ave
143 Ave
Elk Vale Rd
School Rd
Antelope Creek Rd
150 Pl
W Nike Rd
Sd Hwy 231
Nemo Rd
Dyess Ave
N Elk Vale Rd
Country Rd
Liberty Blvd
I 90 W
I 90 E
Highway 14 - 16
Jolly Ln
Reservoir Rd
Long View Rd
154 Ave
Us Hwy 16 W
Sd Hwy 79 S
Old Folsom Rd
Sd Hwy 44 E
Bradsky Rd
Sd Hwy 44
Sheridan Lake Rd
Us Hwy 16 E
Neck Yoke Rd
Spring Creek Rd
231
445
190
90
44
16B
79
16
0
1
Miles
Mall Dr
Seger Dr
Disk Dr
E Mall Dr
Eglin St
Cheyenne Blvd
N Plaza Dr
Sd Hwy 445
Samco Rd
Rand Rd
N 7th St
Anamosa St
E Anamosa St
N Maple Ave
Adams St
North St
E North St
N Creek Dr
City Springs Rd
Sd Hwy 231
W Chicago St
W Rapid St
W Main St
Rapid City
Quincy St
St James St
St Joseph St
St Charles St
St Andrews St
St Anne St
Flormann St
W Flormann St
E Indiana St
Meade St
E Ohio St
Oakland St
E Oakland St
Fairmont Blvd
Anaconda Rd
Range Rd
Canyon Lake Dr
Sheridan Lake Rd
W View Rd
Red Dale Dr
Cambell St
Creek Dr
Sedivy Ln
Valley Dr
S Valley Dr
Homestead St
Copperfield Dr
Concourse Dr
Us Hwy 16 Wb
Us Hwy 16 Eb
Twilight Dr
Avenue A
Reservoir Rd
Ennen Dr
Plateau Ln
Leroy St
Covington St
Williams St
Jolly Ln
Long View Rd
Chapel Ln
Cliff Dr
Woodland Dr
Park Dr
Meadowbrook Dr
Pevans Pky
Skyline Dr
Tower Rd
Wisconsin Ave
Oak Ave
Grandview Dr
5Th St
4Th St
11Th St
12Th St
16Th St
Westland Dr
Elm Ave
Cherry Ave
Fatal Crash (11)
Incapacitating Crash (47)
Non-incapacitating Crash (163)
RAPID TRIP 2045
Metropolitan Transportation Plan
Rapid City Area MPO
Metropolitan Transportation Plan Update
Bicycle and Pedestrian Crashes (2014-18)



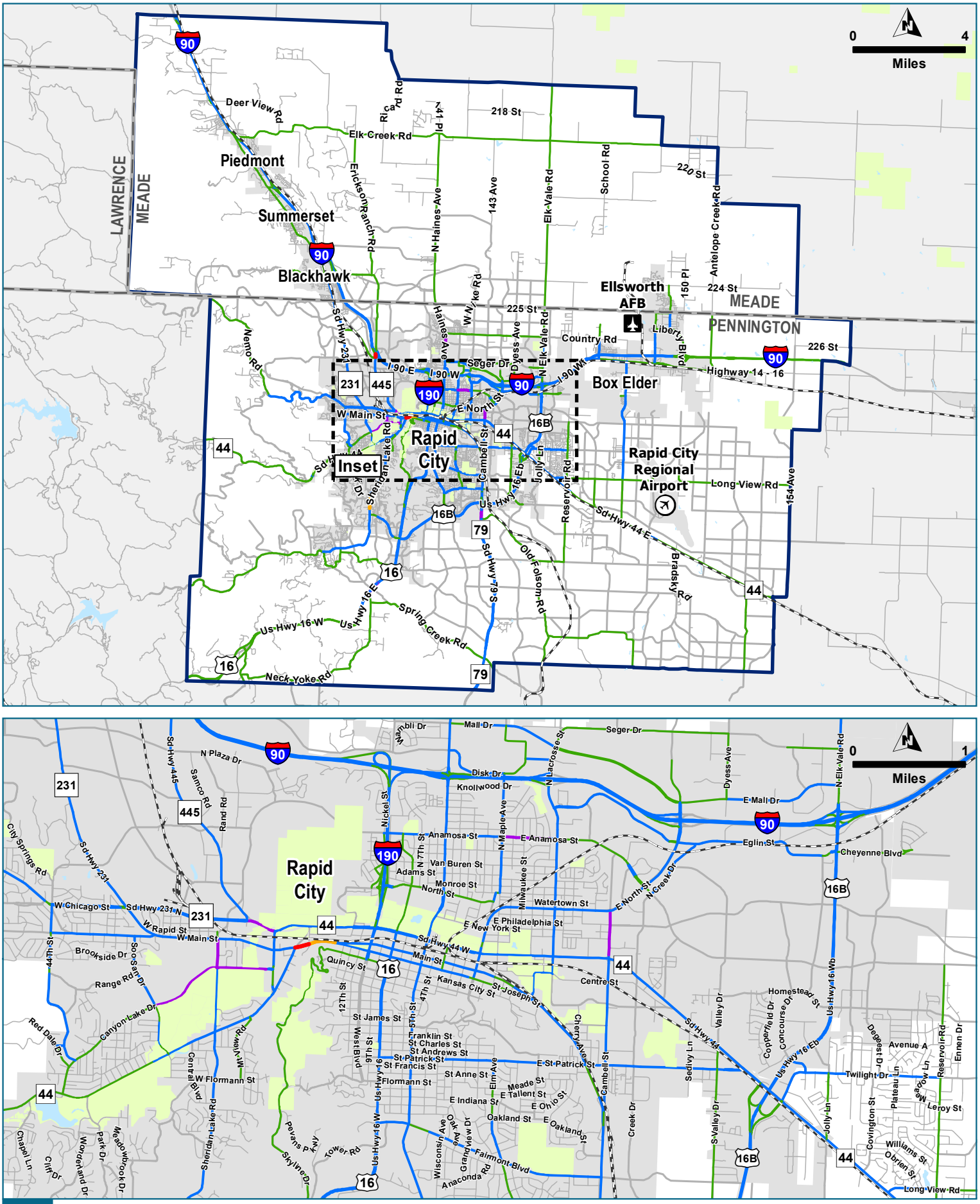


RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

Metropolitan Transportation Plan Update

Intersection Crash Rates and Frequencies (2014-18)



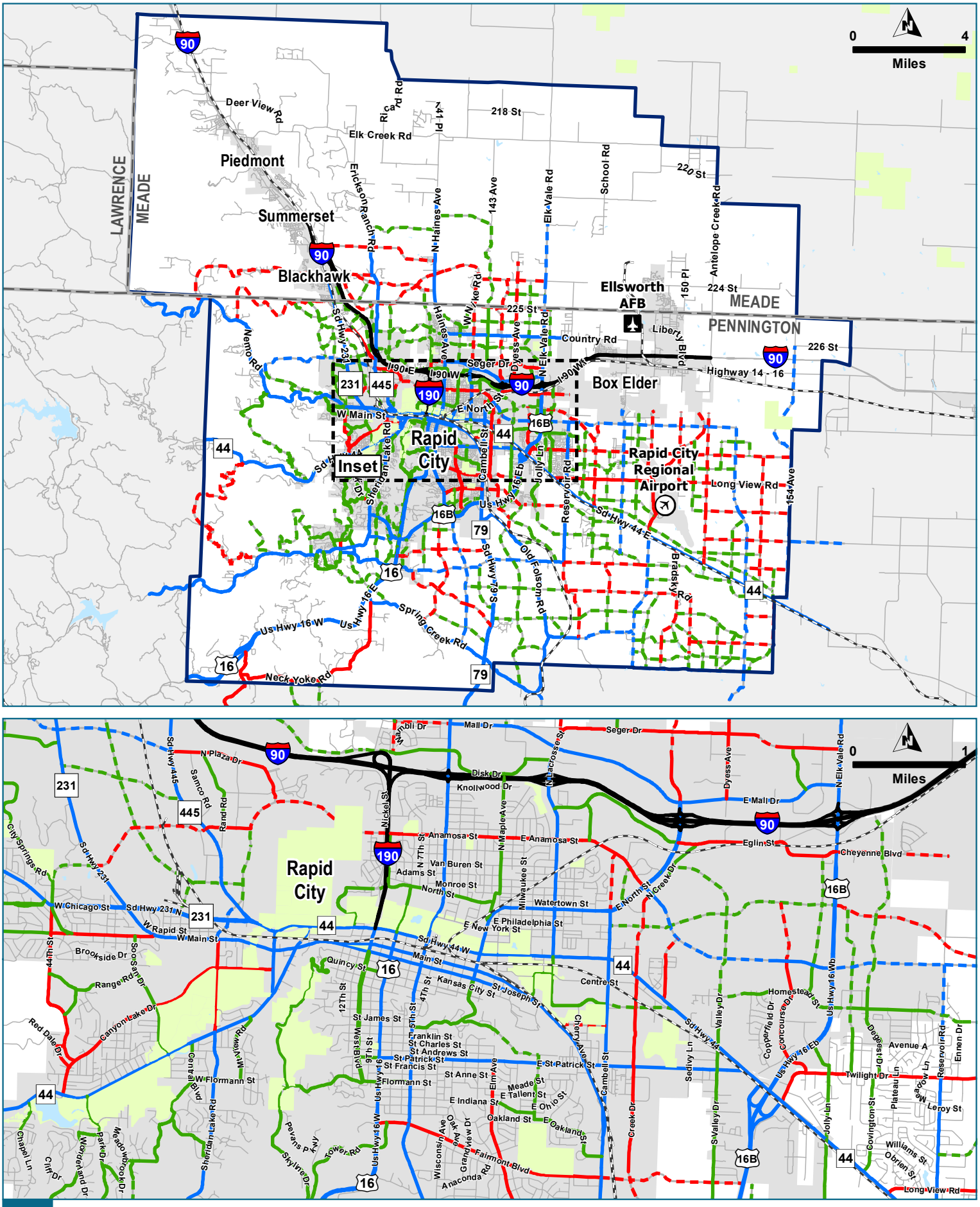
LOA A/B
LOS C
LOS D
LOS E
LOS F

RAPID TRIP 2045
Metropolitan Transportation Plan

Rapid City Area MPO

Metropolitan Transportation Plan Update

Level of Service



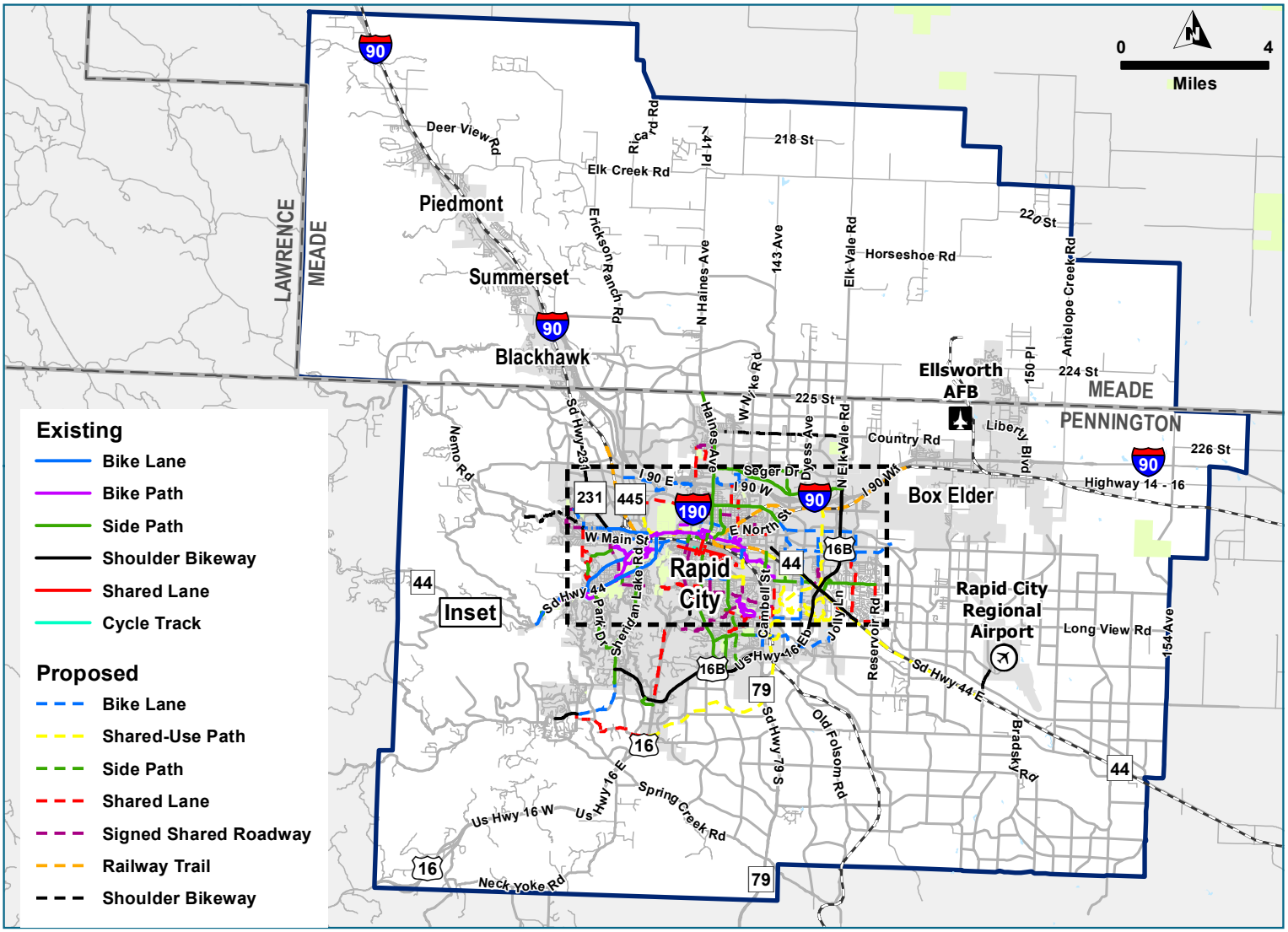
RAPID TRIP 2045 Metropolitan Transportation Plan

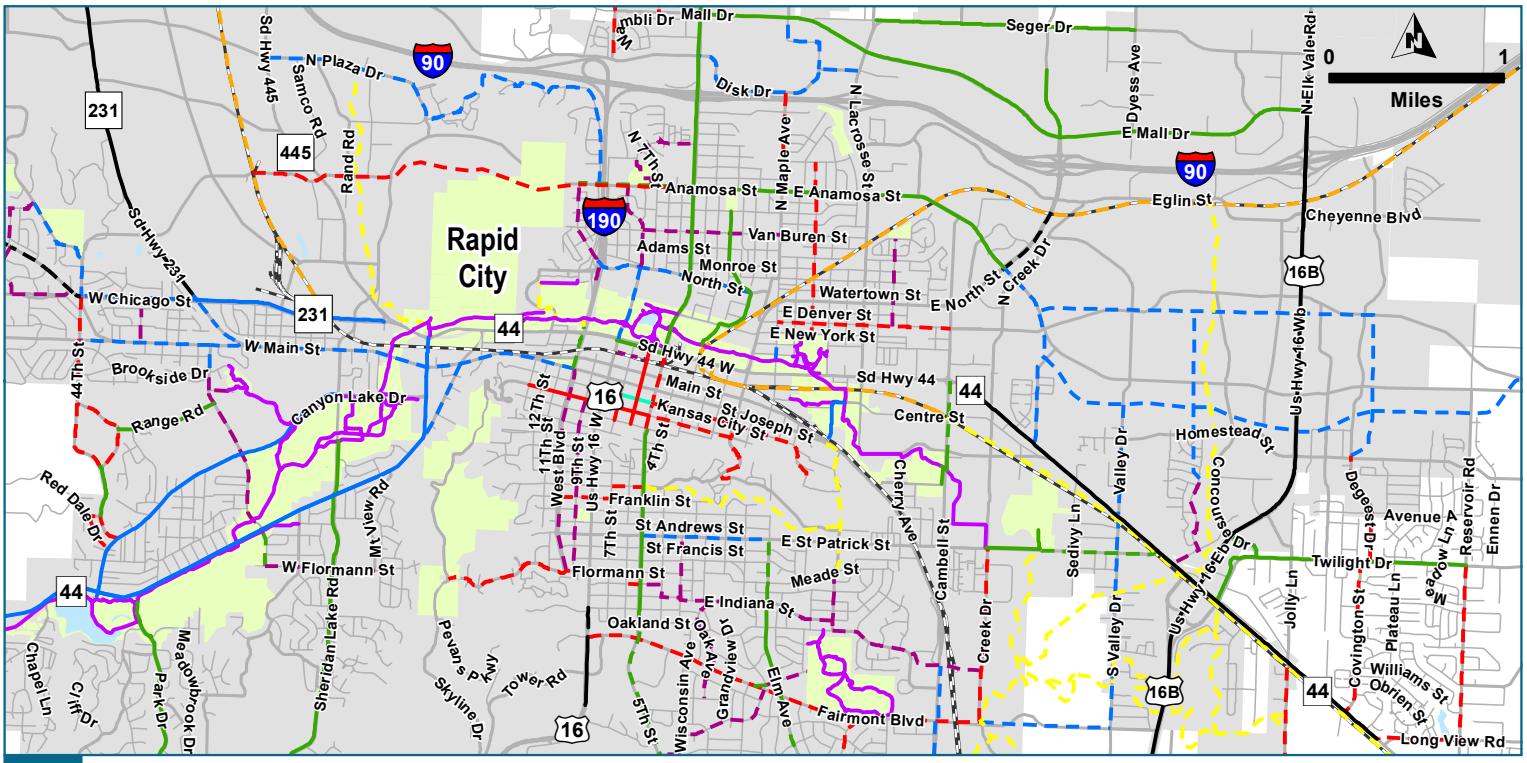
Rapid City Area MPO

- Interstate Highway
- Principal Arterial
- Proposed Principal Arterial
- Minor Arterial
- Proposed Minor Arterial
- Collector
- Proposed Collector

Metropolitan Transportation Plan Update

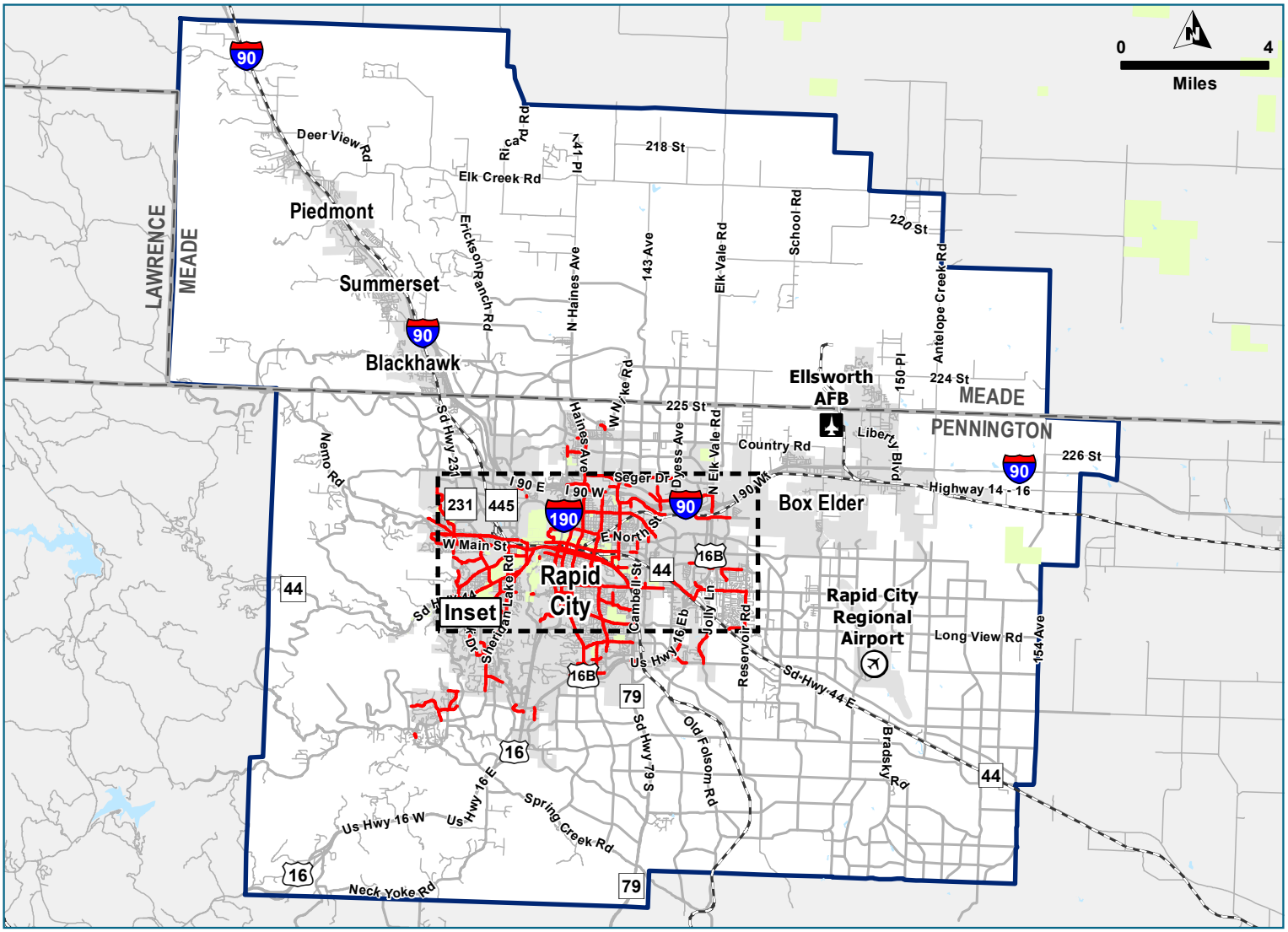
Major Street Plan

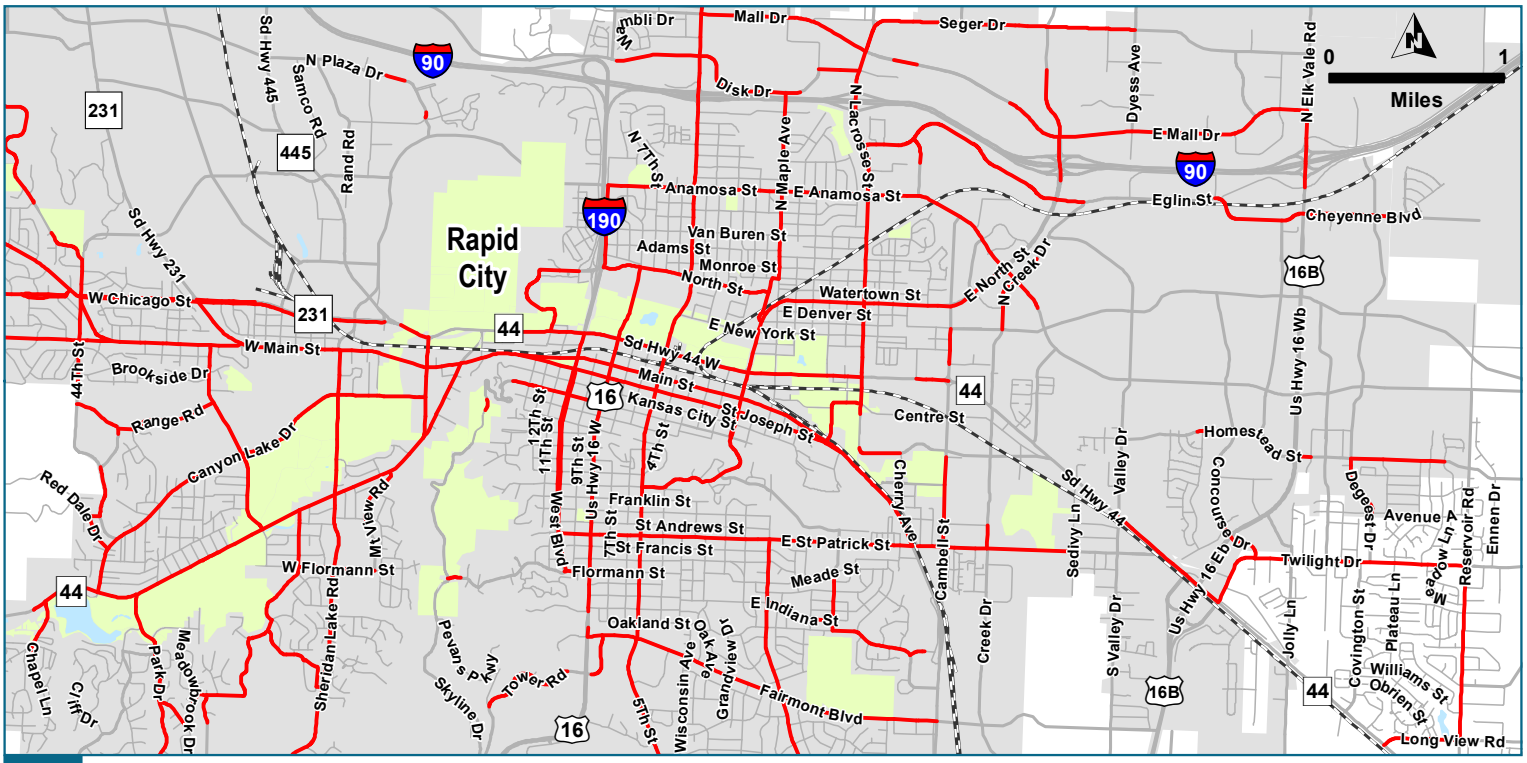




Bicycle and Pedestrian Master Plan

Existing and Proposed Bicycle Facilities





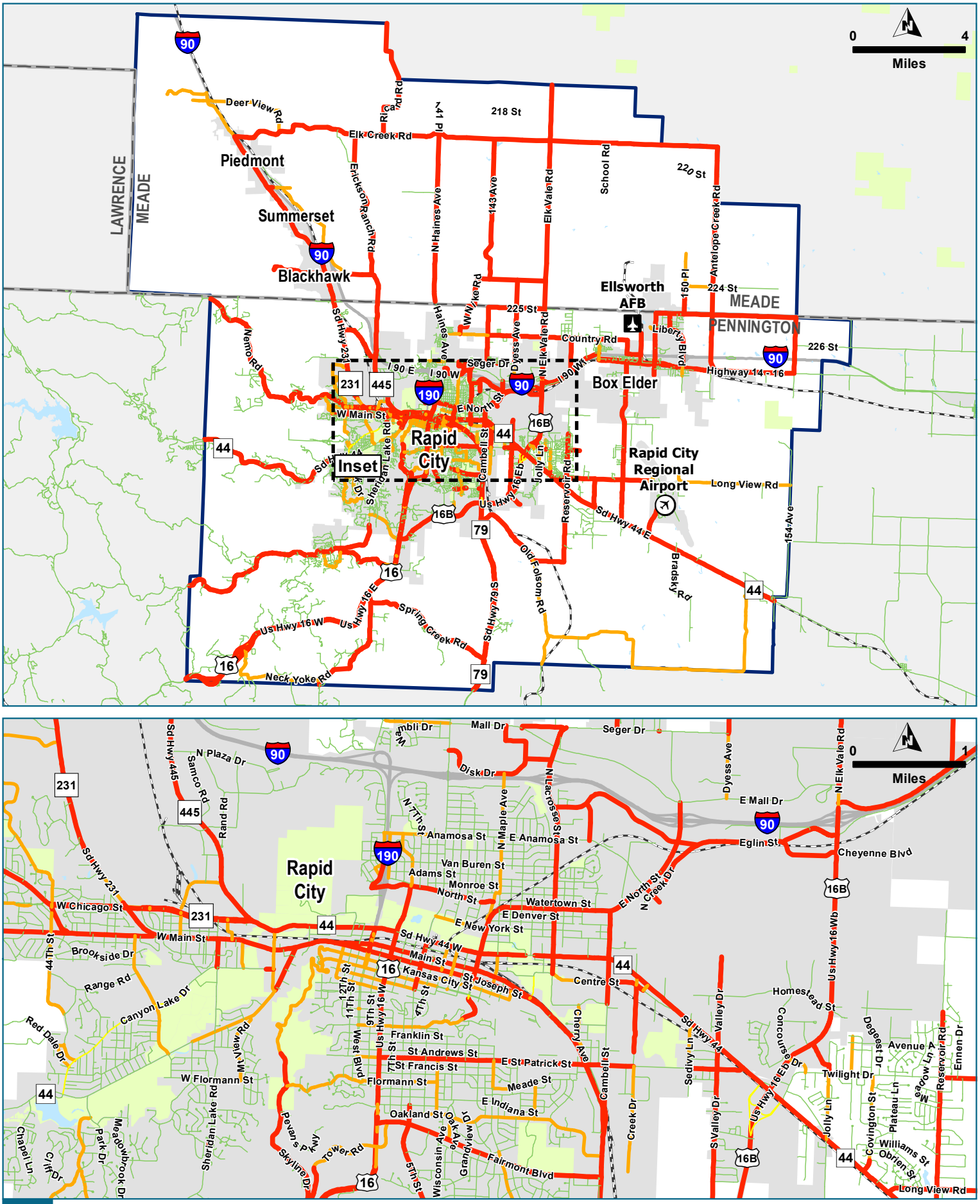
2020 Bicycle & Pedestrian Plan

Rapid City Area MPO

Sidewalks

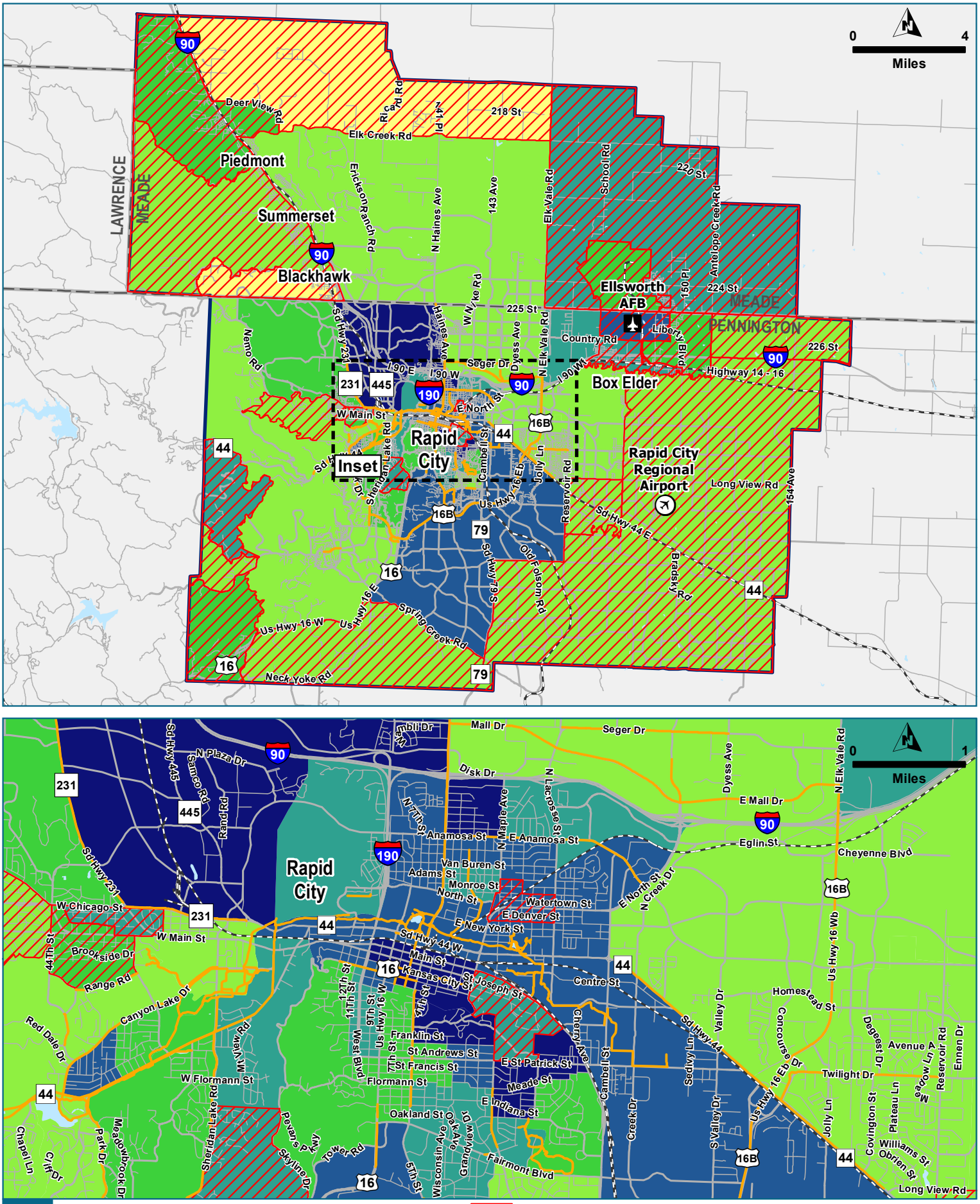
Bicycle and Pedestrian Master Plan

Existing Pedestrian Facilities



Bicycle and Pedestrian Master Plan

Level of Traffic Stress



2020 Bicycle & Pedestrian Plan

Rapid City Area MPO

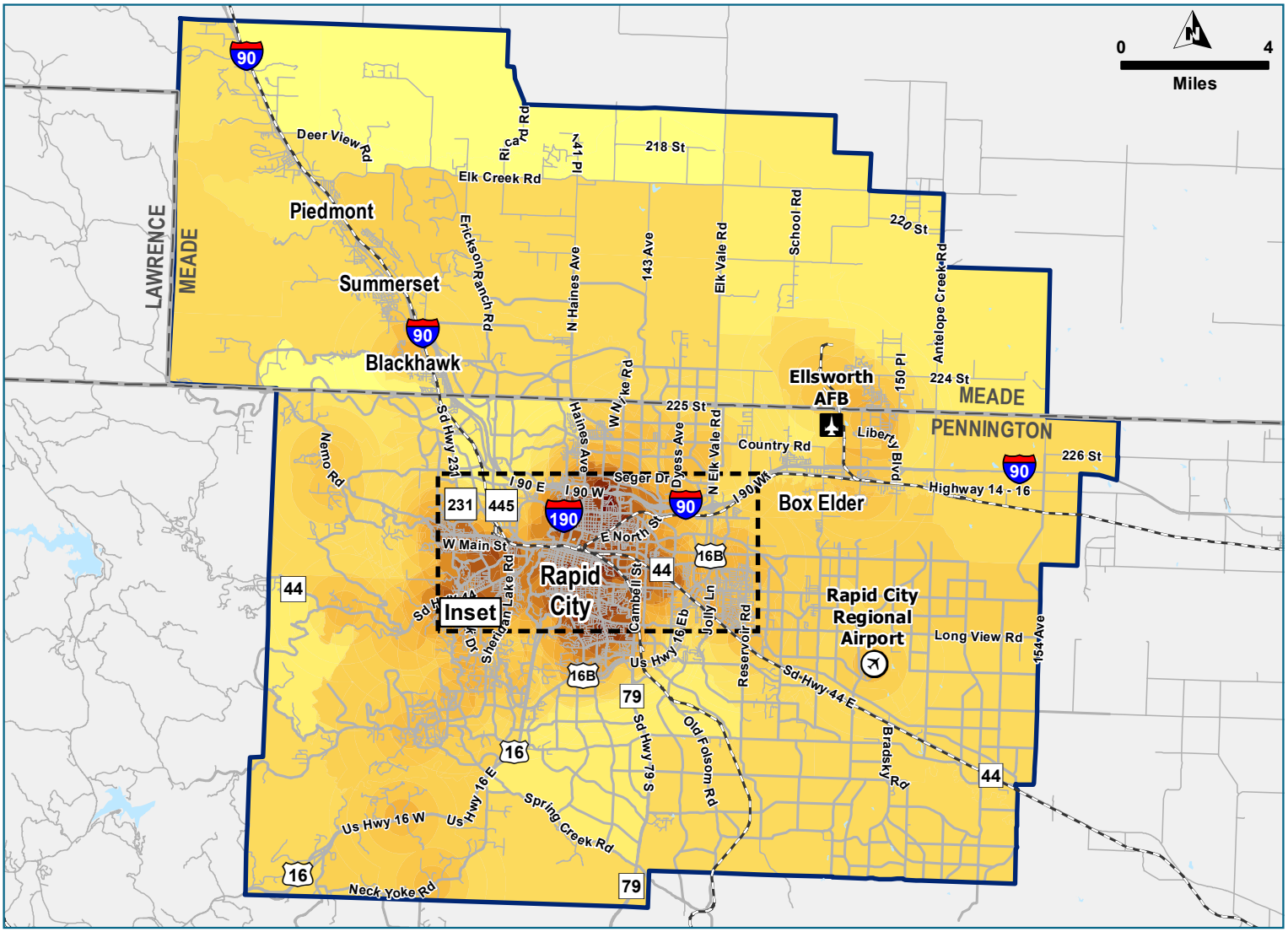
Low (0) Equity Score High (5)

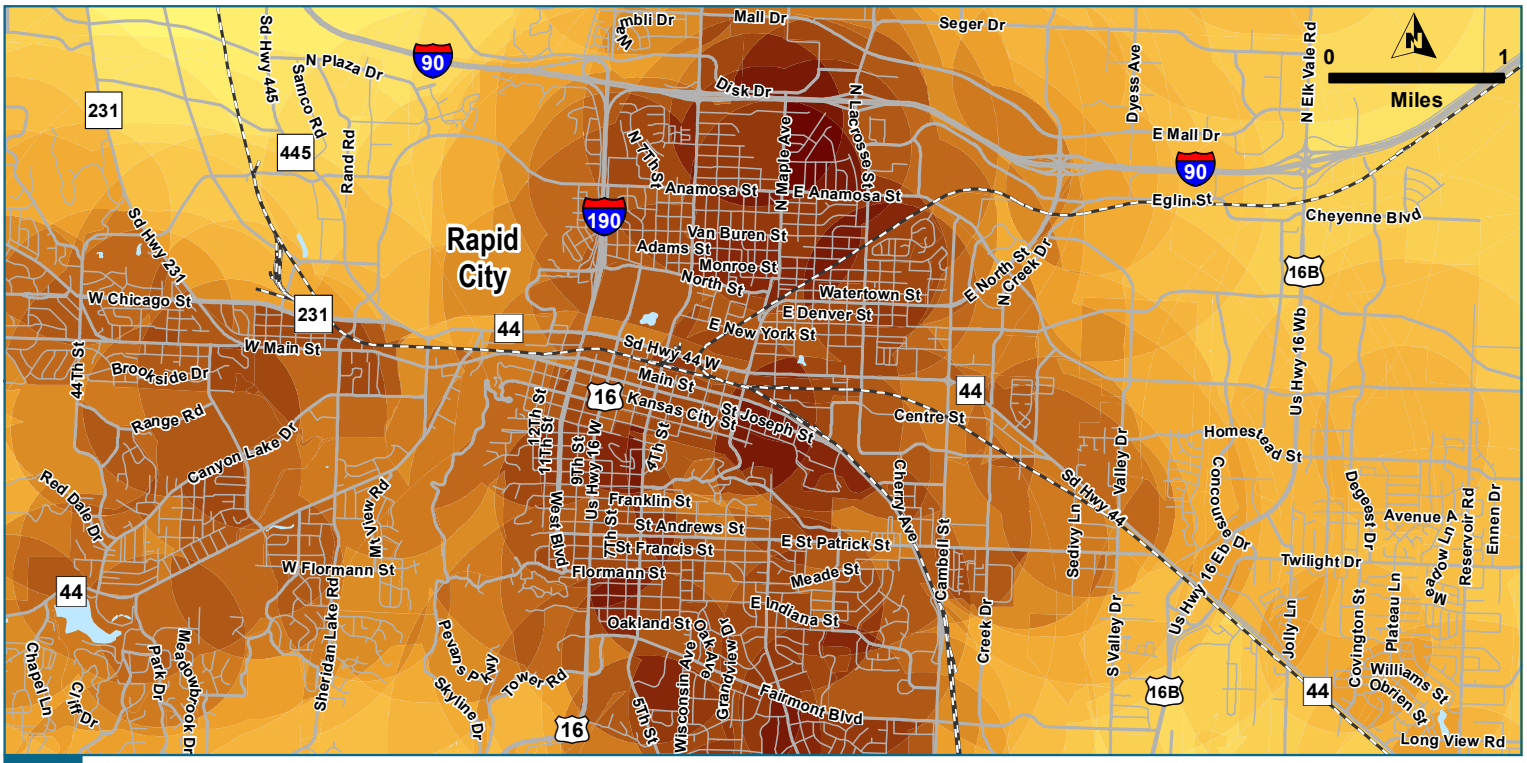
Low Bike Services

Existing Bike Facilities

Bicycle and Pedestrian Master Plan

Composite Equity Score and Low Level of Bicycle Service





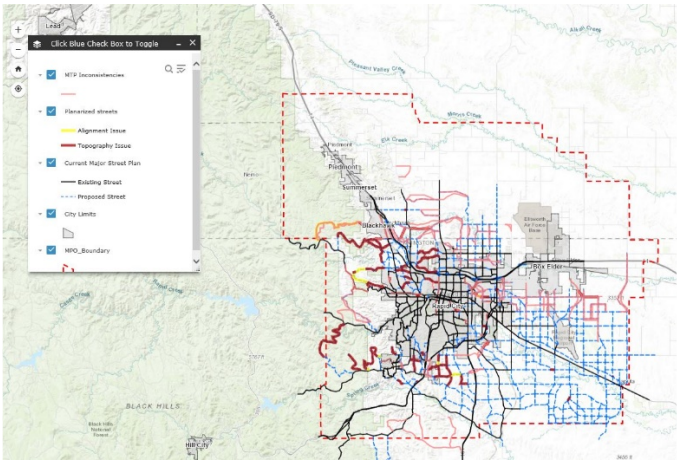
2020 Bicycle & Pedestrian Plan

Rapid City Area MPO

Low — Medium — High

Bicycle and Pedestrian Master Plan

Latent Bicycle Demand



Public Meeting No. 2 On-line Meeting Summary

April 20-May 1, 2020

Rapid City Area MPO Metropolitan Transportation Plan & Bicycle/Pedestrian Plan Update

Rapid City Area MPO

May 15, 2020

Table of Contents

Public Meeting # 2 Overview

Meeting Details

Date: April 20th – May 1st, 2020

Location: Online Meeting Hosted at www.rapidtrip2045.com

Overview: Because of the rapid on-set of COVID-19 during March of 2020, and the subsequent restrictions placed upon public gatherings, it was required that an on-line meeting format be used for Public Meeting No. 2 instead of in-person format. The on-line meeting and project information was open for review and public comment from Monday April 20 through Friday May 1st, 2020.

Advertisements: Rapid City Journal (4/15/20 and 4/18/20), project website, MPO website, and Facebook Event post. Due to circumstances related to the COVID-I9 pandemic, the Native Sun News was unable to publish, despite providing an advertisement to them.

On-line meeting information: The project team hosted an on-line public meeting for the Rapid City Area MPO Metropolitan Transportation Plan (MTP) and Bicycle/Pedestrian Plan Update to present an overview of the project and gather feedback from the public and stakeholders. In general, discussions focused on roadway, transit and bicycle and pedestrian issues/needs.

Attendance: Based on the information received from project website traffic, the following data was collected:

- Page views total: 410
- Unique Page views: 265
- Average time on page: 1:13
- Total users: 246
- Total sessions: 282
  - Mobile: 139
  - Desktop: 150
  - Tablet: 10
- Sessions by acquisition:
  - Direct: 202
  - Social: 73 (66 from Facebook, 7 from Twitter)
  - Referral: 18 (16 referrals from rapidcityareampo.org)
  - Organic Search: 18

Project Website

www.rapidtrip2045.com/onlinemeeting.html
The online public meeting took the attendees through a 14 step process, including:

1. Welcome
2. Rapid Trip 2045 Overview
3. How We Got Here
4. Let's Get Started!
5. System Analysis Results
6. Roadway Major Street Plan
7. Roadway Comment Mapping Activity
8. Roadway Prioritization Activity
9. Bicycle and Pedestrian Prioritization Activity
10. Bicycle and Pedestrian Future System
11. Bicycle and Pedestrian Comment
12. Transit Existing System Analysis
13. Transit Prioritization Activity
14. Next Steps

The mapping activities allowed participants to place suggested improvements or strategies at a desired location where the participant believed there were deficiencies or limitations on the current transportation system. The prioritization activities allowed participants to rank the importance of a specific type of improvement or strategy in addressing system shortfalls. Participants also were able to make general comments with regard to the presented materials or with regard to the project as a whole.

Results

Roadway Comment Mapping Activity

During this activity the respondents were asked to review the treatments/strategies below and using a pin to place where these improvements may be needed within the Rapid City MPO area:

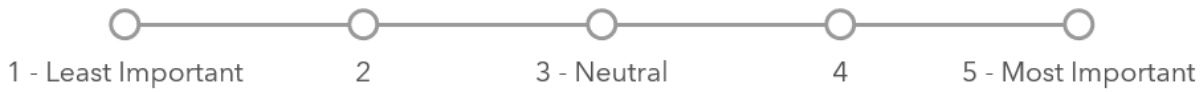
- Medians
- New Traffic Signals
- Traffic Signal Timing Optimization / Coordination
- Turn Lanes
- Grade Separations
- Expressway
- More Travel Lanes (Street Widening)

A total of 30 comments were received. The listing of comments that were received and the corresponding map identifying the location related to the comment can be found in Appendix A.

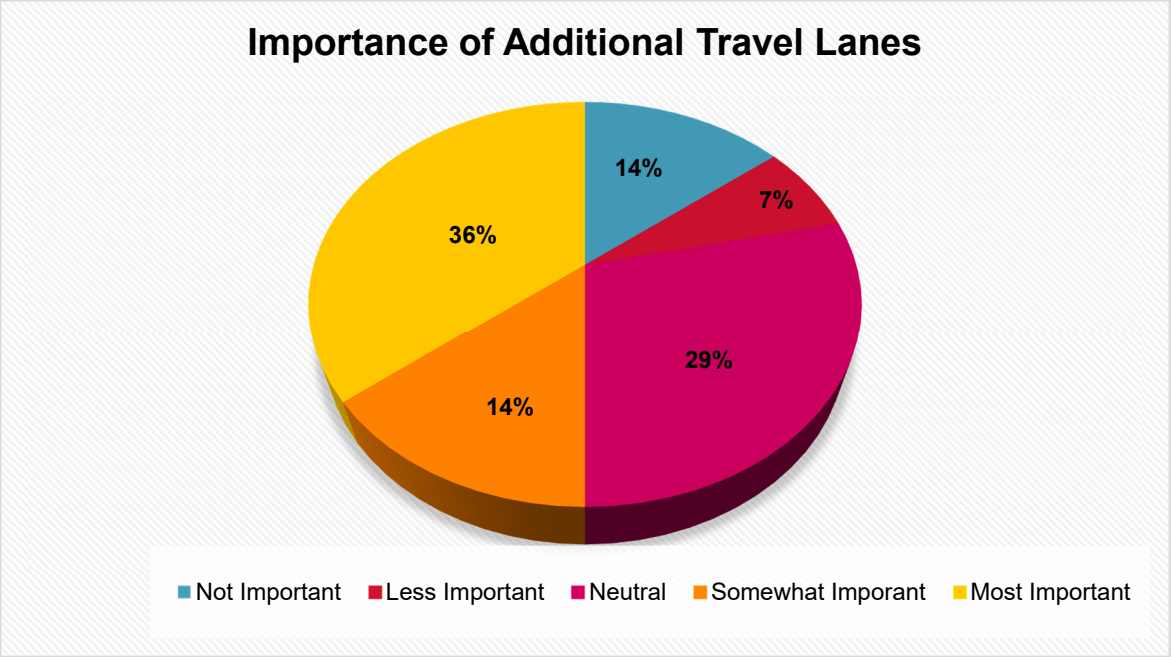
Roadway Prioritization Activity

While we wish we could implement every single project idea right away, unfortunately it isn't possible for RCAMPO to do so with fiscal constraints. The meeting attendees were asked to prioritize types of projects by using the ranking tool to tell us how important each alternative option is to them to be incorporated in Rapid City. The ranking included from least important to most important and the following items were prioritized:

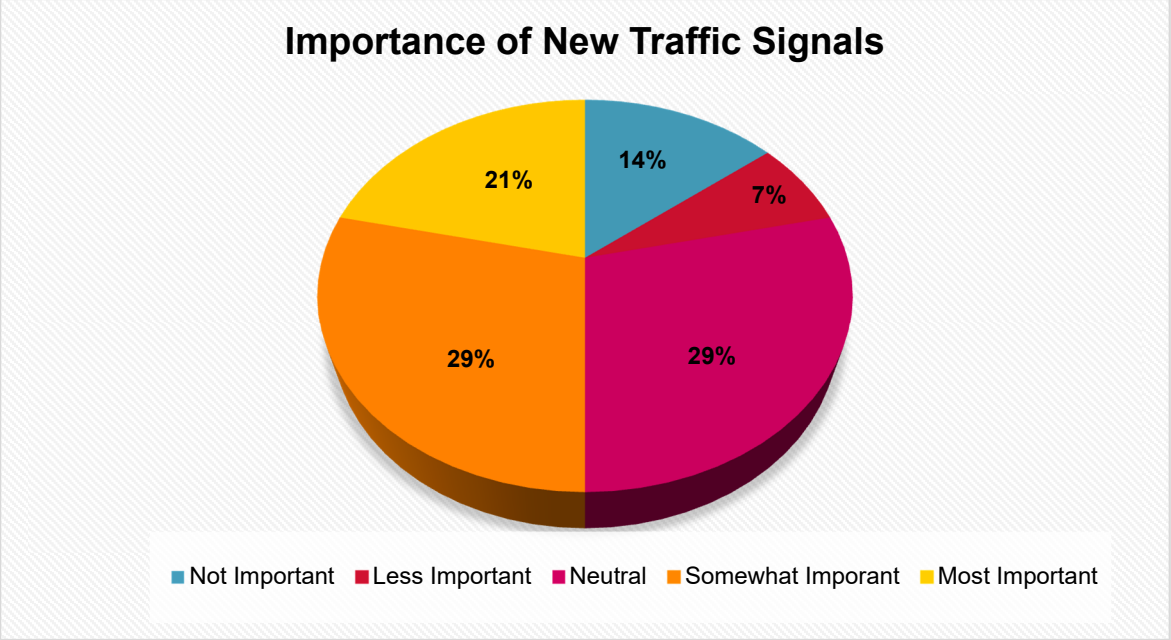
- More Travel Lanes (Street Widening)
- New Traffic Signals
- Traffic Signal Timing Optimization/Coordination
- Turn Lanes
- Medians
- Expressway
- Grade Separations



The results of these surveys are provided in this section.



14 respondents



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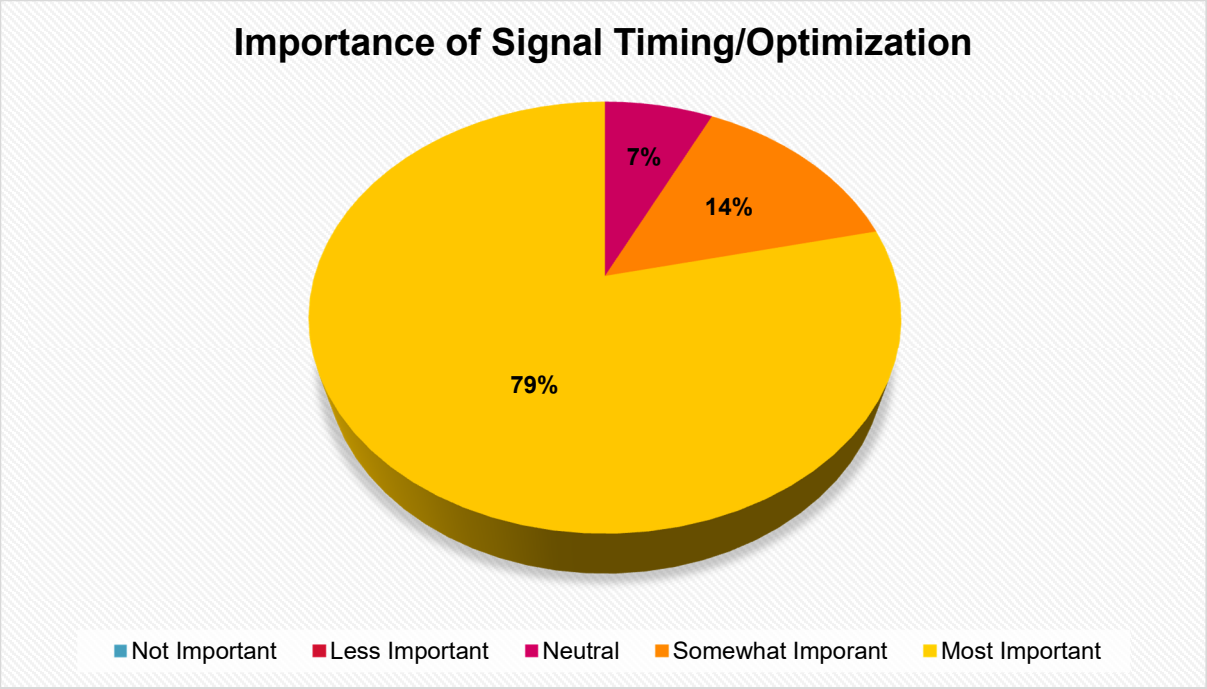

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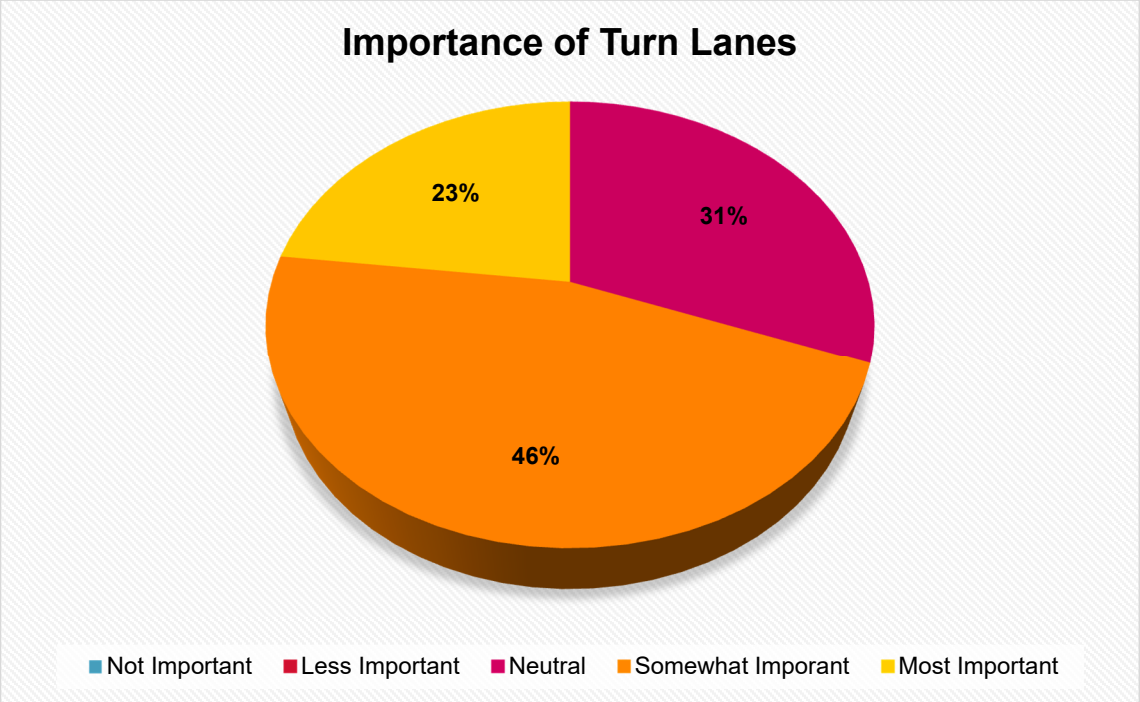
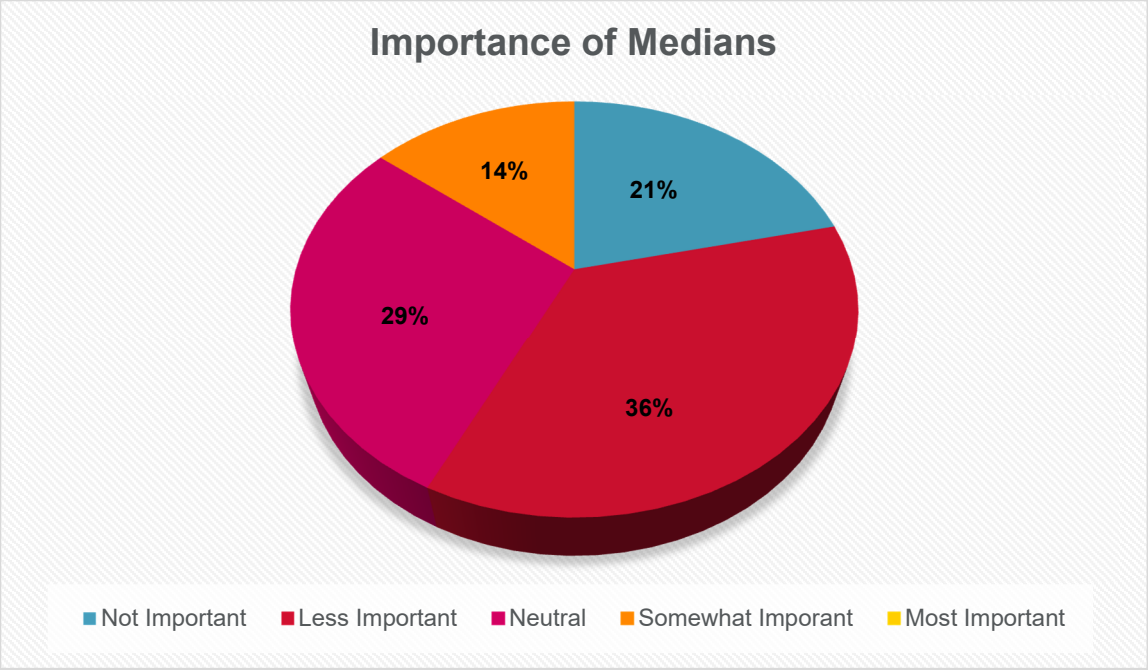
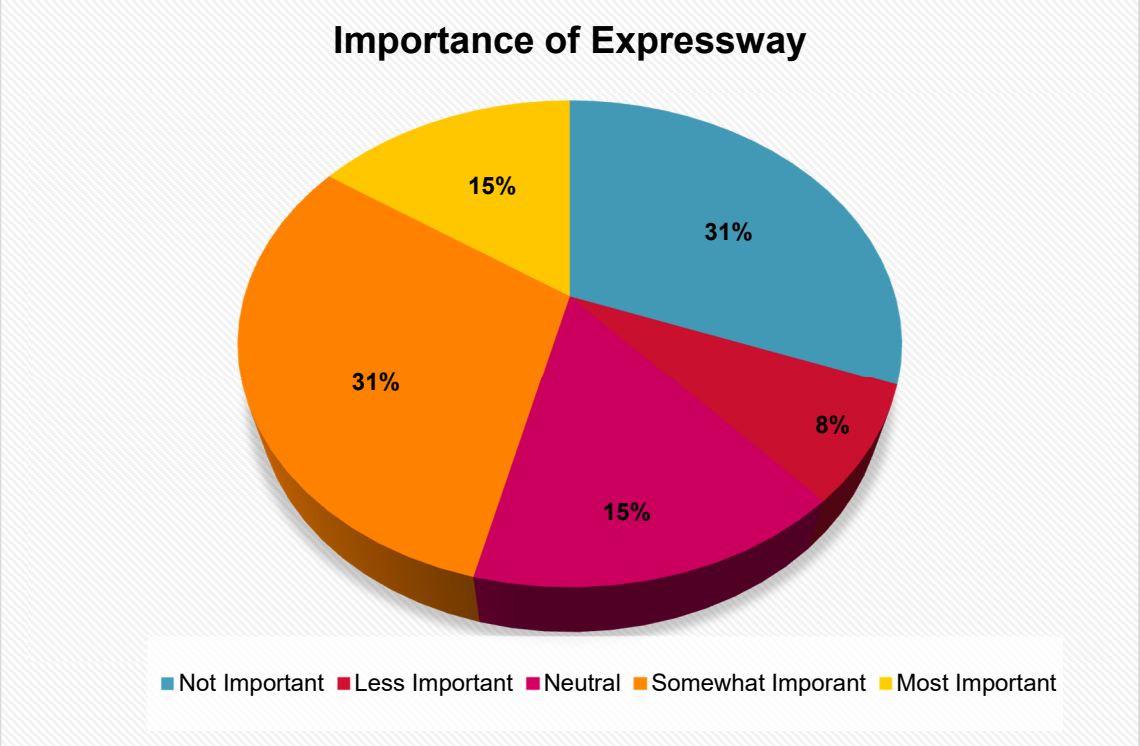


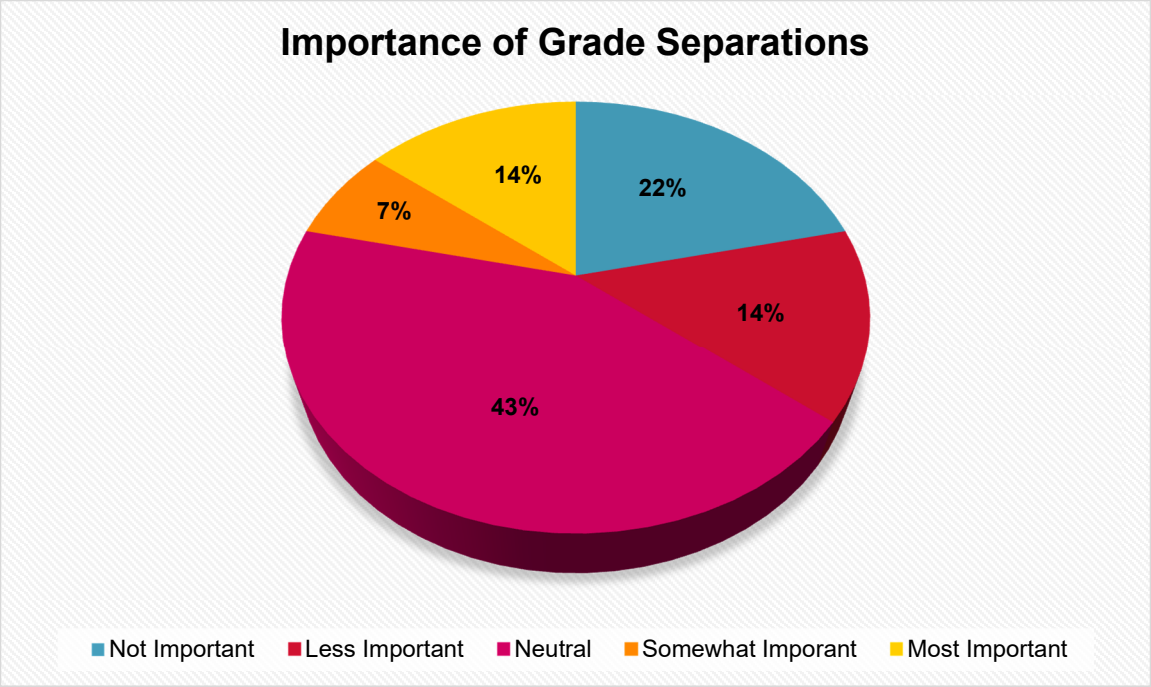
14 respondents



14 respondents



13 respondents



14 respondents

Other /General Comments

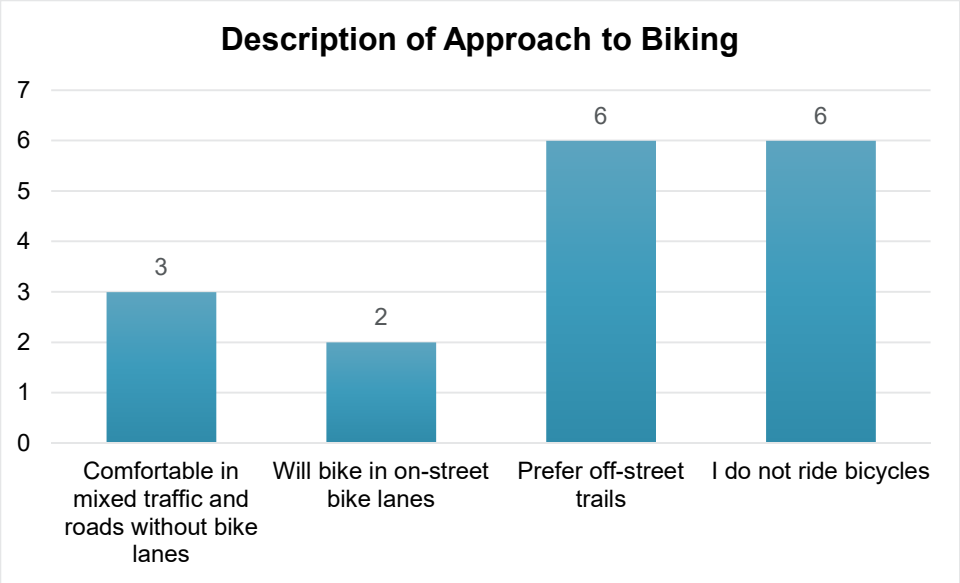
- PLEASE put in a handicap accessible walking (wheelchair) bridge here. (Omaha and 6th Street)
- This intersection is a mess, especially for traffic going in and out of Rushmore Crossing, and needs improved (Eglin and East North Street).

Bike and Pedestrian Prioritization Activity

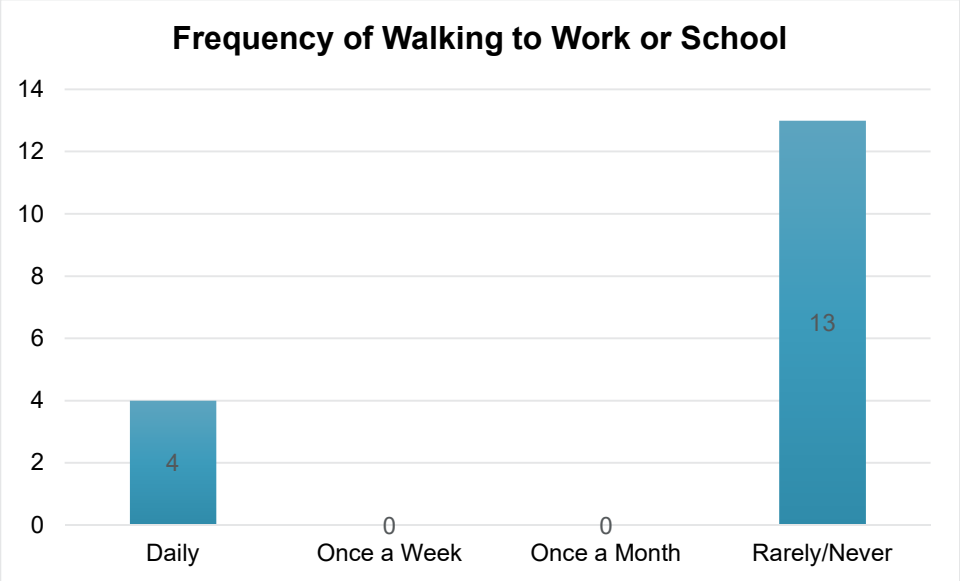
The existing bicycle and pedestrian network features a variety of facility types, from sharrows and sidewalks, to cycle tracks and shared use paths.

To further enhance the safety and comfort of the future network, the RCAMPO is considering supplementing its network with additional types of bicycle and pedestrian improvement options, such as enhanced crossing treatments and bikeways designed with greater separation from traffic.

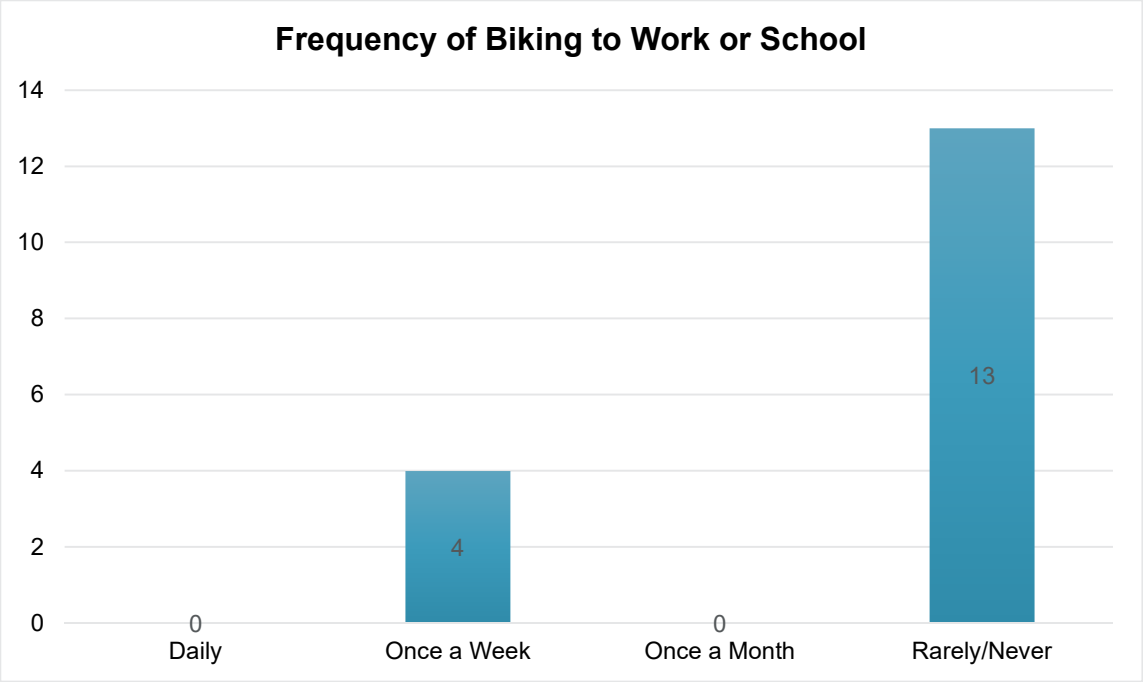
To help identify and prioritize bicycle and pedestrian improvements, the meeting attendees were asked to answer a series of questions get a better understanding of how they currently use the bicycle and pedestrian network and the kinds of improvements that are most important. Between 15 and 17 respondents answered the surveys. The results of this activity is detailed in the charts below.



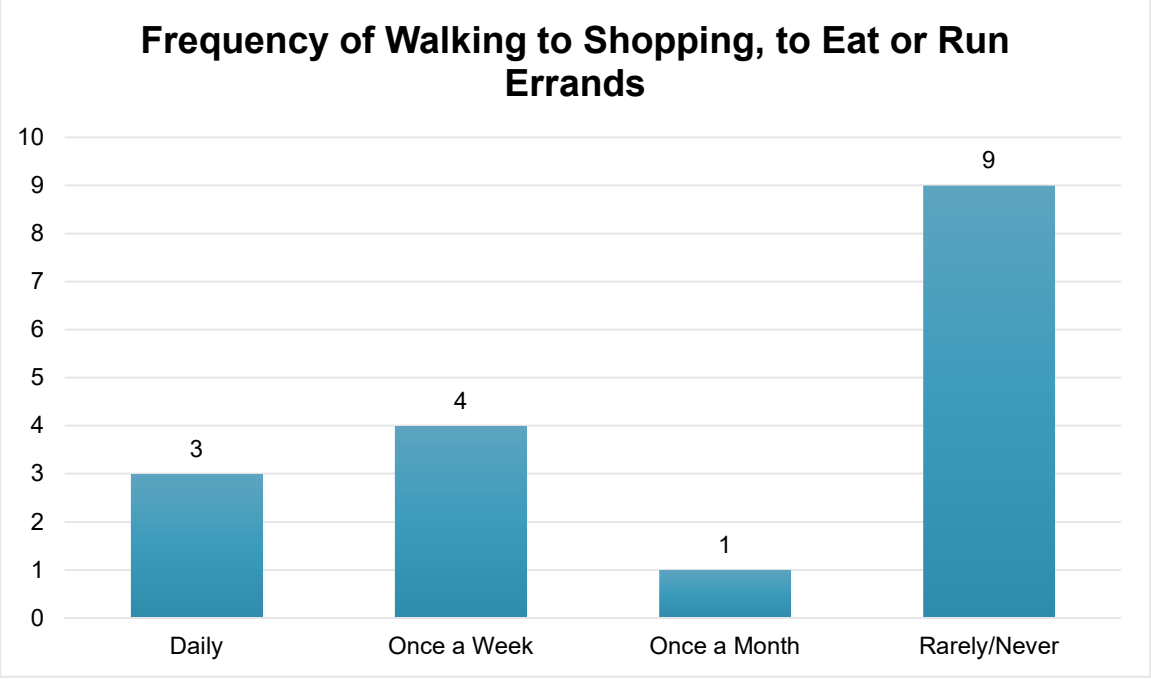
17 respondents



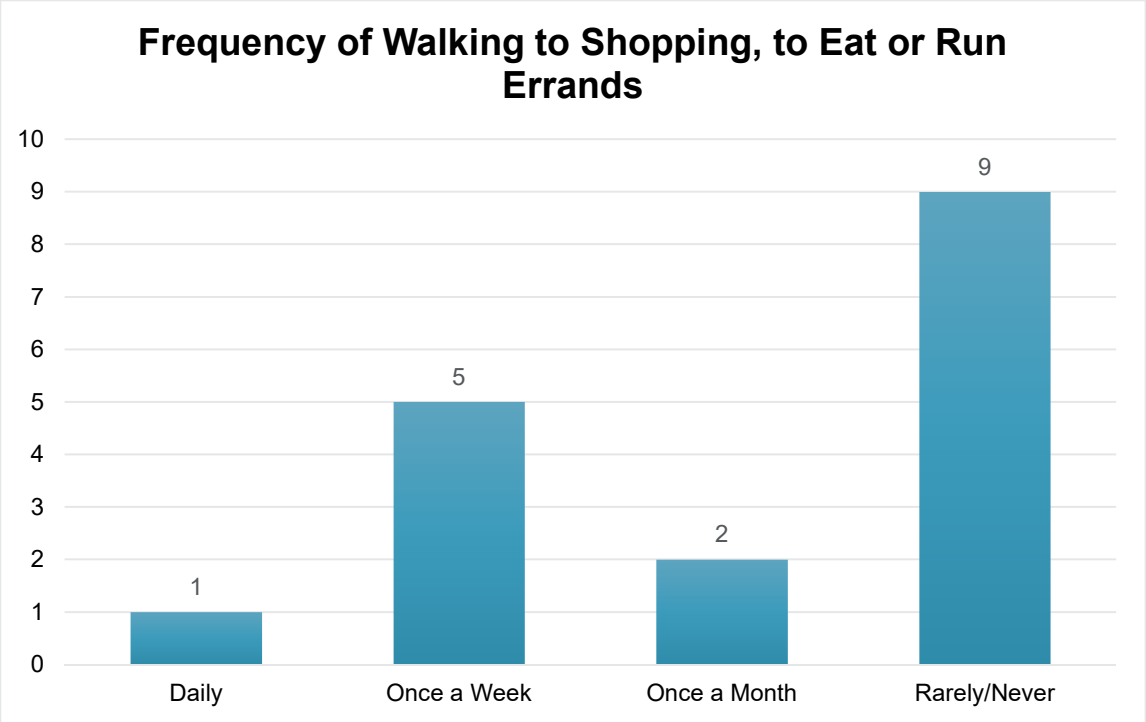
17 respondents



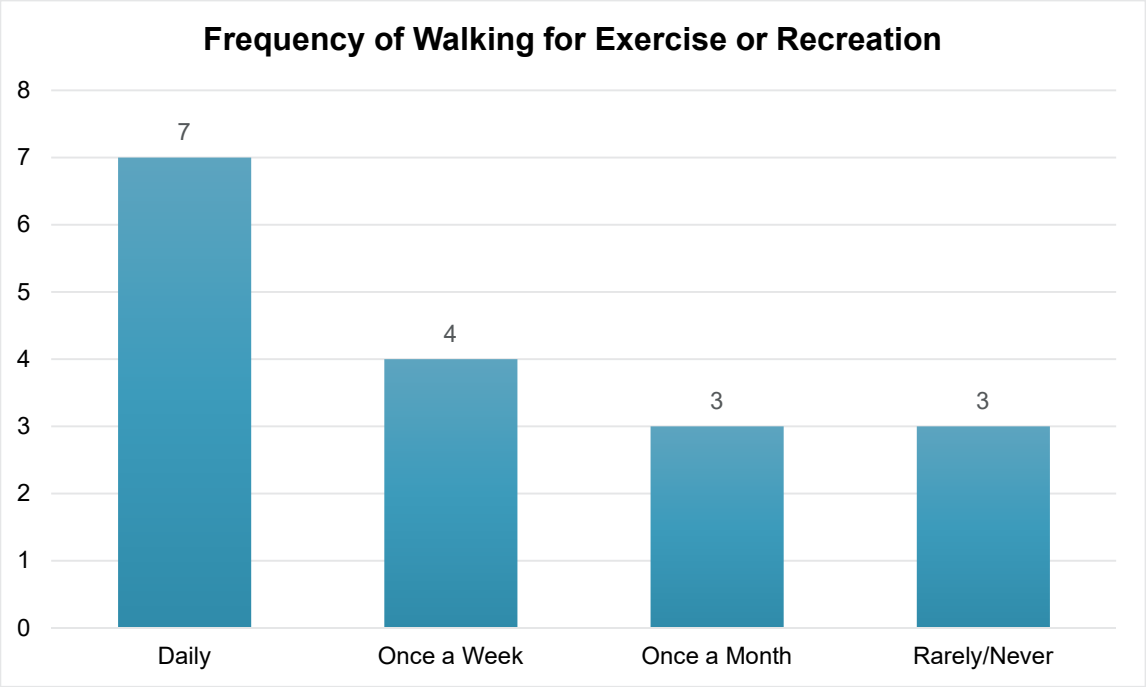
17 respondents



17 respondents



17 respondents



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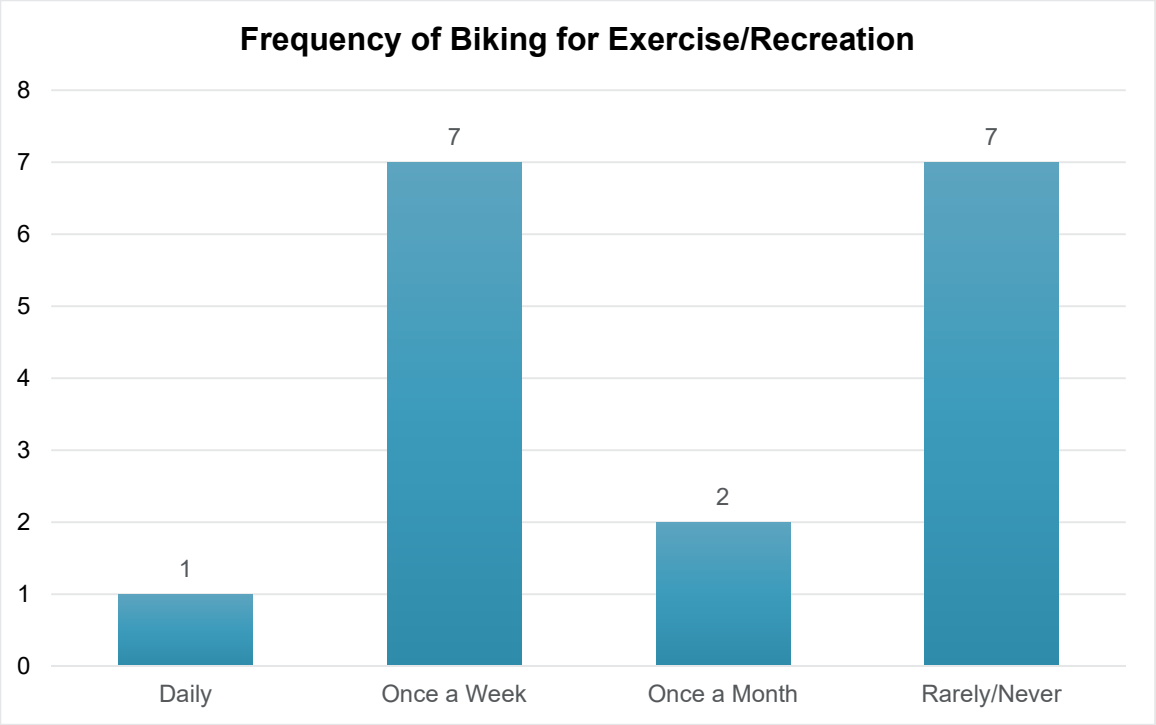

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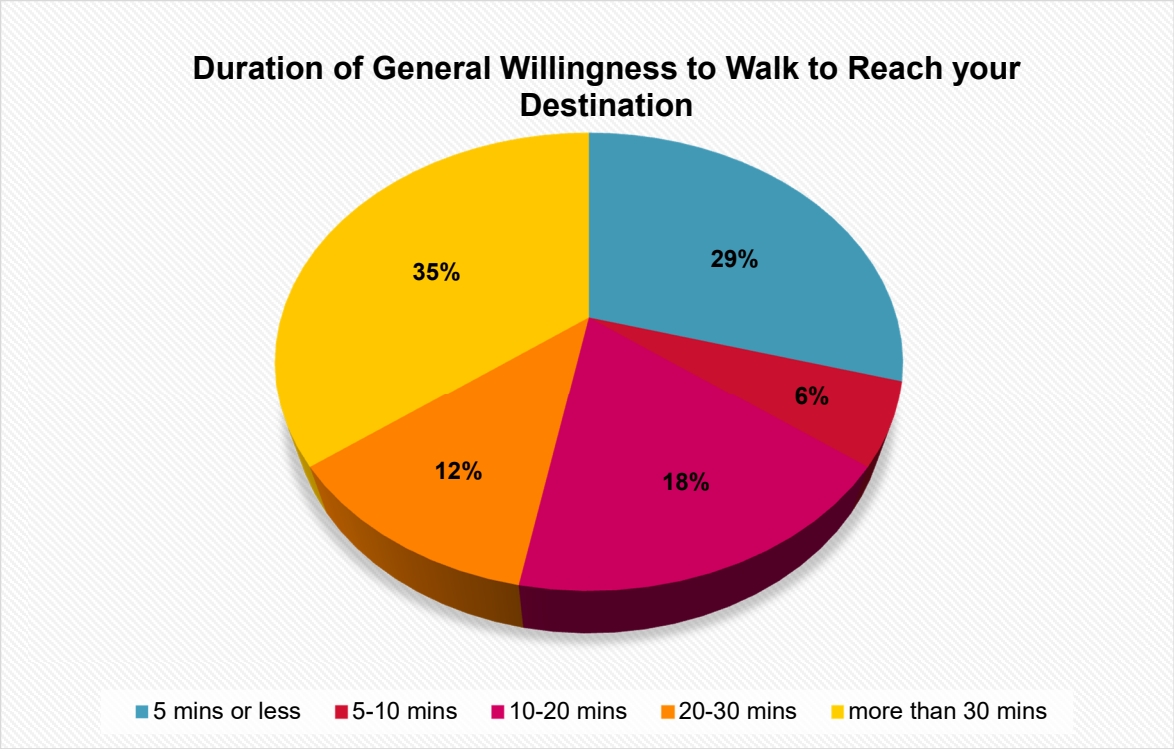
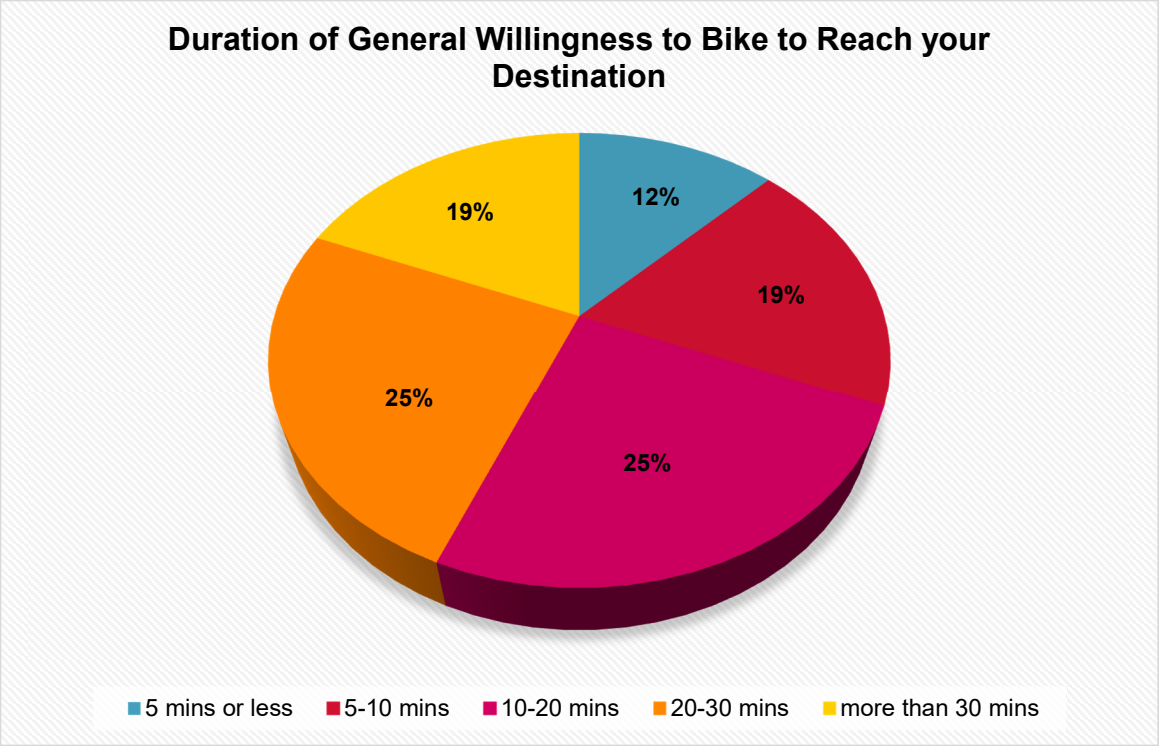
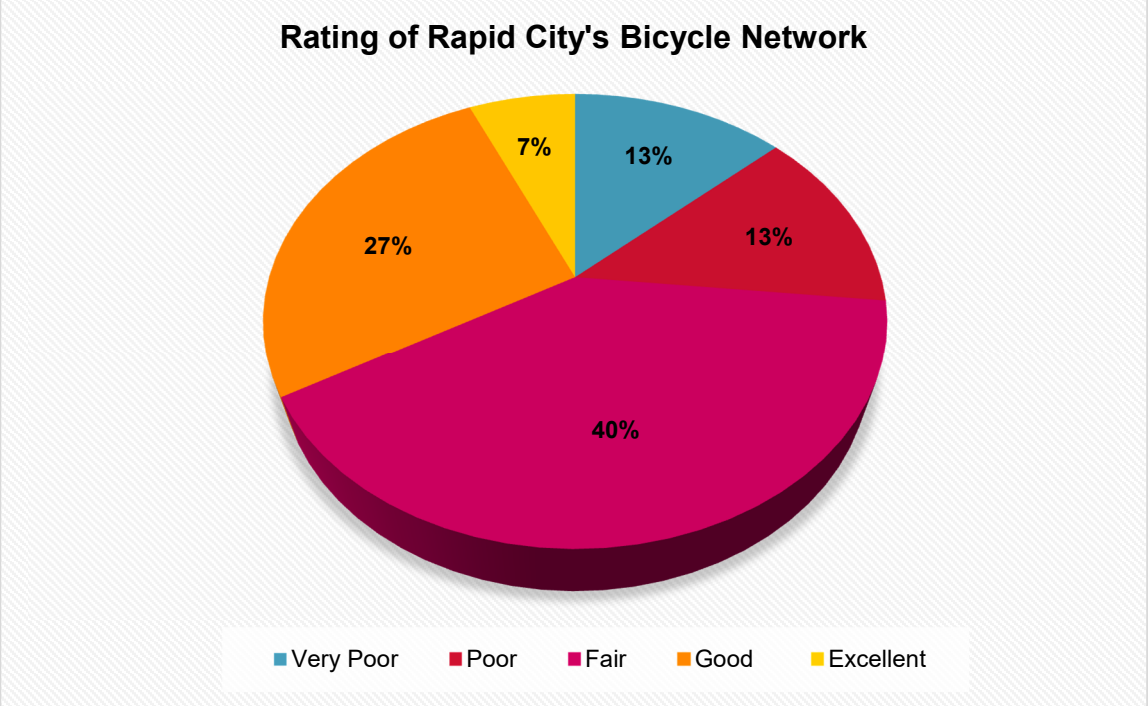


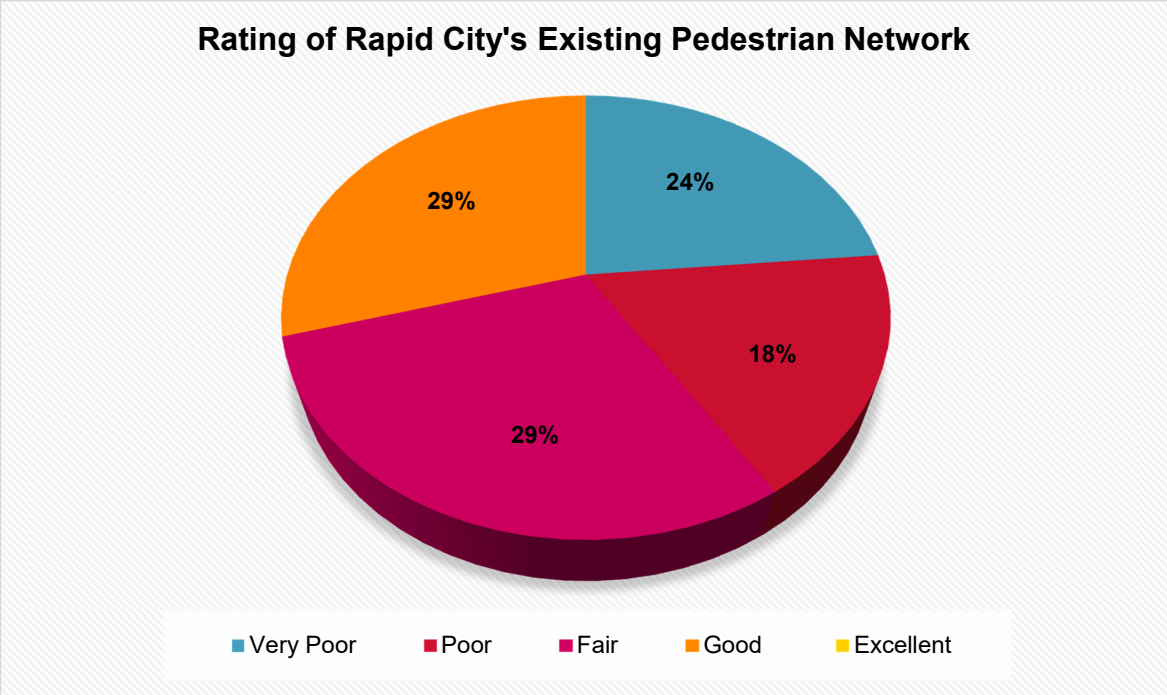
16 respondents



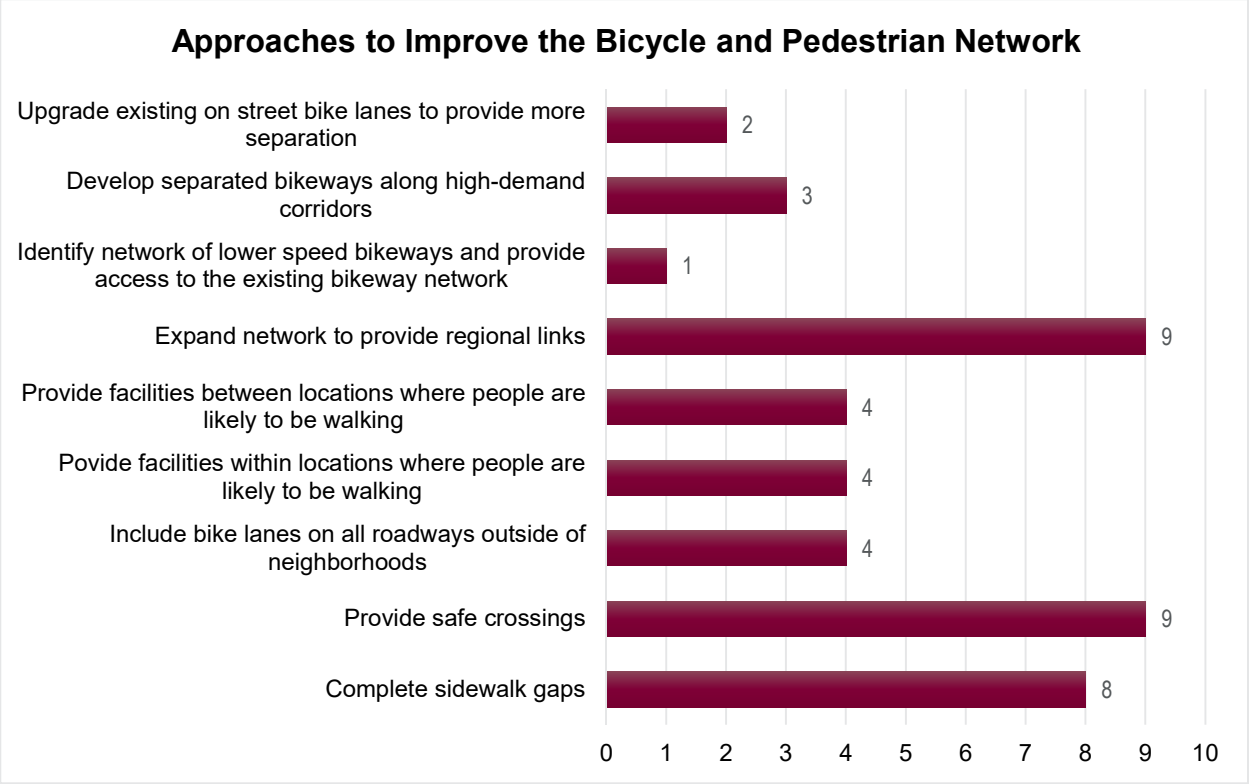
16 respondents



15 respondents



17 respondents



16 respondents

Bicycle & Pedestrian – Comments

We asked the attendees whether we missed anything, or whether they had comments on any proposed improvements. The results of their comments are contained in the Table in Appendix A, along with the map locations.

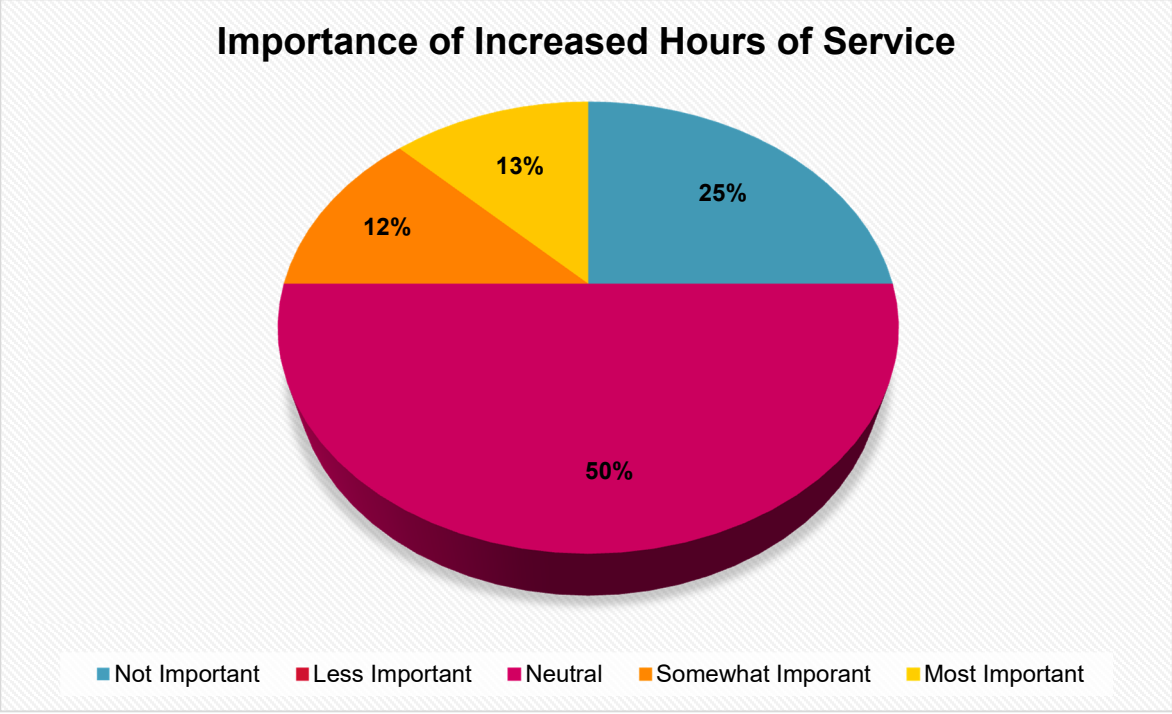
Bike/Pedestrian Priority Comments are generally summarized as follows.

- Crossing Enhancement – 10 Locations
- Sidepath or trails – 10 Locations
- Sidewalk – 10 locations
- Bikeway – 10 Locations

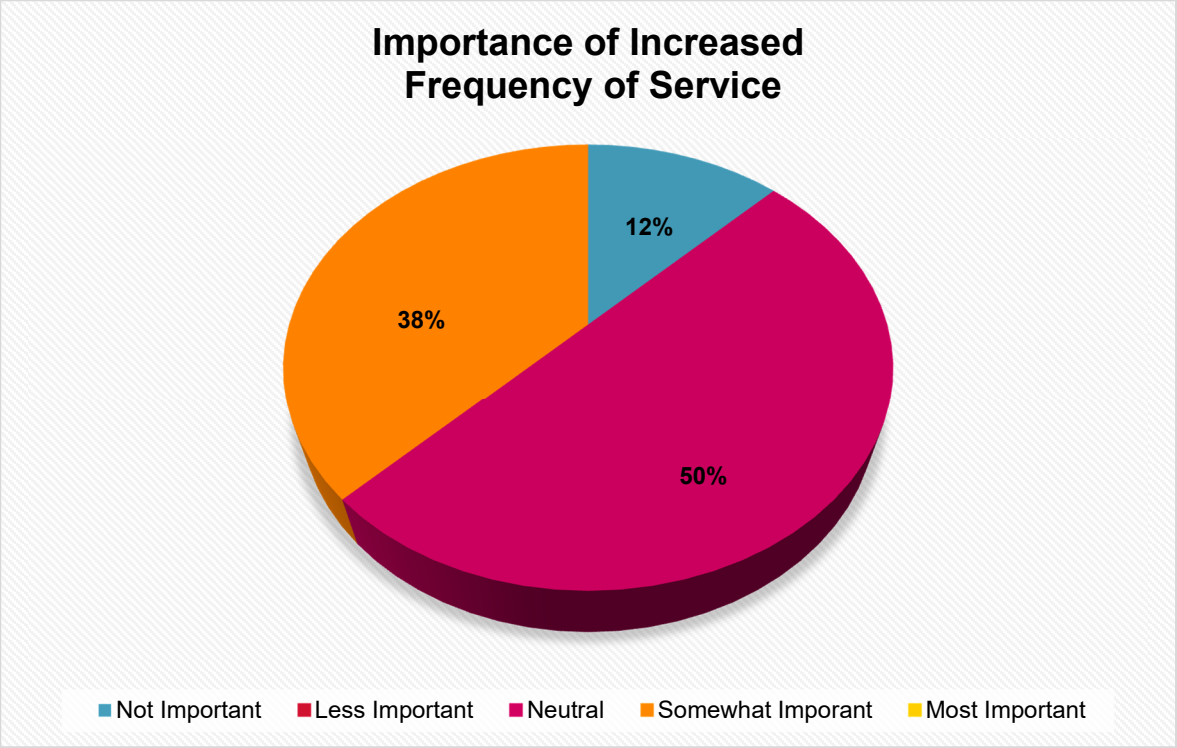
Transit Prioritization Activity

For the transit priority activity, respondents were asked to rank a series of items

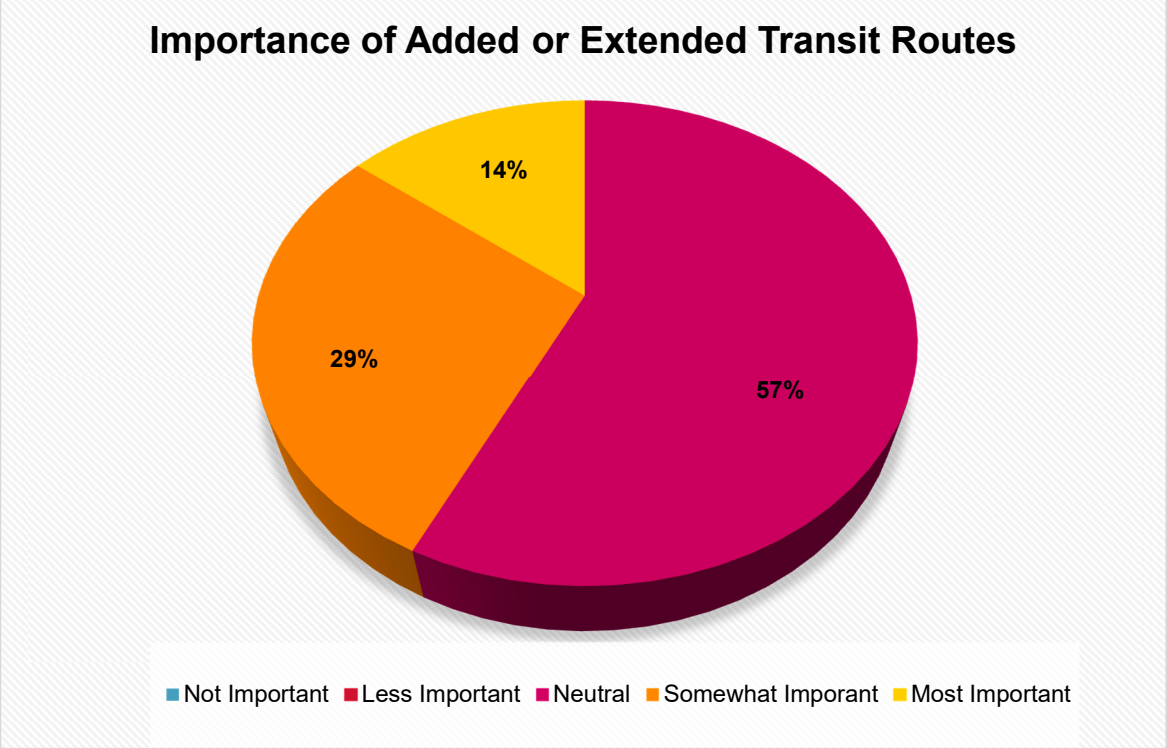
- Increased Hours of Service
- Increased Frequency of Service
- Added or Extended Transit Routes
- Transit to Surrounding Communities



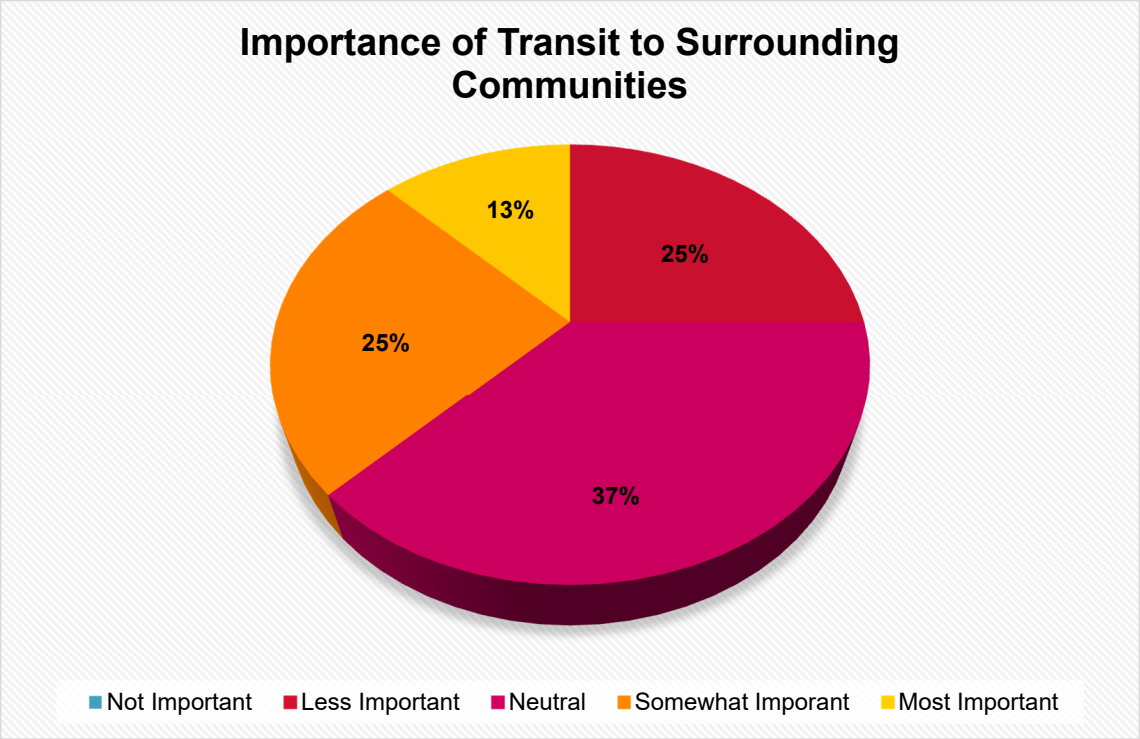
8 respondents



8 respondents



8 respondents



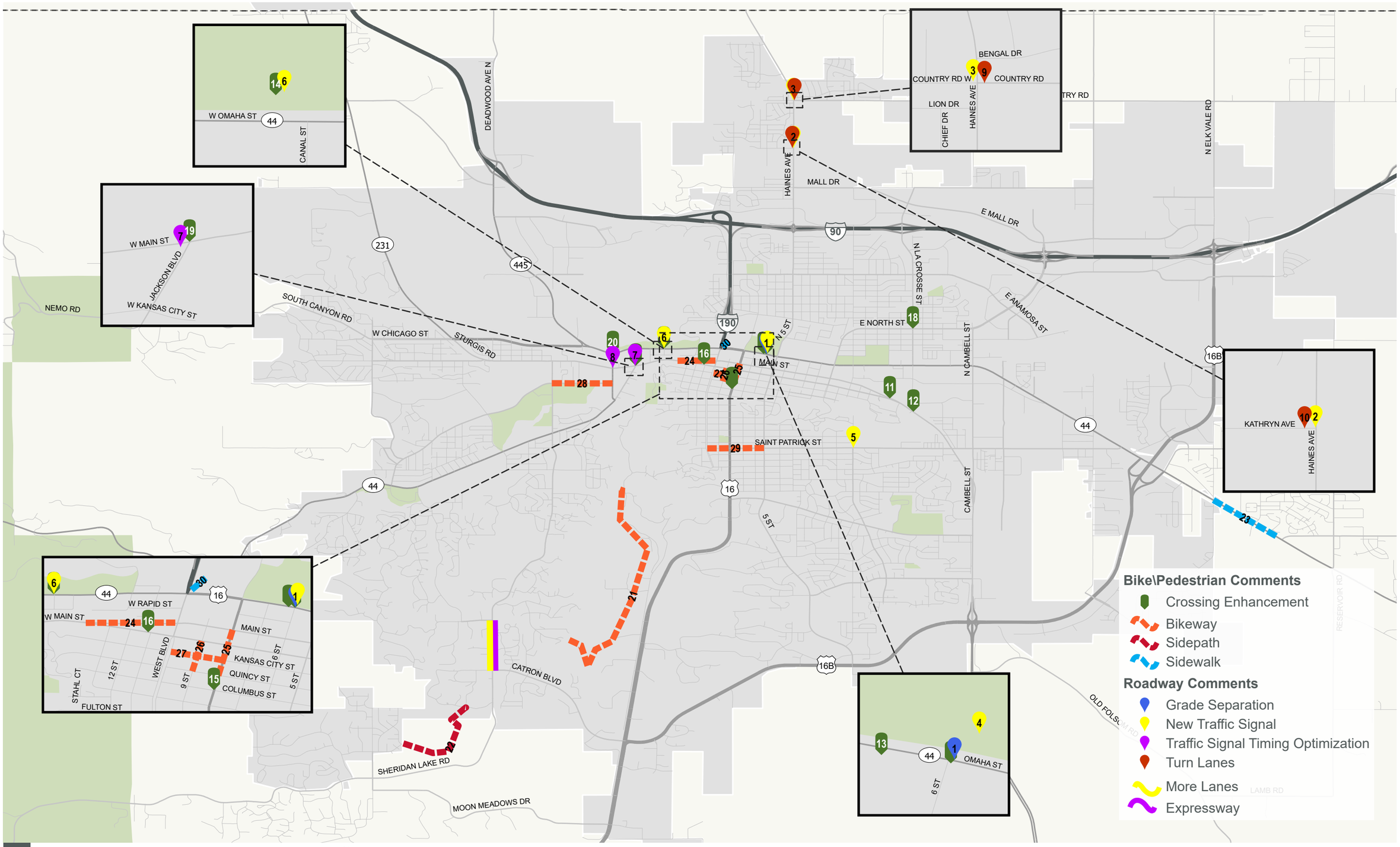
8 respondents

Stay Involved

There were four responses to the question “Would you like to receive future emails about the Rapid City 2045 MTP”? Three persons said yes, and one said no.

Appendix A – Comments and Comment Map

Map ID	Type	Comment
1	Grade Separation	A pedestrian bridge here would be a safer alternative to current crossing.
2	New Traffic Signals	Morning rush timing.
3	New Traffic Signal	Eventual traffic signal for rush times will be needed by 2030.
4	New Traffic Signal	All new signals that are installed need to be accessable Pedestrian Signal for the visually impatred.
5	New Traffic Signal	Traffic lights and pavement improvements would benefit this heavily trafficed intersection.
6	New Traffic Signal	N/A
7	Traffic Signal Timing	When driving westbound on W Main St and turning southbound onto Jackson Blvd, the amber signal duration is far too low. I regularly enter the intersection at a safe speed when the indicator is green, and it is red by the time I leave the intersection.
8	Traffic Signal Timing	When driving northbound on Mountain View Rd and turning westbound onto W Main St, the green indicator is far too short. Often only 1 or 2 cars in a line of 5+ will make it through.
9	Turn Lanes	Left turn lane needed on West bound during morning rush.
10	Turn Lanes	Right turn lane needed East bound morning rush.
11	Crossing Enhancement	Difficult crossing viewing distance/multiple lanes.
12	Crossing Enhancement	Difficult pedestrian/bike crossing - viewing distance/multiple lanes - during events.
13	Crossing Enhancement	Accessable Pedestrian Signals or a handicap accessable brideg anre needed here.
14	Crossing Enhancement	Need a safe way for pedestrians and bicyclists to cross Omaha here.
15	Crossing Enhancement	It would be nice (and presumably safer and less confusing for all involved) if the pedestrian walk signals automatically changed with the green light, rather than having to push the button.
16	Crossing Enhancement	It can be difficult to cross 3 lanes of traffic here and Main Street. Crosswalk markings or pedestrian signage might be helpful.
17	Crossing Enhancement	This crossing is really important for keeping the community connected and providing a safe way for pedestrians and bicyclists to cross Omaha... please keep it!
18	Crossing Enhancement	The pedestrian signals should automatically coordinate with the traffic lights so pedestrians have the right-of-way when the light turns green. There are a lot of pedestrians that cross here and they have to wait if they don't push the button in time.
19	Crossing Enhancement	Need a pedestrian signal and safe way to cross here. Hopefully this is planned as part of the reconstruction project.
20	Crossing Enhancement	A safer pedestrian/bicycle crossing is needed here. I've almost been hit by vehicles multiple times even though I had the walk signal.
21	Bikeway	Would be nice to have a bikeway from Autumn Hills to the Skyline trail system. This would provide a beautiful connection through the woods and views of the blackhills.
22	Sidepath	Alternate path for bicycles instead of Sheridan Lake Road.
23	Sidewalk	Sidewalk along Hwy 44 should continue to at least Covington or Long View.
24	Bikeway	Cycle track needed on Main St as well for westbound bicycle traffic.
25	Bikeway	It would be ideal to connect all of the existing/proposed bike lanes, etc. to create a more complete bicycle network.
26	Bikeway	It would be ideal to connect all of the existing/proposed bike lanes, etc. to create a more complete bicycle network.
27	Bikeway	It would be ideal to connect all of the existing/proposed bike lanes, etc. to create a more complete bicycle network. Bicycle infrastructure connecting to the YMCA is especially needed.
28	Bikeway	It would be ideal to connect all of the existing/proposed bike lanes, etc. to create a more complete bicycle network.
29	Bikeway	This bike lane should connect to Mt. Rushmore Road at a minimum, but West Blvd would be ideal. It makes no sense to stop it at 5th Street.
30	Sidewalk	Would be good to have a sidewalk connecting the intersection to the bike path here in case the bike path is flooded under the bridge.



ONLINE PUBLIC MEETING COMMENT LOCATIONS

Public Meeting No. 3 On-line Meeting Summary

July 6 - July 16, 2020

Rapid City Area MPO Metropolitan Transportation Plan & Bicycle/Pedestrian Plan Update

Rapid City Area MPO

July 17, 2020

Table of Contents

Public Meeting # 3 Overview

Meeting Details

Date: July 6th – July 16th, 2020

Location: Online Meeting Hosted at www.rapidtrip2045.com

Overview: Because of continued limitations placed upon public gatherings by the CDC, it was required that the on-line meeting format be used for Public Meeting No. 3 instead of in-person format. The on-line meeting and project information was open for review and public comment from Monday July 6th through Thursday July 16th, 2020.

Advertisements: Rapid City Journal (6/27/20 and 7/1/20), Native Sun News (6/24/20 and 7/1/20), project website, MPO website, and City press release.

On-line meeting information: The project team hosted an on-line public meeting for the Rapid City Area MPO Metropolitan Transportation Plan (MTP) and Bicycle/Pedestrian Plan Update to present the project findings and DRAFT reports for the MTP and Bicycle and Pedestrian Plan updates and gather feedback from the public and stakeholders.

Attendance: Based on the information received from project website traffic, the following data was collected:

- Page views total: 142
  - Mobile: 52
  - Desktop: 89
  - Tablet: 1
- Average time on page: 3:25
- Sessions by acquisition:
  - Direct/Google: 124
  - Facebook 16
  - Referral: 2 (referrals from rapidcityareampo.org)

Project Website

www.rapidtrip2045.com/onlinemeeting.html
The online public meeting took the attendees through a 5 step process with videos and interactive maps, including:

1. Welcome & Intro
    a. Purpose of Meeting (video)
    b. Rapid Trip 2045 MTP Overview/Background (video)
2. Analysis & Growth
    a. Existing System Performance and Future Growth (video)
    b. Household Growth, Job Growth, and Estimated Traffic Flow (interactive map)
3. MTP Findings & Needs
    a. Study Methodologies and Themes (video)
    b. Major Street Plan, Needs Plan, and Fiscally Constrained Plan (interactive map)
    c. A Multi-Modal Rapid City (video)
4. Bicycle & Pedestrian Plan
    a. Overview, Methodologies, and Themes (video)
    b. Bicycle and Pedestrian Fiscally Constrained Projects (interactive map)
5. In Conclusion
    a. Next Steps (video)
    b. DRAFT Document Review (links to DRAFT MTP and Bike/Ped Plans)
    c. Comments (via website)
    d. Comments (other modes)

Comment Summary

Participants were able to make general comments with regard to the DRAFT documents or with regard to the project as a whole. Comments were received through the On-line Public Meeting Link, through the General Project Website Comment/Contact page, and submitted by email. A compilation of the meeting comments is included in Appendix A.

There were 45 comments received. Comments were mostly general in nature and mainly focused on bicycle and pedestrian issues/needs. The Deadwood Avenue corridor was mentioned by several respondents as needing bicycle/pedestrian improvements. There were also comments on connecting outlying developments (i.e. Rapid Valley/Red Rock area) to the pathway network. Comments with regard to the street/road network were submitted on Jackson Boulevard and East Signal Drive. One comment was received on transit/dial-a-ride service. A few respondents mentioned sustainability as a priority.

Appendix A – Comments

No.	Comments Direct From Public Meeting No. 3 Comment Link
1	EXCUSE me but how is this a public meeting? Am I missing something?!?
2	I propose more circular, or one way patterns to the bike and pedestrian routes throughout Rapid City. Circular/one way trails are always more popular vs. trails which you must back track. More CONNNECTIVITY, essentially to all of the existing and proposed walk/bike trails. They could be concentric rings around/throughout the city of varying lengths, purposefully (one could start training on a 3k route and move up to 5k, 10k, and so on). To visualize this point, aerially, they could essentially resemble the Olympic logo whereby all of the circular trails of varying lengths throughout Rapid City all meet at the same point (downtown, founders park, etc.). I think this could be adapted pretty easily with existing routes with adding some connectivity IOT enhance the existing randomness of the bike/pedestrian plan.
3	It appears that the extension of Jackson Blvd from West Main to Omaha Street is nowhere to be found. Wasn't that project a top priority of the City not to long ago?
4	Need bicycle path linkage to all area schools. Also to area athletic facilities. Also YMCA, public library, public transportation stops and hubs. Construct new roads only if they include bicycle pathways, preferably separated.
5	Hi Rapid City Officials, I feel that an immediate need for safe bike/pedestrian travel on Deadwood Avenue should be addressed the sooner the quicker. Either an east side sidewalk P2147 or the proposed P294 trail that would link this entire area to the bike path giving the Industrial Area workers and the Fountain Springs community access to the bike path. I believe firmly that connecting the entire Deadwood Avenue Industrial Area by either a sidewalk or bike trail will not only keep people alive but give this entrance into our city a polished look instead of the hard to travel dirt trails currently available. If I were to point to another trail that could give our city residents access I would point next to the abandon rail line P424 going out to the valley. A safe path to ride bikes or walk into town from the valley would help to connect businesses and people. These trails are the backbone of pedestrian travel in our city!
6	Comment on an East Signal Drive connector road from Elm Avenue on the west to East St. Andrew Street on the east. The Hansen Heights owners are calling for the removal of this East Signal Drive connector road. The short road segment from Hawthorne Avenue to Hansen Heights property line should be retained. The East Signal Drive connector would pose a major detraction to developing Hansen Heights because it presents a physical barrier crossing the property and large added road construction costs. Hansen Heights has been identified as a Federal Opportunity Zone property to encourage development. The city would be encouraging Hansen Heights development by vacating the East Signal Drive road connector from the updated major road plan. The South Dakota School of Mines has done something similar in vacating Hawthorne Avenue from East St. Andrews north through the Gap Area for future development. Sidney A. Hansen
7	In regard to the bike and pedestrian plan update: Improving recreational bicycle travel and practical pedestrian and bicycle commuting would greatly enhance Rapid City. It would have significant quality of life impacts, marketing benefits for tourism, and would also help reduce carbon emissions and local air pollution. This needs to be a higher priority for the city. Progress on former goal 1.1.1 to complete high priority bikeway network and sidewalk gap projects has been insufficient. This should be a higher priority for the city and region moving forward. Simply restating the same goal will not get it done. Goal 2.2.1: Becoming a Bicycle Friendly Community would have huge benefits for employers and others trying to market the area for both new residents and visitors. Goal 3.2: The city needs to adopt a complete streets policy.
8	In regard to the bike and pedestrian plan update: Your proposed bicycle network map shows that Catron Blvd has an existing bike lane. Sure it has a very wide shoulder, but it is not a bike lane. If you are going to call it a bike lane it needs to be painted and signed as such to draw driver attention to the fact that they need to be aware of bicycles and pedestrians on the side of the road. Cambell Street is a great example of a location that would really benefit from more/better sidewalks for walkability.
9	While your MTP lists “Environmental Sustainability and Resiliency” as one of the top six goals, it is obvious that it is not given nearly as much weight as the others. The objectives and metrics listed under this goal only focus on “limiting impacts,” or in other words making future roads less bad. The MTP should go beyond minimizing harm and include plans to use future transportation projects as ways to transition our community to a more sustainable future. The best potential example of this is the electrification of transportation to allow for more renewable, low-carbon fuels. It is well documented that the country is will largely transition to electric vehicles over the course of this plan, and yet it is given no consideration in this plan! There are ways that you can include EV charging infrastructure and other future considerations. In conclusion, sustainability is important to the people of this community and should be included more deeply and widely in all aspects of this MTP.

10	I'm glad that the city is working on improving biking/pedestrian access in the city. I moved to Rapid in 2016 and was really excited to be able to bike/walk to work, only to find that the reality of actually doing that wasn't very possible. As a new biker, I did not feel safe on the streets of Rapid City...even now, I am very hesitant to ride my bike on the streets because of safety concerns on busy roads and by cars not knowing how to treat me (am I a vehicle or a pedestrian). I think that creating more bike lanes is a necessity (I prefer not shared lanes since drivers don't recognize them in the city); I live in the West Blvd area and biking to my job on East North Street is great once I hit the bike path, however, traversing the downtown streets is pretty scary. Additionally, education is going to be key. I know that education is a long term plan, but the citizens of Rapid need to know how to treat bikers and bikers need to know how to treat drivers (honestly).
11	Most cities rely on system of sidewalks and bike paths for non motorized transportation. Rapid City's sidewalks are too deplorable to bike on and unsafe to walk on. I fell on broken sidewalk downtown and city's reaction was not their responsibility. Well if it's not yours, you need to enforce repair and upkeep upon those you do hold responsible. Thank you for your efforts to improve non motorized transportation and recreation in our community.
12	The plan seems to adequately address anticipated demand at the expense of having any imagination into what an innovative and inclusive Rapid City could be. In designing solely to user-driven demand the planners perpetuate the status quo. Pedestrian and cyclist demand remains low because the city is not a very nice place to bike or walk. Thus, more space is dedicated to vehicles as the city continues its low density uninspiring sprawl. Presenting the modes of transportation apart from each other makes it difficult to analyze if the proposed solutions will create enjoyable user experiences for all. Further, there is no mention of any real environmental or sustainability goals that would support the physical and economic well-being of those that live, work, and visit the city for generations to come. Rapid City has the potential to be more than the mediocre locale this plan suggests. It will just take a little bit of ingenuity and truly holistic planning to achieve it.
13	I'm thrilled to see the proposed additions of bike lanes and new trails. I sometimes commute via bike to my office, which is off Deadwood Avenue. The current dirt trail, which is close to the street, is by far the most dangerous part of my ride. Additionally, it can be tough to get around via bike because of limited bike lanes both downtown and from the northern/southern sides of town. Hopefully the new bike lanes and other proposed additions will also improve driver awareness of how to co-habitat roads with cyclists. Looking forward to the expansions!
14	The RC bike path is designed mainly for exercise but does not seem practical for legitimate transportation within the city. In high use areas there should be parallel separate paths for bicycles and pedestrians. Bicycle path and street intersection/crossings are extremely dangerous and should be avoided by using overpasses/underpasses when possible. Bicycle paths in the Black Hills forest areas have high value that would increase with connectivity with city and intercity bike trails. Biked lanes shared with cars are poorly marked.

No.	Name	Comments From Project Website During PM No.3
1	Charon Geigle	I skimmed through the 110 page draft document. Some of it makes sense... some of it takes wading through. If I were to move to Rapid City from Wall I am looking for connectivity to grocery store, library, downtown, and to eastside.... The grocery store element did not seem to be mentioned in the Draft document. Although I do drive, usually to Rapid City for appts, groceries, etc, I am not attracted to live there because I would have to drive all the time and everywhere due to lack of bike and walking infrastructure. And I transport my bike when needed for recreation. Not everyone has a vehicle that accommodates a bike for transport to other places or a bike repair shop for that matter. Self repair bike stations would be appropriate to incorporate in residential areas as well. I would like to see one geographic area of Rapid City fully interconnected rather than a project here and there.
2	Emily Ashley	Hello! Thank you for allowing the opportunity to comment. I work at Strider out off of Deadwood Avenue. It would be nice to get from Strider (or anywhere off of Deadwood Ave) to the bike path safely, be it a sidewalk on Deadwood Ave. or the proposed trail up next to the small stream. Getting to work by bike safely and not in the mud would be awesome! Thanks again!
3	Martin Spahn	A bicycle and pedestrian plan needs to include linkage to all area schools. A good example of how this is done well is Sheridan, WY. Also linked should be area athletic facilities, swimming pools, as well as community facilities such as YMCA, library, and the downtown area. Doing this will functionally integrate pedestrians and bicyclists in everyday life activities and errands, which will reduce our need for and dependence on motor vehicles, which will free up city space for communal use. Also: we need a safe and user-friendly crossing over Omaha Street, somewhere between Mountain View and Founders Park Drive. A bridge for pedestrians and bicyclists would work. Whenever new roads are built, they should be required to include separate bicyle/pedestrian pathways. Does anybody else see a need for motor vehicle driver education about pedestrians and bicyclists? The notion that we have to slow down and wait with our cars, if we cannot assure safe lateral passing distance at safe passing speed, seems to be missing for some of our drivers. Any plans for electric vehicle charging infrastucture going forward (public stations, multiple)? Lastly, I cannot enter any comments in the comment box (Provide Your Comments); it remains nunfunctional for me, despite using all different browsers recommended. It erases whatever I write midway into the first line.....
4	Susan Marcks	Hello, I noticed in the Rapid City Journal that they were discussing the future development of biking and pedestrian plans in Rapid City. I have written requests in the past, with no response or updates - but will try to see if I can be heard here too. Deadwood Avenue DESPERATELY needs a sidewalk. There are several bikers and pedestrians there on a daily basis that are in danger. The road is too busy to ride on and the rutted out grassy area beside the road is extremely dangerous, hard to ride on, not maintained, it really is just an accident waiting to happen. In fact, twice in the last 6 years, I have had two different co-workers struck by cars on their bikes when trying to ride on the road. Thankfully no one has been seriously injured... yet. A sidewalk on the east side of deadwood ave can potentially save lives. Thanks for your consideration on this very long awaited, and overdue upgrade to our city. Susan Marcks
5	Julie Godbe	Please mitigate the narrow shoulder rumble strips as a safety hazard for cyclists. Wide (continuous) shoulder repair and requirement would make the narrow shoulder rumble strips less dangerous. (e.g. Hwy 385 and south Haines Ave.) In using SDPS accident statistics to guide safety planning, please note that there is inequity for cyclists because cycling statistics are not counted unless there's a death or a car is involved and there is over $1000 damage. So safety engineers need to think outside the motorist-centric statistic box on this and be proactive for cyclists instead of marveling at the STILL rising ped/cycling statistics. It's bad! I attended the October 2019 ped/cycling planning meeting and ineffectively communicated my concern for narrow shoulder rumble strip on a post-it note. The 2019 state highway safety plan for more shoulder rumble strips is disturbing!
6	James Chastain	There is a need to connect the city bike path on the east to the designated bike path along Twilight Dr and the sidewalk on the north side of SD Hwy 44. This would require adding about 1/2 mile of wide sidewalk along E Saint Patrick St to SD Hwy 44. Thank you
7	Ann Hilton	I would like to ride my bike from the valley into town. Is this going to be in the plans?
8	Bobby Sundby	Would really like to see the bike path extended up towards fountain Springs golf course area. Thank you
9	James Fuhrmann	There is no sense to add to the bike path if the Parks Dept. and Police are going to use it as a freeway. I ride the path daily and over 35% is broke up. This damage isn't from bikes. The bike path can't be maintained with that kind of abuse. I have seen water trucks, skid steers, pickups, trucks with cut down trees on them not to mention the ambulances. The Parks Dept. says they have to use it to get to garbage pickup. Maybe more thought should be put into the location of the garbage can location.
10	Sara Odden	I would like to see a connection to the bike path from the Red Rock Meadows/Red Rock Estates/Red Rock Village/High Pointe Ranch/Countryside Subdivisions. I wonder if a path connection along the Shooting Star Trail ROW from Wildwood/Sheridan Lake Road to Poppy Trail would be good for consideration. These neighborhoods have no connection to the trails and this may be beneficial and a good use of the existing section line ROW that will likely never become a thru street.
11	Josh Tjeerdsma	I would like to give my input regarding bicycle transportation infrastructure. I have commuted to work in Rapid City by bicycle for the last 20 years. I have traveled a lot with my job and have noticed that all major metropolitan areas have been rapidly expanded their bike lane infrastructure to make cycling more safe and efficient. It seems that most cities include bike lanes in all new road construction. I have been disappointed seeing road projects in the area being completed without bike lanes. I feel like we are falling behind the rest of the country in this area. I feel like cycling and pedestrian infrastructure is a major attraction to people moving to a new town. I know that once a large road project is completed it wont be redone for a long time, so it seems important to plan for the future. I have also been hit by a car while riding and had numerous close calls in Rapid City. My children also use bicycles as a way to travel around the city, and it frightens me knowing how dangerous it is here. I would ask that the local government take more consideration of alternative modes of transportation for the future of our city and safety. As a side note, I also feel the city is focusing too much energy in the Civic Center corridor when it seems like our issues lie elsewhere. During the tourist season and off season there seems to be a lot more activity and congestion around outdoor areas like Hanson Larson park than the Civic Center. I hope the city is taking that into consideration with the new Omaha street construction. Please don't let our beautiful city fall behind by focusing too much energy and tax dollars in the wrong places. Thanks for your time. Josh Tjeerdsma
12	Sage Harkin	Kota news took too long to present the project! I've never owned a car. * My concerns were always these: - There's no pedestrian signs/lights/crosswalk on the I-90 & Jackson Blvd intersection. - Sidewalk needed on W. Main at least from West St. to Cross St. - Traffic signs, etc. are haphazardly placed "in the middle of sidewalks" all over Rushmore Rd, and a few other places. Stupid! - E. St. Patrick has storm water grates on the street that can trap bike tires as they are parallel to traffic flow! - A hike & bike tunnel through Skyline would be a blessing over long trip around it! * Paths well made are on S. 5th St., S. Sheridan Lake Rd., and downtown, though those need repainting. ~ Thank You

13	Conor McMahon	As a regular cyclist, for both recreation and transportation I would love to provide feedback on the Bike Plan. But a 110 page plan with no abstract is very unapproachable. I can tell you that having lived in several cities all of the country, Rapid feels way behind in its bike infrastructure. The bike path is great, but what is really needed are real bikes lanes on major streets. Not painting a bike in the road and calling it a bike lane. Drivers in this city are very hostile to cyclists. We need physical barriers separating bike lines. I see a huge issue with people trying to bike from the west and SW side of the city, through the gap, to work or recreate downtown. There is no way to do this safely right now. Riding on West Main Street through the gap literally makes me fear for my life. The alternatives is riding on that sidewalk. This might be the worst maintained sidewalk in Rapid City. I have wrecked my bike just do to huge uneven spots in the pavement. This sidewalk is also heavily used by pedestrians so I hate riding on it but its the only "safe" option. In short, IMHO, the two biggest priorities should be a safe, physically separated bike path on west main through the gap, and 2)installing physical barriers to create a dedicated bike lanes in downtown rapid. I'm also going to say that it seems like residents on the north and east side use bicycles for transportation out of necessity due to economic conditions. So please dont just put all the money into the west side of town, distribute it equally among all residents. Thanks for your work on this and have a great day.
14	Tom Blue	The Canyon Lake Drive bike lane is rarely used. However when the road was reduced from 4 lanes to 2 lanes (with turning lane), it created a lot of vehicle congestion, especially at high traffic times. I am also a bike rider and would often ride in one of the former vehicle lanes. It worked fine. Please remove the bike lane, re-stripe to 4 lanes, and make the outside lanes a shared vehicle/bike lane for the occasional bike rider. There's just too much vehicle travel on that road for only 1 lane in each direction. Thank you.
15	Stacy Torneten	I would like to recommend crossing lights in high speed areas. As an example Viking & Haines intersection. Traffic will not stop if you are at the crosswalk. in many cases speed is an issue people heading north are picking up speed as they head out or those coming down off the hill are going faster than the posted limit. The other issue with this specific intersection is if you slow down to let someone cross the cars behind will pass you. this becomes a dangerous situation for pedestrians or bicycles, this area has grown tremendously with more children. Thank you.
16	Matt	Rapid City needs more room on most if not all major roads for bicycle commuters. Most streets if there is commuter the vehicles are in your hip pocket when they pass. Meaning they have to slow down or enter the other lane to pass the bicycle, making it more stressful for the driver, and the rider, as well as all traffic. The more this happens to a driver the more often they get frustrated with the biking community and less likely they are to show them respect. I was even clipped a few weeks ago at the corner of St. Patrick, and St. Joesph while biking because people didn't care, the other cars behind that person didn't even stop to see if I was ok, just kept driving. Is there a location to view the 2011 bicycle and pedestrian plan to see what it all entails from 9 years ago?
17	Jessica Oliveto	There is A TON of foot/bike traffic on S Canyon RD. The speed limit is 35 mph, which seems too high for a 2 lane residential road. There are also pedestrians crossing the road multiple times a day near 4532 S Canyon Road. A crosswalk and Capital and S Cayon is desperately needed.
18	Steve Flanery	I have ridden my bicycle for 15 miles a day since April. I leave my home in west Rapid City and hop on the bike path from Canyon Lake to downtown. I ride a combination of bike path/city streets and dirt trails on Hanson-Larsen and Skyline Park. This town is not bike friendly, too many distracted and angry vehicle drivers on city streets and walkers on the bike path. Once the pandemic subsides, I believe the bike traffic will not substantially be reduced. Hanson-Larsen does is not supported by tax revenue and we need more public/private partnerships and collaborations to meet the demand of the cycling public. Make no mistake about it, world class trail riding like we have at Hanson-Larsen is economic development and attracts many visitors who like to spend money. We need to be known as a bike friendly community and we had better get with the program!
19	Gregory Josten	Moon Meadows Road is in need of a bicycle/pedestrian path. The road is experiencing increasing use by bicyclists, walkers, and runners. However, much of the road has no shoulder forcing people either into the ditch or on the pavement. Passing forces motorists into the oncoming traffic lane along a road with many sharp curves and hills. The best solution is a paved path that parallels the road. Gravel will not be acceptable because cyclists with thin-tired road bikes will not ride on gravel. I'm afraid it's just a matter of time before current conditions result in an accident causing someone to get seriously injured or killed. Thank you for the opportunity to provide input!
20	James	Keep the damn bikes off the road and on the sidewalk where they belong.
21	Eric Henrickson	Please develop areas outside of the couple blocks of downtown that we have. As previously stated, the Deadwood Avenue area is full of people that would love to commute without a car (many of my coworkers live on the west side) but there are simply no safe ways to do that today. I live at the top of West Chicago and was excited to see a sidewalk as part of the plans when the road was being redone a couple of years ago. Of course, it wound up being on the wrong side of the road and not actually connecting to anything. Seriously! ?! Maybe two more blocks and it could have connected to the bike path. Very short sighted. I would also add that compared to many other dedicated pedestrian transport networks, our bike path is laughably narrow. On a day with more traffic you can do nothing but ride/walk single file, which may be fine for commuting but completely defeats the purpose for most leisurely users. I have four young kids, keeping them all in a line as we use the bikpath/sidewalks is difficult at best. Failure to connect more intentionally to the newly remodeled Baken Park and Canal Street business centers would be another huge miss. Speaking of shopping, how in the world did we manage to completely isolate the Rushmore Crossing Mall from all viable forms of pedestrian traffic? The only way to get there is via car, which is a major pain given how the parking lots are layed out. For those brave enough to risk riding their bike, there are no accommodations once you arrive. I realize our outdoor season can be limited here, but during the times we are able to use it, our pedestrian system is stressed to the max. There are other states with similar climates doing a much better job of this than we are right now.
22	Rod Pettigrew	I use the bike path as a commuter on my bike to work everyday. I mean everyday, thru snow, ice, rain and wind. Overall, I believe we have a great biking system. I live on St Cloud Street west of West Blvd and I work at Flooring America out by Menard's. Everyday about 6:00 AM I head down 11th Street to Kansas City over to 6th, across Omaha at the Promenade, take the bike path to Roosevelt Park and then zig zag on streets to Kmart, cross Campbell and eventually end up where I work. Yes it would be great to have a bike path from point A to point B, bike lanes all over town, a underground or overpass at Omaha, but all of this cost money. As you know, Rapid City is not the bike riding capital of anything. It is growing but has a long way to go. Here are my thoughts: Rapid City automobile drivers have NO respect for bike riders, NONE. Can not tell you how many times I have been flipped off, honked at, cars coming as close as they can. I am one of the few who follows the rules of the road while riding my bike. Soy, not only should there money invested in however the system needs to be improve, it also needs money invested in a very aggressive campaign in educating the public about bikes on the road. I know the existing infrastructure limits what can be and can not be done at a reasonable cost. It would certainly be great if all streets had a bike lane or bike markings. Certainly not all streets but maybe create a bike map that could get one from here to there with bike lanes or bike markings. I have biked along the bike lane on Jackson and really do not feel comfortable. Cars just speed by to close and there is not room for error. Like previously mentioned, I cross Omaha at the Promenade early in the morning and between 4;00 and 6:00 PM everyday. I really do not see the need for a change with what is there. Yea, I sometimes need to wait, I think it is ok to have traffic slow down and stop, makes Omaha safer. I know planners goal is to get cars down main corridors as fast as they can. I believe get them to a main corridor but there is nothing wrong with making them stop for pedestrians and bikes. I have been confused and disappointed by an offer I made last year. The bike markings on Kansas City Street and 6th Street have been worn and weathered away. I believe these are important. I called and talked with some department head last year who was in charge of over seeing the bike markings. My question was, what is the cost to do 1 marking. Once I would know the cost, I would do simple math and explained I was willing to pay out of my own pocket to have as many repainted as possible at NO cost to the city. FREE, I would pay labor and material. They turned me down on my offer, still can not figure that out. The markings on the road should make drivers of cars more aware that bikes use the lane. The bike path is great, the only issue I have is the volume of some of our less fortunate who are often in desperate condition. I know of people who do not use the bike path from the Civic Ctr east because of this. They feel unsafe. I guess I use the bike path often enough that I recognize them and maybe they recognize me as a lonely bike rider. Do not know if any of this helps, just my .02 worth.
23	Edna Steinberg	City Springs Road sidewalks: From end of 44th Street there is approx 2 blocks of no sidewalk on either side of the street. Also no sidewalk to Elizabeth - Seton School. St Martins Village has added 50 twin homes since 2013, of these at least 22 in the last two years. Plus an apartment and a nursing home since 2013 Lots of walkers, not just residents, go by our house every day, winter or summer. School kids ride their bikes to school also. Drivers do not go 25 mph. There are 26 signs in just the SMV area on City Springs Road

24	Maria Thouron	I just have a couple of comments about bike/pedestrian access here in Rapid City. While I love the bike trail we have, more trails/offshoots would be very welcome. My husband and I used to live in Lincoln, NE, and at the time neither of us owned a car--we were able to commute via bicycle everywhere we went because their trail system covered the city so well. That is sadly not the case here. For example, we live north of the Civic Center, and our daughter's daycare is by Pinedale Elementary. There is no good, safe route for us to bike from our house to that neighbor hood, even though getting from our house onto the trail is relatively easy. Our previous daycare was located north of Rapid, on Steeler Lane, and while there is an excellent wide sidewalk leading out to that area, it is a loud and stressful ride next to such a busy road. Since there is still a lot of undeveloped land north of town, why not put a trail in that doesn't follow the road so closely? Biking out to Rushmore Crossing is also problematic, since it is on sidewalks with many road crossings (and bicyclists are technically supposed to walk their bikes through every single road crossing). There is also a sad lack of acceptable sidewalks, especially in North Rapid. One of the most obvious deficiencies, along East Blvd next to the former Prairie Market, has finally been remedied, but there are still many sidewalks in North Rapid that are in poor repair and have no access ramps, making them very difficult for those on bikes, with strollers, or in wheelchairs to use. Is there a way to revitalize some of these sidewalks and, at the minimum, put access ramps in? Thank you for working on this!
25	Chris Matusiak	I like to ride thru town but the conditions of the roads are terrible. They need to re-asphault the downtown side roads like 4th st, 9th, etc. The bike lanes on the sidewalks around Quincy & Kansas City st are ok but could use more signage. We could use more designated lanes for bikes only. Not everyone goes where the bike path runs.
26	Bill Cantalope	there actually is no place to ride bikes downtown, the side walks are tight and the diagonal parking makes it impossible to ride on the streets in certain places. It would be nice to build a walk/bike way across Chicago Street. Allowing restaurants to have table space on the sidewalks make it difficult to ride. I guess reduce the speed limit and mark out a bike lane on the road is one idea, bikes are suppose to follow automobile rules, or place signs around stating Walkers/Bikers Share the space on the side walk, also the city need to have foot patrol down town to protect the tourist.

WRITTEN TESTIMONY
(Please Print or Type)

Concerning the TENTATIVE 2021-2024 ~~SDDOT STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)~~ Rapid City MTP

Please mitigate the narrow shoulder rumble strips as a safety hazard for cyclists. Wide shoulder repair and requirement would make the narrow shoulder rumble strips less dangerous on our tourist-attracting, scenic, windy and hilly narrow 2-lane roads. eg Hwy 385 & Haines

In using the accident statistics to guide safety planning, please note that there is inequity for cyclists because bike statistics are not collected unless there's a death or a car is involved AND there's more than $1000 damage. So safety engineers need to think outside the "auto-centric" statistic box on this and be pro-active for vulnerable cyclists instead of re-active to inequitable statistics.

I attended the October 2019 planning meeting and ineffectively communicated this concern on a post-it note. The 2019 state highway safety plan for more shoulder rumble strips is disturbing!

NAME: Julie Godbe **DATE:** 7-13-20
ADDRESS: 4930 Ireland Pl
CITY: Rapid City 57702 **STATE:** SD

Written testimony will be included in the meeting record. Comments should be submitted by July ~~28~~ 16, 2020 to:

~~Darin Bergquist, Secretary~~
~~South Dakota Department of Transportation~~
~~700 East Broadway Ave~~
~~Pierre, South Dakota 57501-2586~~

cc Kip Harrington
Transportation Planning
Community Planning & Dev Services
300 6th St RC SD 57701

Or e-mail your comments along with your address to: ~~Levi.Briggs@state.sd.us~~

julie.godbe@gmail.com 394-4120

Hamilton, Dustin

From: Harrington Kip <Kip.Harrington@rcgov.org>
Sent: Tuesday, July 14, 2020 3:59 PM
To: Hamilton, Dustin
Subject: FW: Satisfied caller/Dial-a-Ride

FYI.

Kip Harrington
Planner III
Long Range Planning
Rapid City Department of Community Development
300 6th Street
Rapid City SD 57701
(605) 394-4120
kip.harrington@rcgov.org

From: Shoemaker Darrell <Darrell.Shoemaker@rcgov.org>
Sent: Tuesday, July 14, 2020 3:58 PM
To: Harrington Kip <Kip.Harrington@rcgov.org>
Cc: Gould Megan <Megan.Gould@rcgov.org>; Tech Dale <Dale.Tech@rcgov.org>
Subject: Satisfied caller/Dial-a-Ride

Took a call from a Phyllis Alexander...phone is 390-0341...

She had seen the media item or the FB item on the online feedback for the transportation plans...

She is 88 years old and wanted to know if any of this involves transportation...I told you were looking at various different reports, and yes transportation/transit is a part of it.

She didn't know how to do the online feedback but wanted us to know that she uses Dial-a-Ride several times to go to the Regional Sports Center and to other doctors...and she has NEVER had a bad experience with Dial-a-Ride...she commends the drivers and they are always usually on time give or take...she doesn't want to see any changes in the system...it's great for older folks...and demanded her voice be heard. I told her I would share both with the folks taking feedback but also the Rapid Transit folks...she was glad I would do that and said again, Dial-a-Ride is wonderful.

There you have it...glad to get such calls....

Thank you,

Darrell W. Shoemaker | Communications Coordinator
T: 605.721.6686 | M: 605.939.8551
E: Darrell.Shoemaker@rcgov.org
W: www.rcgov.org

July 14, 2020

Bike/Pedestrian Plan Update Thoughts and Comments
Rapidtrip2045.com

Based on the foundational statement in the plan of:

> Proposed projects from the 2011 plan will be evaluated to determine if they should be maintained as-is or be modified or removed. Modified or additional projects will be based on evaluation of LTS, equity, bike and ped demand, existing and proposed bike/ped networks, identified network gaps, connections to facilities and destinations, and public input with a specific focus on low-stress facilities and streets.

I believe it is time for Rapid City to go to the next level for bicycle safety and accessibility. We have an opportunity to create a world class biking community. We already have many of the necessary facilities and support systems in place. We should ask the question, "What kind of community are we?", when it comes to a bicycle and pedestrian friendly atmosphere.

When I was in college at the South Dakota School of Mines and Technology many people including myself were active bicyclists. Many of my classmates commuted (weather permitting) from their homes to campus. My friends and I would often spend weekends riding through town, up highway 44, and back to campus.

I have waited years to finally have a job where I can ride my bike to work. Riding through our city over the last few months as a commuter, and over the past few years as recreational biker I have learned a great deal.

In Rapid City it appears there are four types of riders:

- Casual/Leisure
  - These are your families and the occasional riders you see on the bike path.
- Recreational
  - These people cross over from riding the bike path to enjoying the Hansen-Larson and the skyline drive paths.
- Commuter/Student
  - This demographic provides us with the greatest opportunity for expansion. These riders are challenged by the disjointed, obstacle laden, traffic interference system currently in place. These riders also must leave the safety of our primary system and travel streets and sidewalks to reach their destination.
- Competitive/Advanced
  - These riders are primarily seen in the streets and on our single track paths on M Hill and the Skyline Drive systems. They will continue to ride with traffic. They must be allowed to do so, however, anything we can do to make their ride safer must be done.

Each of these have their place in the system and require differing, yet shared facilities to accommodate everyone.

There are some fairly simple things we can do without much effort or expense to aid our journey to being a full circle bicycle friendly community.

1. Connections
    a. Look at bike paths the same way we look at roadways, with main routes and then feeders connecting to destinations
    b. Look at means to get the Casual/Leisure riders to the bike paths.
    c. Find out where our active bikers (and potential bikers) would like to go – and go there.

2. Destinations
    a. Downtown
    b. Parks System
    c. SDSMT
    d. Western Dakota Vo-tech
    e. Grocery/shopping
    f. Neighborhoods
    g. Parking friendly facilities at destinations (Secure)

3. Design
    a. Stop being an afterthought – It seems like we design the roadway and then as an afterthought throw the bike way on somewhere.
    b. Grades: many places on our bike path system have steep grades and even grade breaks where we transition from very flat to steep instantly.
    c. Curve limitations: some of the curves are too tight and prohibit a smooth pass through. Bikers often must slow down and sometimes even dismount if there are other riders or pedestrians.
    d. Limitation of obstacles: see safety below
    e. Markings: many places our bikeways cross streets or parking lots and there are not clear markings leaving the riders and runners to fend for themselves against traffic.
    f. Visibility: (for both the cyclist and the vehicles). Many locations where the bike path crosses traffic it is challenging to see cars or bikes.
    g. Bottom line – there should be design criteria for the bikeways the same as we have for roadways.

4. Safety
    a. Assess our current system with regards to safety, in some places the bike way is the most convenient place to put power poles, signs, fire hydrants, and many other obstacles to a smooth clear safe ride.
    b. Look specifically at obstacles, crossings, visibility

5. Events
    a. Sponsor events (When the Covid-19 pandemic subsides and permits the opportunity)
    b. Promote bicycle ridership through ad campaigns, local businesses, and news stories.

To delve into the design aspect a little more: we should look at a graduated path improvements. To build a concrete path to access everything is very cost prohibitive. I suggest we take an approach whereas there are differing levels of service.

A basic level dedicated bikeway could be a crushed fines paths similar to the Michelson Trail or the City of Deadwood path. The crushed fines path has been used very successfully as a multiuse path in major cities such as Denver and Austin Texas. This would be good option to improve the existing path connecting to Western Dakota Vo-tech. The crushed fines path is also a cost effective way to determine effectiveness and provide a base moving to a higher level of service.

The second level could be an asphalt surface. These work very well for a more traveled all weather pathway. An example of a great asphalt path is at Angostura Reservoir. The SD State Parks have gradually continued to extend the path and is a popular path for visitors and it provides connections to their facilities.

The third level is the concrete paths such as we have through the city. These are more expensive but also provide a higher level of service. The concrete paths should be incorporated into street projects to provide our connections whenever feasible.

The challenging task is to commit funding to the goal.

Hamilton, Dustin

From: Nancy Jordan <jordantimes5@hotmail.com>
Sent: Wednesday, July 15, 2020 9:45 AM
To: Hamilton, Dustin
Subject: Re: Contact for MTP Comments

re. mpo2045 study

As discussed, our systems will not allow us to comment on mpo software.

Comments

1. Does this current plan consider the impact of the global pandemic which started in October of 2019. If not, should this be stated in assumptions.
2. I am still confused about the impact of the whooping Crane migration route. Has the bat and crane background work been done to justify the two routes from North Haines Ave east north of Box Elder creek? The one route runs closer to the nesting grounds than the existing road.
3. Figure 8-1. legend references MTP inconsistences. This plan appears to show four different roads across our property. A corridor study was completed. Were the results not accepted by all government agency's? The road which was studied next to Box Elder creek did not make the final consideration due to flood plain. it now exists on this plan.
4. Figure 9-3. project 158. This project appears to be the old connecting road from before the $250,000 corridor study. Was this route reselected? No project number for corridor study route.
5. Figure 9. Flood plain map. Please verify flood plain for Box Elder creek.

Thank you.
Stay Safe.

Jon Jordan

From: Hamilton, Dustin <Dustin.Hamilton@hdrinc.com>
Sent: Wednesday, July 15, 2020 8:08 AM
To: jordantimes5@hotmail.com <jordantimes5@hotmail.com>
Subject: Contact for MTP Comments

Contact information for comments on RCAMPO MTP.

Dustin Hamilton, PE
Transportation Business Group Manager

HDR
703 Main St., Suite 200
Rapid City, SD 57701
D 605.791.6103 **M** 605.381.2185
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Lucas Haan
2402 Janet Street
Rapid City, SD
(605) 389 1361
lucas.haan@gmail.com

16th July 2020

Kip Harrington
Planner III
Long Range Planning
Rapid City Department of Community Development
300 6th Street
Rapid City SD 57701
(605) 394-4120
kip.harrington@rcgov.org

Dear Mr. Harrington,

First of all, I would like to thank all that have been a part of developing the 2045 plan for bicycle and pedestrian travel and for the opportunity to provide comments. I will address the plan from a bicyclist's perspective, and specifically one that is an avid cyclist and daily commuter.

I do not agree with how the miles of existing bicycle infrastructure is tabulated. For example the "existing trail" on Sheridan Lake Rd from Jackson to Catron is just a large sidewalk with multiple driveways and entrances to businesses. This street sees high traffic volumes at high speeds of 35 MPH and greater and therefore introduces a high stress scenario. As a result of this scenario there are low amounts of commuters from this area. The same logic can be applied to 5th Street and other areas around the city and I fear that these areas over inflate the true state of infrastructure available to cyclists.

After thorough review of the plan I can support the recommended facility types and locations based on priority. In fact, one can imagine that I am excited to see the recommendation to add 97 miles of bike infrastructure for the high and medium priorities and potentially gain 17 miles in new construction facilities. However, the fiscally constrained plan achieves only a minute fraction of the recommended plan.

The fiscally constrained plan only adds 4.59 miles of cycling infrastructure over 25 years. To put this in perspective, by the time my kids have kids, bicycle infrastructure will not be any better than they are today. Furthermore, to my understanding, the fiscally constrained miles are only achieved if funding is awarded through grants and the city is able to provide 20% of the project cost. I am concerned that there is no set funding or line item within the city budget for expansion of the cycling infrastructure. Without set funding to back the initiative of making commuting by bike a viable option in Rapid City we will never progress.

At this time we need to invest in the infrastructure for cyclists to make cyclists feel safer and to make travel more convenient. If we can do this, it will attract more and more commuters and reduce the load on the vehicle traffic plans.

Sincerely,

Lucas Haan

Appendix C.
Project Prioritization

APPENDIX C. PROJECT SELECTION AND PRIORITIZATION

The approach taken to prioritizing transportation projects throughout the region was multimodal in nature, and was developed based on feedback received during public engagement activities, the metropolitan planning organization's (MPO) performance measure requirements, and guidance from the MPO, Executive Policy Committee, and local jurisdictions.

Projects were first categorized by mode—roadway, bicycle and pedestrian, and transit—then scored across the series of metrics shown in **Table 1**. Each project's individual metric scores were summed for an overall score. Based on this overall score, the projects were ranked and prioritized for inclusion in the Fiscally Constrained Plan presented in Chapter 11 of the Rapid City Area Metropolitan Transportation Plan.

Insert table and/or graphic of project prioritization metrics

Alternative Screening for Roadway Projects

Roadway projects were further categorized into two different types— System Addition Corridor projects and System Management projects. System Addition Corridor projects are those that construct new roads while System Management projects are those identified as occurring on the existing system. An alternative, points-based screening approach developed to tie the prioritization process to the MTP goals and objectives presented in Chapter 6 of the Rapid City Area Metropolitan Transportation Plan was used to score projects falling under one of these two categories.

System Addition Corridor Project Scoring

System Addition Corridor projects were sourced from the current Major Street Plan, the 2020-2023 TIP, and the 2020-2023 SDDOT STIP. The screening approach for System Addition Corridor projects aimed to prioritize projects that would benefit the future system by:

- Occurring on or adjacent to corridors projected to have high 2045 traffic volumes
- Being located in a designated high-growth area, based on projected socio-economic growth
- Being located in a designated infill area, defined as any area currently served by existing services
- Potential to divert traffic in a corridor projected to have congestion issues
- Limiting impact on open space and/or agricultural lands

Table 2 summarizes the approach used for scoring and prioritizing System Addition Corridor projects while **Figure 1** shows the location of the System Addition Corridor projects.

System Management Project Scoring

System Management projects were sourced from the Fiscally Constrained Plan of the previous LRTP, comments received from the community during public engagement events, and system issues identified during the existing conditions analysis described in Chapter 4 of the Rapid City Area Metropolitan Transportation Plan. These projects were scored against 10 different criteria for prioritization:

Improves safety at high crash intersections
Improves non-motorized safety
Increases bicycle and pedestrian accessibility
Creates multi-modal connection to major destinations in the region
Improves traffic operations where roadway LOS is predicted to be “D” or worse
Improves passenger reliability on an NHS route exhibiting existing reliability issues
Enhances freight mobility
Limits impacts to the built environment
Benefits access to tourism locations in the region

- Limits impacts to designated Environmental Justice areas

Table 2 summarizes the approach used for scoring and prioritizing System Management projects while **Figure 2** and **Figure 3** show the location of the System Management projects.

Table 1. System Addition Corridors Scoring Criteria

Prioritization Approach	Project Scoring Criteria		
	+2	**+1**	**0**
Project's level of 2045 ADT predicted to occur in the corridor	4,000 ADT or more on new streets in area	2,000 to 4,000 ADT on new streets in area	0-2,000 ADT on new streets in area
Project location is within a designated high-growth corridor	Project is within high-growth corridor for jobs/households	Project is within medium-growth corridor for jobs / households	Project is not within or adjacent to high- / or medium-growth corridor
Project is located in designated infill area	Project is within infill area		Project is not within or adjacent to an infill area
Project diverts traffic from a congested corridor	Project diverts traffic from a congested area		Projects does not divert traffic from a congested area
Transportation impacts on open space and agricultural land are limited	The project does not impact open space or agricultural land		Project is located in an open space or agricultural area

Table 2. System Management Scoring Approach

Goal Area	Prioritization Approach	Project Scoring Criteria			
		+2	**+1**	**0**	**-2**
Safety	The project improves safety at a high-crash or high-crash rate intersection	Project improves safety at one or more of the Top 20 Crash Frequency or Crash Rate intersections	Project improves safety at one or more moderate or low crash frequency or crash rate intersections	Project has limited impact on improving safety	Project has potential to negatively impact safety
	The project provides a safer treatment for non-motorized users	Project improves non-motorized safety at one or more of the fatal or serious injury non-motorized crash locations	Project improves non-motorized safety at one or more non-incapacitating non-motorized crash locations	Project has limited impact on improving non-motorized safety	Project has potential to negatively impact non-motorized safety
Multi-Modal Mobility and Accessibility	The project completes a planned bicycle or pedestrian facility that connects to regional bicycle and pedestrian system	Project constructs planned bicycle or pedestrian facility or provides new bicycle and pedestrian connection	Project constructs new bicycle or pedestrian facility	Project does not construct bicycle or pedestrian facility	Project negatively impacts existing bicycle or pedestrian facility, or negatively impacts bicycling and walking in the region
	The project improves traffic mobility or provides a new bicycle, pedestrian, or transit connection to designated growth areas in the region	Project creates multimodal connection to a designated growth area		Project does not create a multi-modal connection to a designated growth area	
System Efficiency and Reliability	The project improves traffic operations for a location operating at LOS D or worse in 2045	Project improves operations at a location exhibiting a 2045 LOS D or worse	Project improves traffic operations	Project does not improve traffic operations at a location exhibiting 2045 LOS D or worse	
	The project improves reliability for a corridor identified as having reliability issues	Project improves reliability on a corridor identified as having reliability issues	Project improves reliability on an NHS or Interstate route	Project does not improve reliability	Project negatively impacts reliability on a corridor identified as having reliability issues
	The project improves reliability in a designated freight corridor	Project improves freight reliability on a designated freight corridor		Project does not improve freight reliability on a designated freight route	Project negatively impacts freight reliability on a designated freight route
Economic Prosperity	The project benefits access to a tourism location	Project improves access to a tourism location		Project does not impact a tourism location	
Environmental Sustainability and Resiliency	The project limits impacts on the natural environment	Project limits impacts on wetland, national forest, and other natural areas		Project is located in wetland, national forest, or other natural area	
	The project limits impacts to the built environment and surrounding neighborhoods	Project does not impact property/require additional ROW		Project impacts property/requires additional ROW	
	Project limits impacts on Environmental Justice populations	Project is not within an identified EJ census tract		Project is within an identified EJ census tract	

Figure 1. System Addition Project Priority

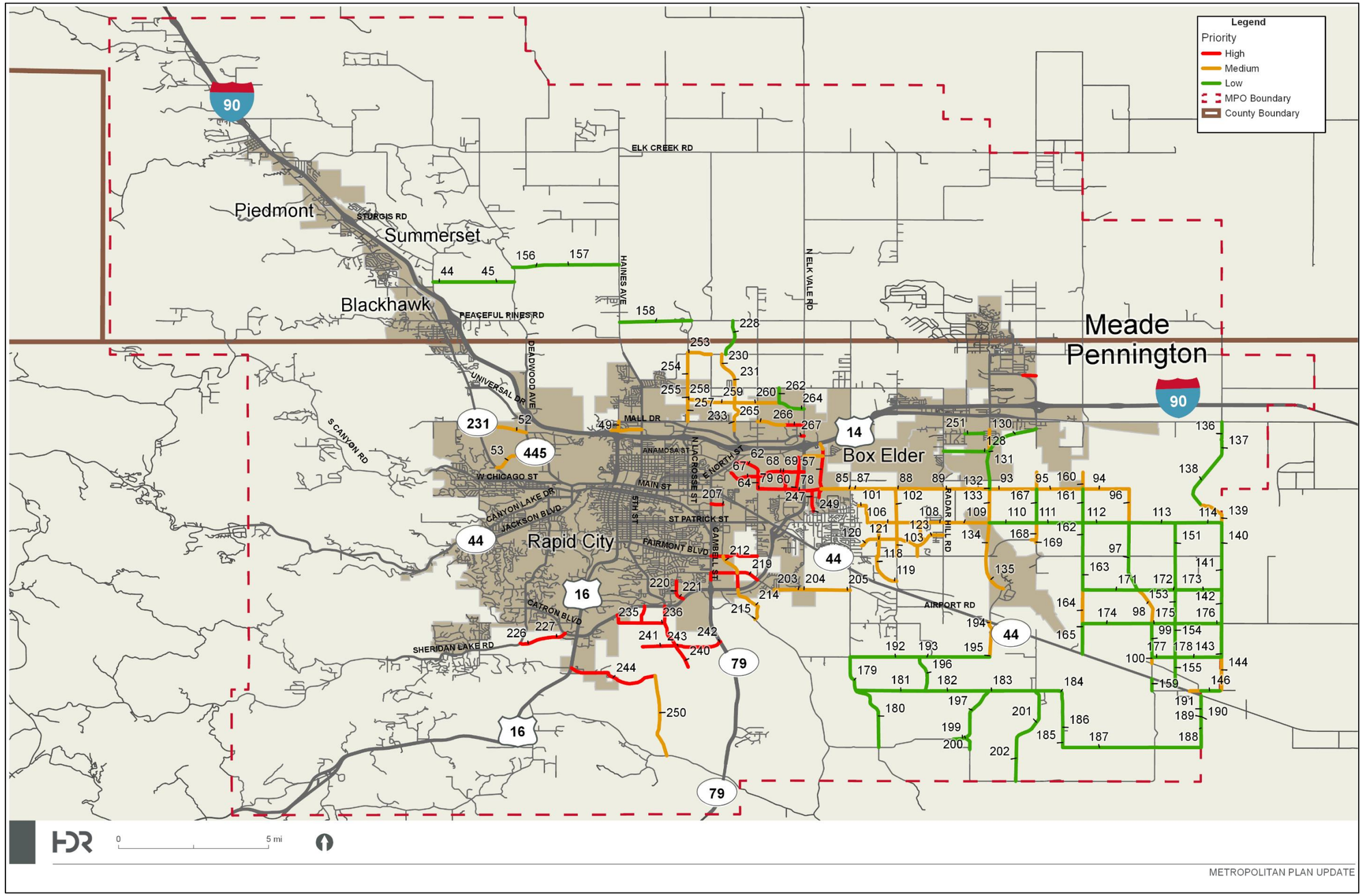


Figure 2. System Improvement Project Priority (Regional Scale)

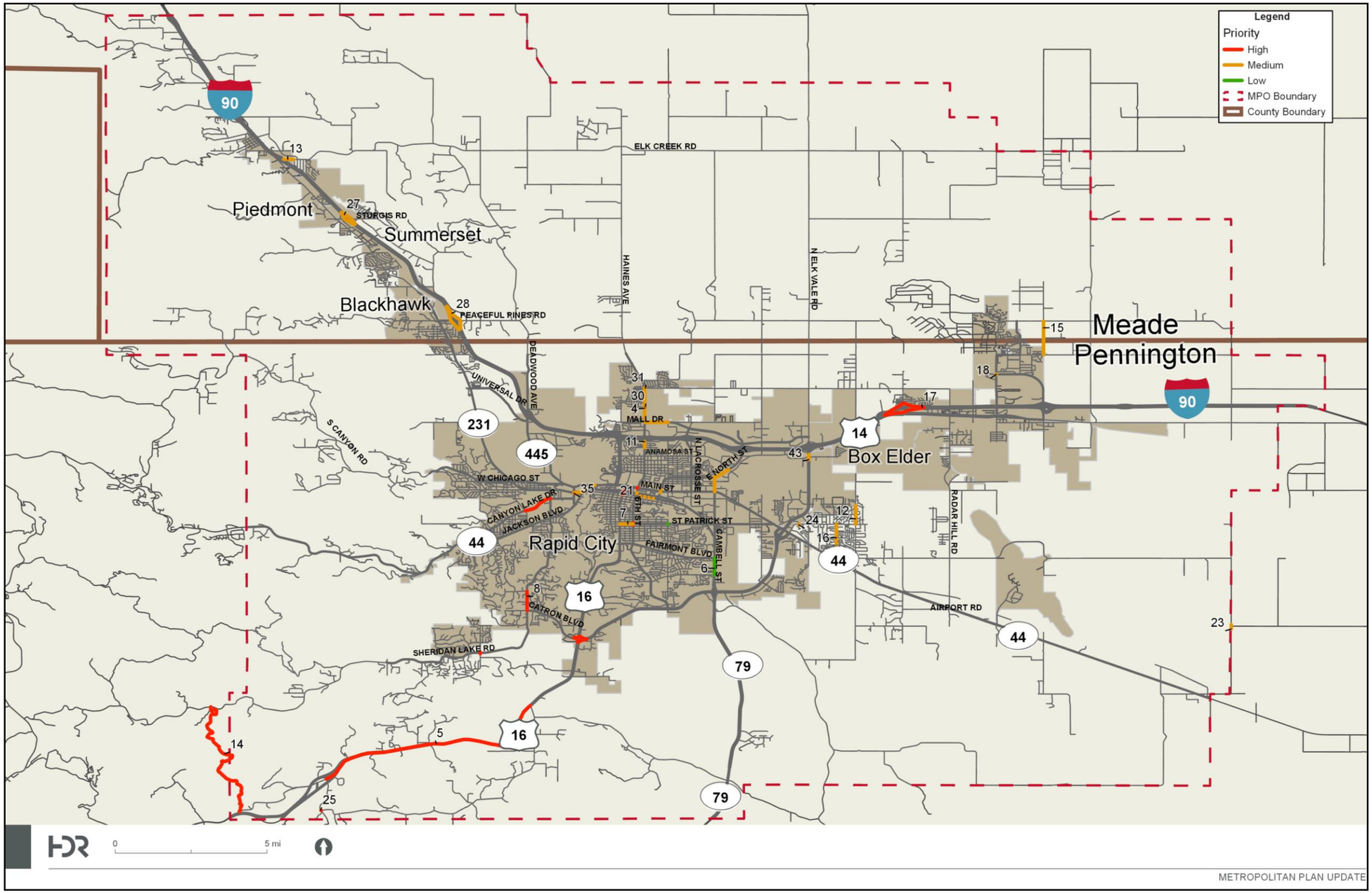
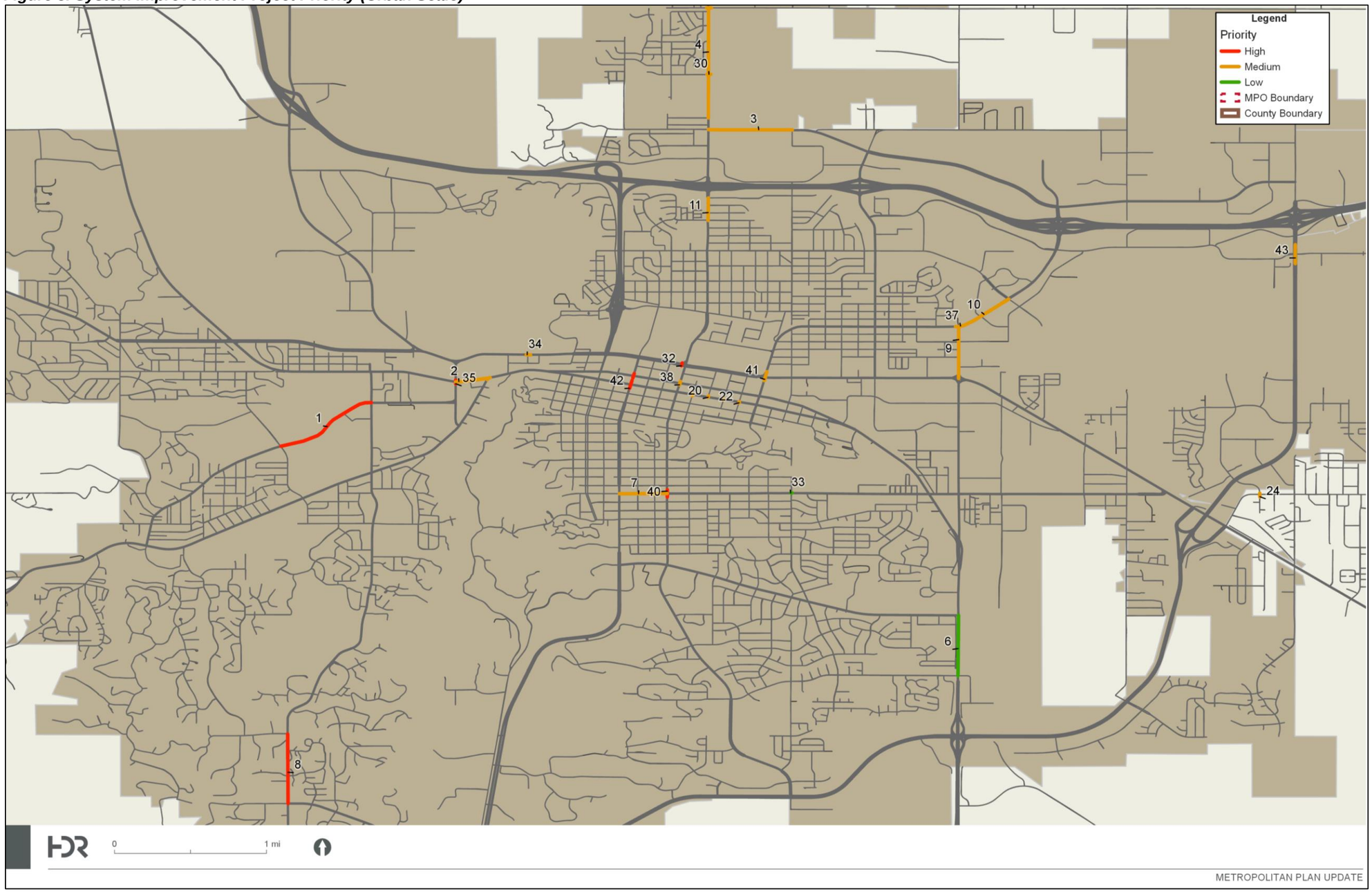


Figure 3. System Improvement Project Priority (Urban Scale)



Appendix D.
Safety Countermeasures

APPENDIX D. RAPID CITY AREA MPO INTERSECTION SAFETY COUNTERMEASURES

This document summarizes safety countermeasures available to the Rapid City Area MPO to address traffic safety at the top 25 intersections that exhibited high crash frequencies, in terms of the total number of crashes, and high crash rates per million entering vehicles (MEV) during the years 2014 to 2018.

Based on the intersection crash analysis, it was found that rear end and angle crashes were the most common crash types that occurred during 2014-2018. One strategy to address the high number of rear end crashes is to improve signal head visibility at each intersection that experienced higher proportions of rear end collisions. The recommended safety strategy to reduce the number of angle crashes occurring at intersections is to update left-turn phasing to protected-only.

As stated, the intersection crash analysis identified the top 25 highest crash frequency and crash rate intersections in the MPO region; of these 25 intersections, 8 are located on the Omaha Street corridor. A recommended strategy to reduce vehicular crash occurrences is to improve signal progressions and timings for each intersection along the corridor. This strategy is especially useful for addressing rear end crashes.

Table 1 summarizes the top 25 crash frequency and crash rate intersections in the MPO region and includes the prevalent safety issues facing each intersection. The table also includes potential improvement strategies based on Crash Modification Factors (CMF) Clearinghouse, which is a resource that provides a quantitative estimate of the effectiveness of traffic safety countermeasures as well as a repository of data and resources for CMF users.[1] The CMF strategies recommended for each intersection were based on the types of crashes that occurred. Some of the common CMF strategies that were identified were:

- Improve signal head visibility
- Add 3-inch yellow retroreflective sheeting to signal backplates
- Implement systemic signing and visibility improvements at signalized intersections

[1] Crash Modification Factors Clearinghouse. http://cmfclearinghouse.org/userguide_CMF.cfm

Table 1. Intersection Safety Countermeasures for the Rapid City Area MPO

Intersection	Total Crashes (Rank)	Crash Rate/MEV (Rank)	Prevalent Issues	Potential Strategies
Cambell St & E Omaha St	98 (1)	1.29 (10)	Frequent rear end crashes-northbound and southbound Frequent angle crashes-eastbound and westbound May need to add separate signal head for each lane	Improve signal head visibility Implement systemic signing and visibility improvements at signalized intersections
E North St & N Cambell St	93 (2)	1.38 (9)	Frequent angle crashes-northbound and westbound Frequent rear end crashes-eastbound and westbound Median curbs are not painted	Add additional signal and upgrade to 12-inch lenses Improve visibility of signal heads Implement systemic signing and visibility improvements at signalized intersections
5th St & Main St	83 (3)	1.44 (6)	Frequent angle and rear end crashes-northbound Faded pavement markings	Change from permitted-protected to protected on major approach Add additional signal and upgrade to 12-inch lenses Add signal (additional primary head) Improve visibility of signal heads Implement systemic signing and visibility improvements at signalized intersections
Catron Blvd & US Hwy 16	80 (4)	4.15 (2)	Frequent angle and rear end crashes-Eastbound	Signal is being reconstructed as Single Point Interchange (SPI)
5th St & Omaha St	78 (5)	1.23 (12)	Frequent rear end crashes-southbound, eastbound, westbound	Increase total change interval (greater than ITE recommended practice) Implement systemic signing and visibility improvements at signalized intersections Changing from protected-permissive to flashing yellow arrow (FYA)

Table 1. Intersection Safety Countermeasures for the Rapid City Area MPO

Intersection	Total Crashes (Rank)	Crash Rate/MEV (Rank)	Prevalent Issues	Potential Strategies
Mountain View Rd & W Main St	70 (6)	0.98 (18)	Frequent angle crashes-northbound and eastbound	Change from permitted-protected to protected on major approach Implement systemic signing and visibility improvements at signalized intersections
Main St & Mount Rushmore Rd	69 (7)	1.41 (7)	Frequent angle crashes-northbound	Change from permitted-protected to protected on major approach Add additional signal and upgrade to 12-inch lenses Implement systemic signing and visibility improvements at signalized intersections
W Omaha St & Mountain View Rd	64 (8)	1.07 (14)	Frequent rear end crashes-northbound, eastbound, westbound	Add additional signal and upgrade to 12-inch lenses Improve visibility of signal heads Implement systemic signing and visibility improvements at signalized intersections
E North St & N Lacrosse St	64 (9)	1.15 (13)	Moderate number of angle crashes for each approach (northbound, southbound, eastbound, and westbound)	Improve visibility of signal heads Implement systemic signing and visibility improvements at signalized intersections
W Omaha St & West Blvd	62 (10)	1.45 (5)	Frequent rear end crashes-southbound and westbound	Implement systemic signing and visibility improvements at signalized intersections
E St Patrick St & St Joseph St	57 (11)	1.40 (8)	High number of angle crashes on eastbound approach May need installation of separate signal heads for each lane	Change from permitted-protected to protected on major approach Modify change plus clearance interval to ITE 1985 Proposed Recommended Practice

Table 1. Intersection Safety Countermeasures for the Rapid City Area MPO

Intersection	Total Crashes (Rank)	Crash Rate/MEV (Rank)	Prevalent Issues	Potential Strategies
				Implement systemic signing and visibility improvements at signalized intersections
5th St & St Patrick St	54 (12)	0.97 (19)	High proportion of crashes-northbound approach	Change from permitted-protected to protected on major approach Implement systemic signing and visibility improvements at signalized intersections Add signal (additional primary head)
E North St & Eglin St	54 (13)	1.05 (15)	Frequent angle and rear end crashes-eastbound	Implement systemic signing and visibility improvements at signalized intersections
Cambell St & E St Patrick St	53 (14)	0.73 (25)	High proportion of northbound crashes	Implement systemic signing and visibility improvements at signalized intersections
East Blvd & Omaha St	52 (15)	1.28 (11)	Frequent angle crashes-eastbound	Intersections will be reconstructed in 2020
I 90 Ramp Terminals & N Lacrosse St	51 (16)	1.76 (4)	Frequent angle crashes-northbound	Interchange will be reconstructed to Diverging Diamond Interchange in 2021/2022
Omaha St & Mount Rushmore Rd	50 (17)	0.93 (21)	Frequent rear end crashes-eastbound and westbound	Implement systemic signing and visibility improvements at signalized intersections
Lacrosse St & E Omaha St	48 (18)	0.89 (22)	High proportion of angle crashes-eastbound and westbound Mast arms may need to be lengthened	Implement systemic signing and visibility improvements at signalized intersections
5th St & Cathedral Blvd & Fairmont Blvd	47 (19)	0.84 (23)	High proportion of northbound crashes Mast arms may need to be lengthened	Implement systemic signing and visibility improvements at signalized intersections
E Anamosa St & N Lacrosse St	47 (20)	1.02 (16)	High proportion of eastbound crashes	Install dynamic signal warning flashers Implement systemic signing and visibility improvements at signalized intersections

Table 1. Intersection Safety Countermeasures for the Rapid City Area MPO

Intersection	Total Crashes (Rank)	Crash Rate/MEV (Rank)	Prevalent Issues	Potential Strategies
St Joseph St & Mount Rushmore Rd	46 (21)	0.95 (20)	High proportion of angle crashes-eastbound	Implement systemic signing and visibility improvements at signalized intersections Add additional signal and upgrade to 12-inch lenses
I 90 ramp terminals & Haines Ave	46 (22)	5.71 (1)	High proportion of crashes-eastbound	
Cheyenne Blvd & Elk Vale Rd	46 (23)	2.35 (3)	Moderate number of rear end crashes-northbound	Install dynamic signal warning flashers Improve pavement friction (increase skid resistance) Implement systemic signing and visibility improvements at signalized intersections
Disk Dr & Haines Ave	45 (24)	1.01 (17)	Frequent rear end and angle crashes-westbound	Implement systemic signing and visibility improvements at signalized intersections Install dynamic signal warning flashers
Deadwood Ave & W Chicago St	44 (25)	0.83 (24)	High proportion of crashes-eastbound and southbound	Implement systemic signing and visibility improvements at signalized intersections Install dynamic signal warning flashers

Appendix E.
Environmental Review

APPENDIX E. METROPOLITAN TRANSPORTATION PLAN ENVIRONMENTAL REVIEW

Environmental Review

To analyze potential resources within the Rapid City MPO Boundary (Study Area), a desktop review of available data was analyzed. The environmental resources screened were selected based on the characteristics of the Study Area, as well as input received from area resource agencies. The resources considered are generally consistent with the National Environmental Policy Act (NEPA), its implementing regulations, and Federal Highway Administration (FHWA) guidelines. The following sections summarize resources that are considered red flag environmental resources with separate regulatory drivers. Coordination with these agencies was completed as part of the environmental screening process. Further coordination would be required for each project.

The following sections describe each resource category, along with the approach and limitation for each category. Please refer to **Figure 1: Project Location Map**.

Archaeological and Historical Resources

Section 106 of the National Historic Preservation Act (NHPA) produced a regulatory framework, mandating review of federally funded and permitted projects to determine any potentially adverse impacts to historic resources. The Act requires projects to avoid impacts to National Register of Historic Places (NRHP) and potentially eligible properties, and, if impacts cannot be avoided, to minimize and mitigate impacts.

Approach: A record search using the National Register of Historic Places provided by the U.S. National Park Service was completed by HDR. A Level I cultural literature search was not completed for this memo because of the size of the Study Area. Within the Rapid City MPO Boundary, there is potential for historic and cultural resources. Historic and cultural resources are regulated under Section 106 of the NHPA, and may require consultation between the FHWA, South Dakota Department of Transportation (SDDOT) and the South Dakota State Historic Preservation Office (SHPO).

The record search identified recorded sites that were listed as eligible for the NRHP. The record search resulted in 36 sites located within the Study Area that have been listed as eligible for the NRHP. Shapefiles of these sites were imported into ArcGIS and can be compared against future Project concepts to determine the potential for impacts to cultural resources. Because the NRHP only lists sites that are already listed, a complete file search from SHPO would be required for each project. Please refer to **Figure 2: Cultural Resource Site Map** and **Figure 3: Cultural Resource District Map**

Limitations: Early in project planning, the City of Rapid City (City) should work with SDDOT to coordinate its intent to proceed with a particular roadway improvement project, and request that

the SDDOT advise the City on the applicability of Section 106, the need to identify consulting parties, and for a Level I cultural resource literature search. When appropriate, the City should anticipate that a Level III identification effort will be conducted, including identification of archaeological, architectural, and traditional cultural properties subject to the effects of the project. When historic properties are identified, the City should anticipate that avoidance or mitigation of adverse effects to such properties may be required. Impacts to historic properties may be considered protected under Section 4(f)

Wetlands and Waters of the U.S.

Waters of the U.S., including wetlands, are protected under Section 404 of the CWA and Executive Order 11990 Protection of Wetlands. These regulations require avoidance of all wetland impacts or, where avoidance is not practical, minimization to the greatest extent possible. When the objectives of a transportation project cannot be met without adverse impacts to wetlands, wetland mitigation involves the preparation of a wetland mitigation plan detailing how lost wetland functions will be compensated.

Approach: For this environmental review, the National Wetlands Inventory (NWI) and aerial imagery were reviewed within the Study Area to determine potential project impacts. There are several wetlands located within the city limits and adjacent to Rapid City. Because the NWI provides an estimate of wetlands based on soil type and aerial photography, these boundaries are utilized as guidance for identifying wetland areas and delineation would be required for each project. Please refer to **Figure 4: NWI Map**.

Limitations: Wetlands and other waters of the U.S. will need to be considered for each project as the City wants to move the project from planning stages to construction. Early in project planning, an onsite wetland delineation of the Study Area is recommended to confirm the boundaries of wetlands and other waters of the U.S. within the Study Area and to coordinate with USACE to determine jurisdiction.

Wildlife/Threatened and Endangered Species

Various federal laws have been established to protect wildlife, including: the Endangered Species Act (ESA); the Migratory Bird Treaty Act (MBTA); and the Bald and Golden Eagle Protection Act (BGPA).

Approach: Fish and wildlife species listed under the ESA would need to be considered for each project. The list of species identified within the Study Area was identified from U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system. Two species designated as endangered and two species designated as threatened exist within the Study Area. These include the whooping crane (endangered), least tern (endangered), northern long-eared bat (threatened) and Rufa red knot (threatened). According to IPaC, no critical habitat exists within the Study Area.

To identify the potential for threatened and endangered species to be present in an area, aerial imagery was used to identify potential habitat located within the Study Area. The Study Area is

highly developed with commercial, industrial, and residential activities. Much of the area is developed and habitat for the least tern was not identified inside of the Study Area. The Study Area is partially located inside of the whooping crane migratory route. Additionally, the northern long-eared bat is a federally listed threatened species with a range encompassing South Dakota; future environmental evaluations should consider the impacts to northern long-eared bat as projects are studied further. Please see **Figure 5: Whooping Crane Migration Route**.

Limitations: Consultation with USFWS would be required to determine which ESA-listed species have the potential to occur within each Study Area. Coordination with SD Game, Fish, and Parks would be recommended regarding impacts to state-listed sensitive species. Additionally, coordination with USFWS would be required for any project on USFWS property.

Parks and Recreation Properties

The Department of Transportation Act (DOT Act) of 1966 included a special provision – Section 4(f) – which is intended to protect publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. Similarly, Section 6(f) protects state and locally sponsored projects that were funded as part of the Land and Water Conservation Fund (LWCF).

Approach: The LWCF website was reviewed to identify the use of Section 6(f) grants in the Study Area. Publicly owned parks and recreation areas are present within the Study Area. Public spaces within the City of Rapid City that have received LWCF grant money are subject to Section 6(f) regulations. Additionally, if the projects proposed in these alternatives receive Federal Highway Administration (FHWA) funds, the projects will be subject to Section 4(f) consultation.

Limitations: There have been several grants received at a variety of the city parks. Areas within the Project corridor that could impact City parks or recreational trails would need to be further reviewed to determine potential for a Section 6(f) impact. Due to the use of LWCF grants, it is recommended that consultation occur with Rapid City Parks and Recreation or any other necessary entity early with each project to determine the location of improvements to determine whether the park area impacted will be subject to Section 6(f) or Section 4(f) regulations. Please see **Figure 6: Park Location Map**, **Figure 7: Bike Paths Map**, and **Figure 8: Black Hills National Forest Map**.

Floodplain and Floodways

Floodplains are the lands on either side of a watercourse that are inundated when a channel exceeds its capacity. The National Flood Insurance Program (NFIP) encourages state and local governments to adopt sound floodplain management programs. The City has been a participating member of the Federal Emergency Management Agency (FEMA) Flood Insurance Program since 1998. The current Pennington County Flood Insurance Study (FIS) that includes the City is dated June 3, 2013.

The main floodways and floodplains within the Study Area are those associated with Rapid Creek, Box Elder Creek, Spring Creek, and Elk Creek and their tributaries.

Approach: FEMA flood maps were evaluated and floodplain and floodways were determined. Please see **Figure 9: Floodplain Map**.

Limitations: If any projects would involve areas associated with FEMA or FIS, a floodplain permit may be required if the floodplain would be encroached upon. A Floodplain Development Application would be completed for the project and the City would obtain a Floodplain Development Permit.

Regulated/Hazardous Materials

Hazardous materials include substances or materials that EPA has determined to be capable of posing an unreasonable risk to health, safety, or property. Hazardous materials may exist within the Study Area at facilities that generate, store, or dispose of these substances, or at locations of past releases of these substances. Examples of hazardous materials include asbestos, lead based paint, heavy metals, dry-cleaning solvents, and petroleum hydrocarbons (for example, gasoline and diesel fuels), all of which could be harmful to human health and the environment.

Approach: The SD Department of National Resources (SDDENR) Environmental Events Database website was reviewed for the Project Area to identify any areas that could be of concern for project such as contaminated soils, hazardous waste site, and buried tanks concepts. Please see **Figure 10: SDDENR Recorded Spills Map**.

Limitations: Information for hazardous material should be reviewed at the time of a proposed project to identify any potential new hazards that may have occurred from the time of the Study to a project.

Environmental Justice Populations

Environmental Justice is the approach to identifying and addressing potential disproportionately high and adverse effects of transportation programs, policies, and activities on minority populations and low-income populations. The goal is to achieve an equitable distribution of benefits and burdens.

In 1994, President Clinton issued Executive Order 12898, directing federal agencies, to the greatest extent practicable, to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. In 1997, the Department of Transportation (U.S. DOT) issued an Order to address Environmental Justice in minority populations and low-income populations to summarize and expand upon the requirements of Executive Order 12898 on Environmental Justice. This section describes how Environmental Justice populations were identified for Rapid City MPO.

Methodology

Minority Populations

FHWA defines a minority population as any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity. FHWA defines a minority as:[1]

- ***Black***: a person having origins in any of the black racial groups of Africa.
- ***Hispanic or Latino***: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- ***Asian American***: a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- ***American Indian and Alaskan Native***: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition.
- ***Native Hawaiian and Other Pacific Islander***: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Reference Population

A reference population is necessary in order to determine whether potential project-related adverse impacts are disproportionately borne by one or more minority or low-income populations compared to the greater area. USDOT guidance for Environmental Justice (EJ) analysis and documentation[2] states:

"Potential environmental justice impacts are detected by locating minority populations and low-income populations in and near the project area, calculating their percentage in the area relative to a reference population, and determining whether there will be adverse impacts to them."

In this analysis, the Study Area population is compared to a reference population within the Rapid City U.S. Census Core Based Statistical Area (CBSA). And for a wider view, additional statistics listed compare the Study Area with Pennington County, Meade County and the state of South Dakota populations.

Minority Populations

Per FHWA guidance, a readily identifiable group of minority persons was identified as any census tract with a "substantial" minority populations: where the percentage of minority population was at least one standard deviation (35%) higher than the average percentage of the

[1] FHWA Order 6640.23A
[2] U.S. DOT Environmental Justice in NEPA Documentation Process (American FactFinder, Step-by-Step Guide). April 3, 2012. Available at: https://secure.in.gov/indot/files/ES_EnvironmentalJusticeGuidance_2012.pdf

minority population within the reference population (Rapid City CBSA). The minority population of the Rapid City CBSA is 20.9% of the total population; the threshold value used to determine a "substantial" minority population is 28.2% (20.9% multiplied by 1.35). Consequently, any census tract within the Study Area where the percentage of minorities is greater than 28.2% was identified as having a minority population.

Low-Income Populations

FHWA defines a low-income population as any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity. FHWA defines low-income as a person whose median household income is at or below the Department of Health and Human Services (DHSS) poverty guidelines. The best approximation for the number of people below the DHHS poverty guidelines in a particular area is the number of persons below the Census Bureau poverty thresholds in that area.

Similar to the minority population, a readily identifiable group of low-income population was identified as any census tract with a "substantial" low-income population: where the percentage of low-income population was at least one standard deviation (35%) higher than the average percentage of the low-income population in the reference population. The low-income population (or percent poverty) of the reference population (Rapid City core based statistical area) is 24.8% of the total population; the threshold value used to determine a "substantial" low-income population is 33.5%. Consequently, any Census block group within the Study Area where the percentage of low-income persons is greater than 33.5% was identified as having a low-income population.

Data Sources

Esri 2019 U.S. demographic data was used to identify minority and low-income populations in the Study Area. Esri Demographics offers current-year updates and five-year projections of population, race and Hispanic origin, household income, and more. Annual demographic updates incorporate both traditional and new data sources to remain current. The estimate combine the best data from the U.S. Census Bureau's American Community Survey with other sources to enable better measures of change than are possible with ACS data alone.

Identified Environmental Justice Populations

Based on the methodology described above, the Environmental Justice populations defined for the Rapid City MPO area are shown in **Figure 11: Environmental Justice Population Map**.

Figure 1: Project Location Map

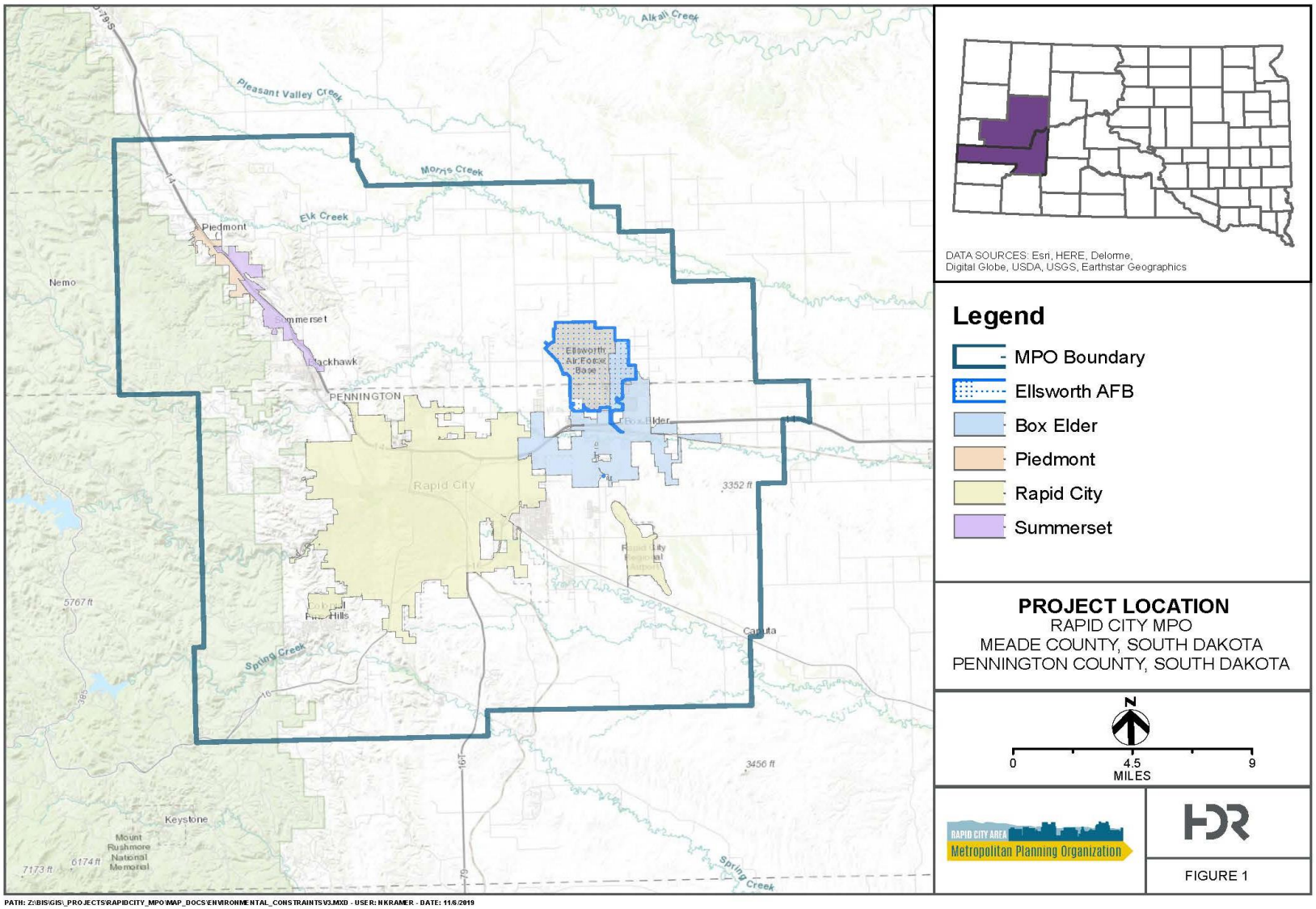


Figure 2: Cultural Resource Site Map

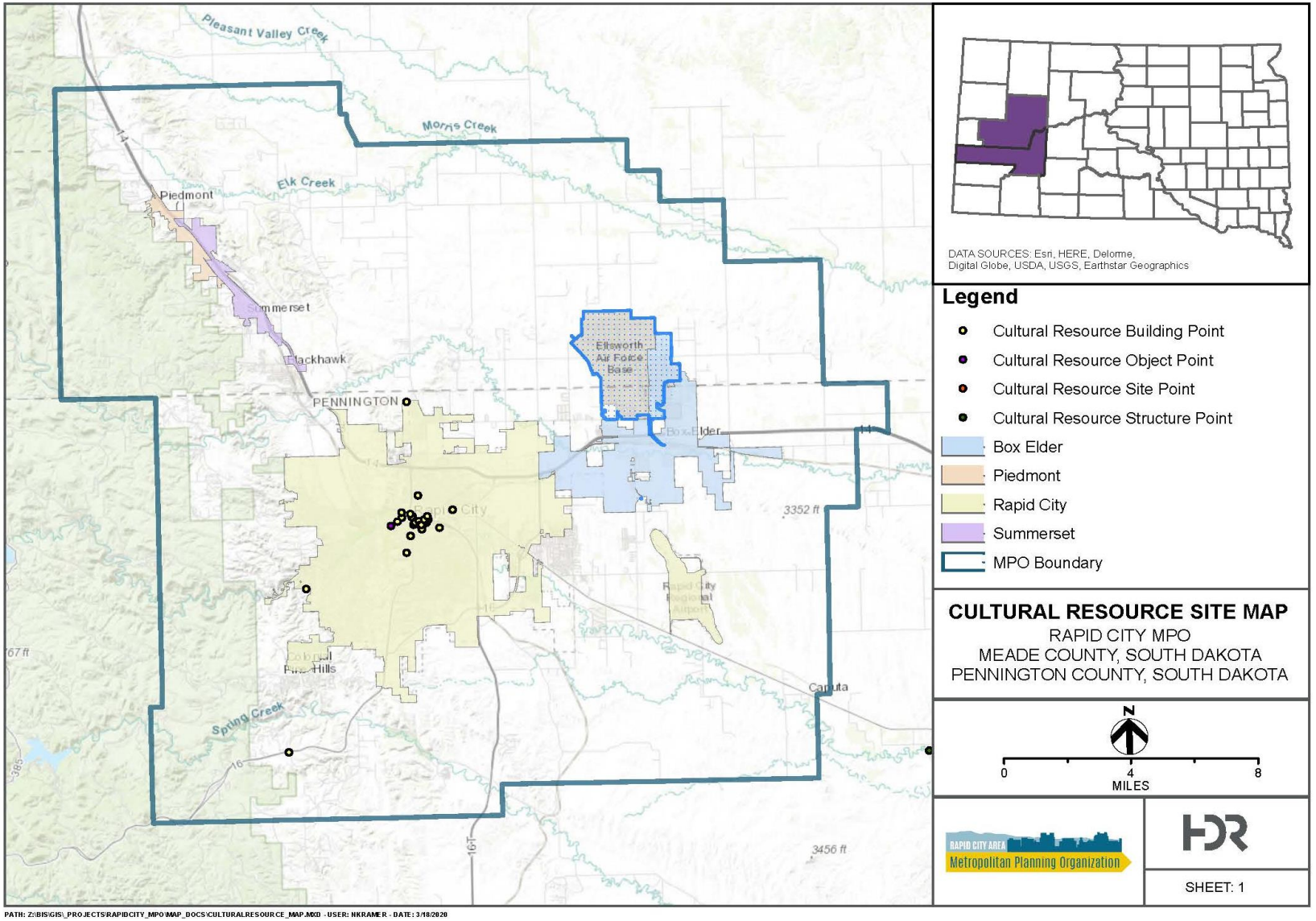


Figure 3: Cultural Resource District Map

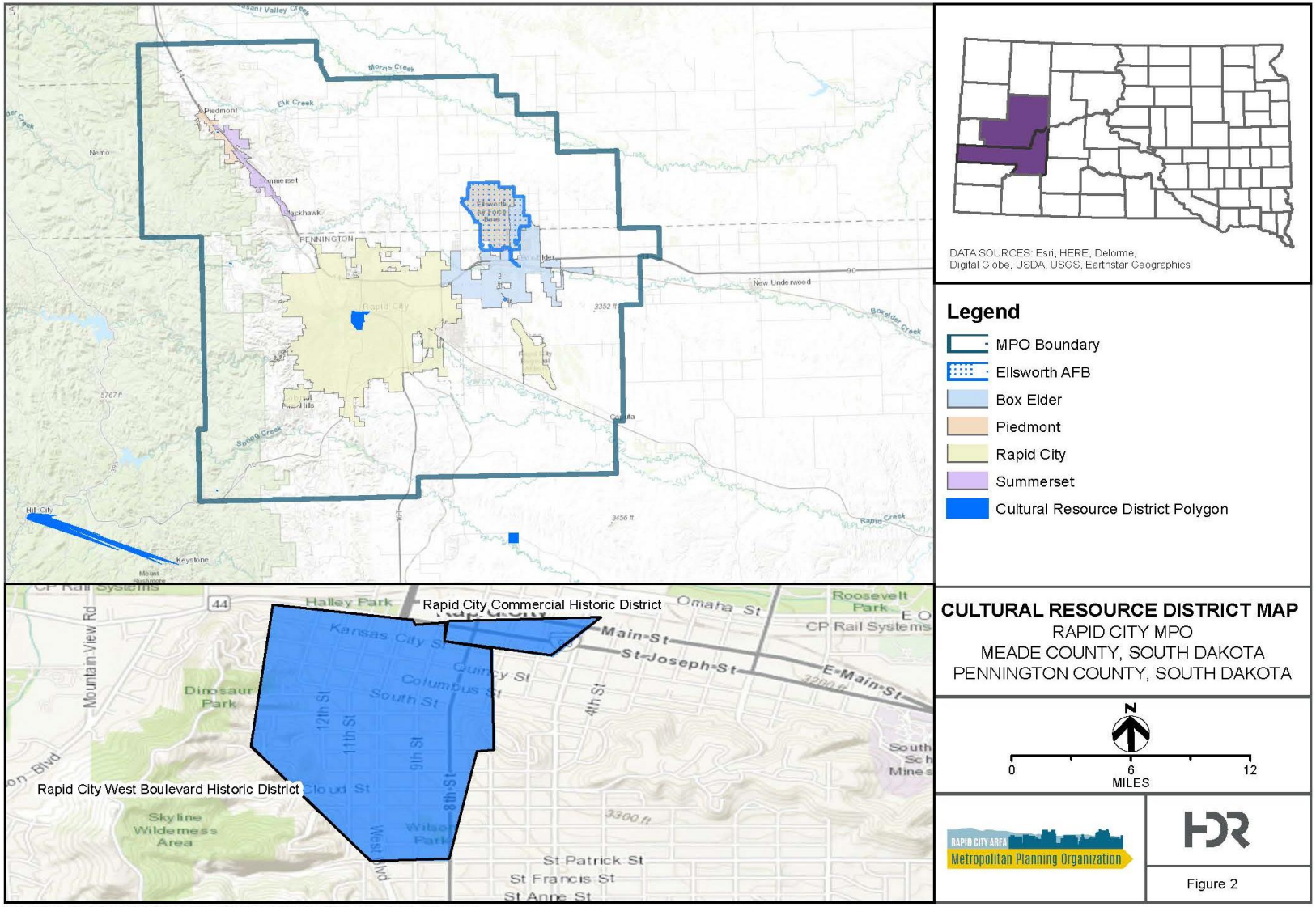


Figure 4: NWI Map

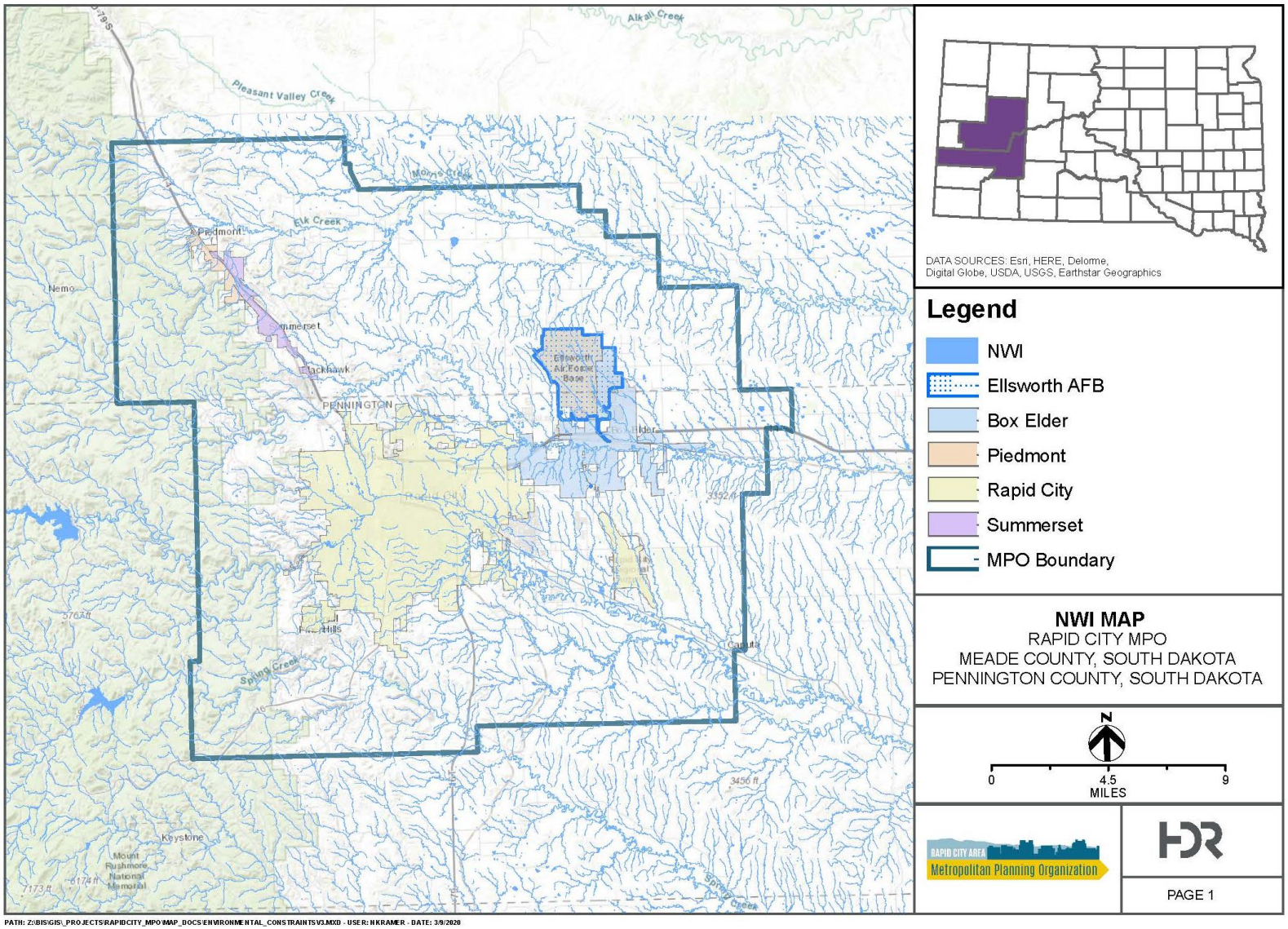


Figure 5: Whooping Crane Migration Route

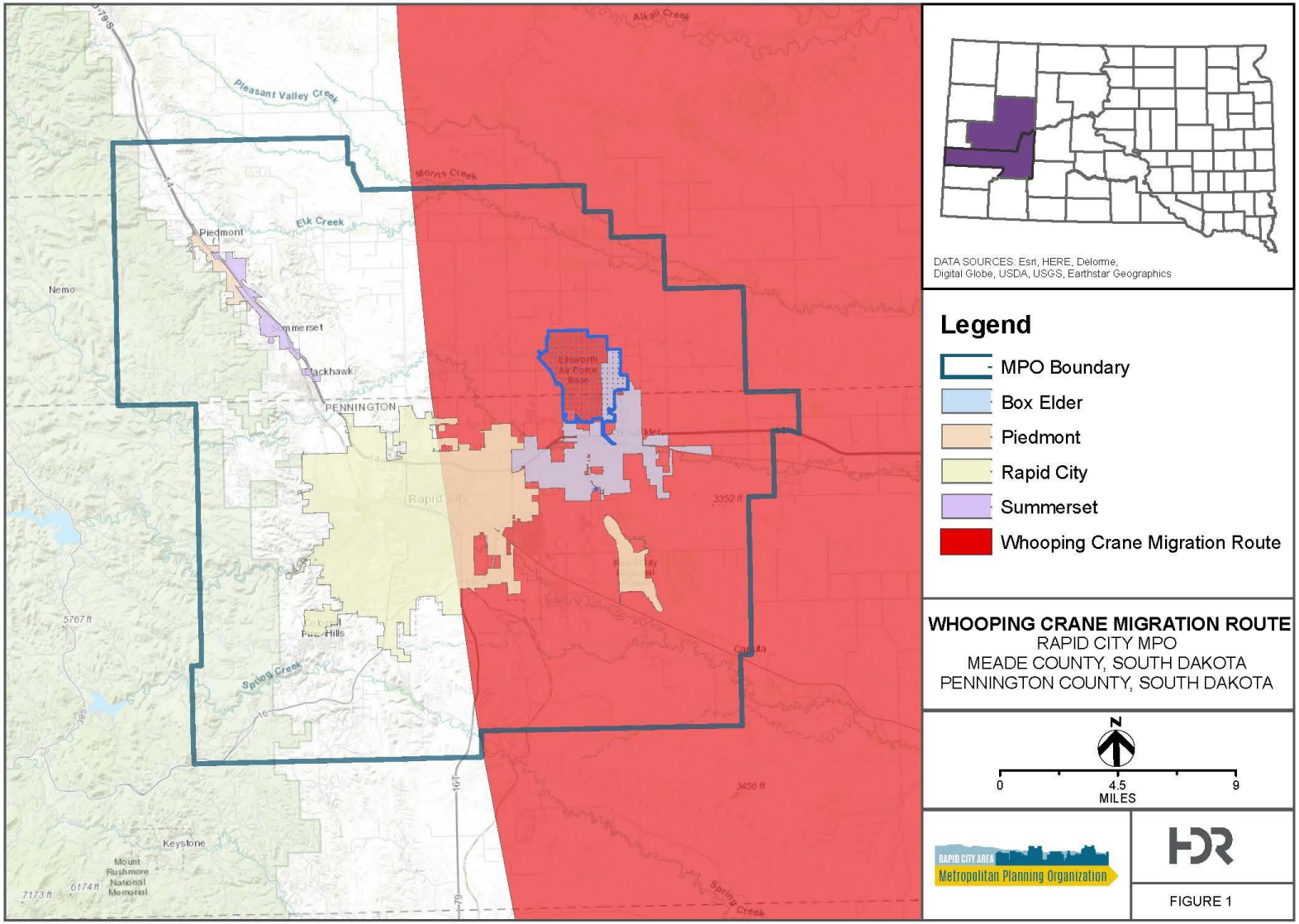


Figure 6: Park Location Map

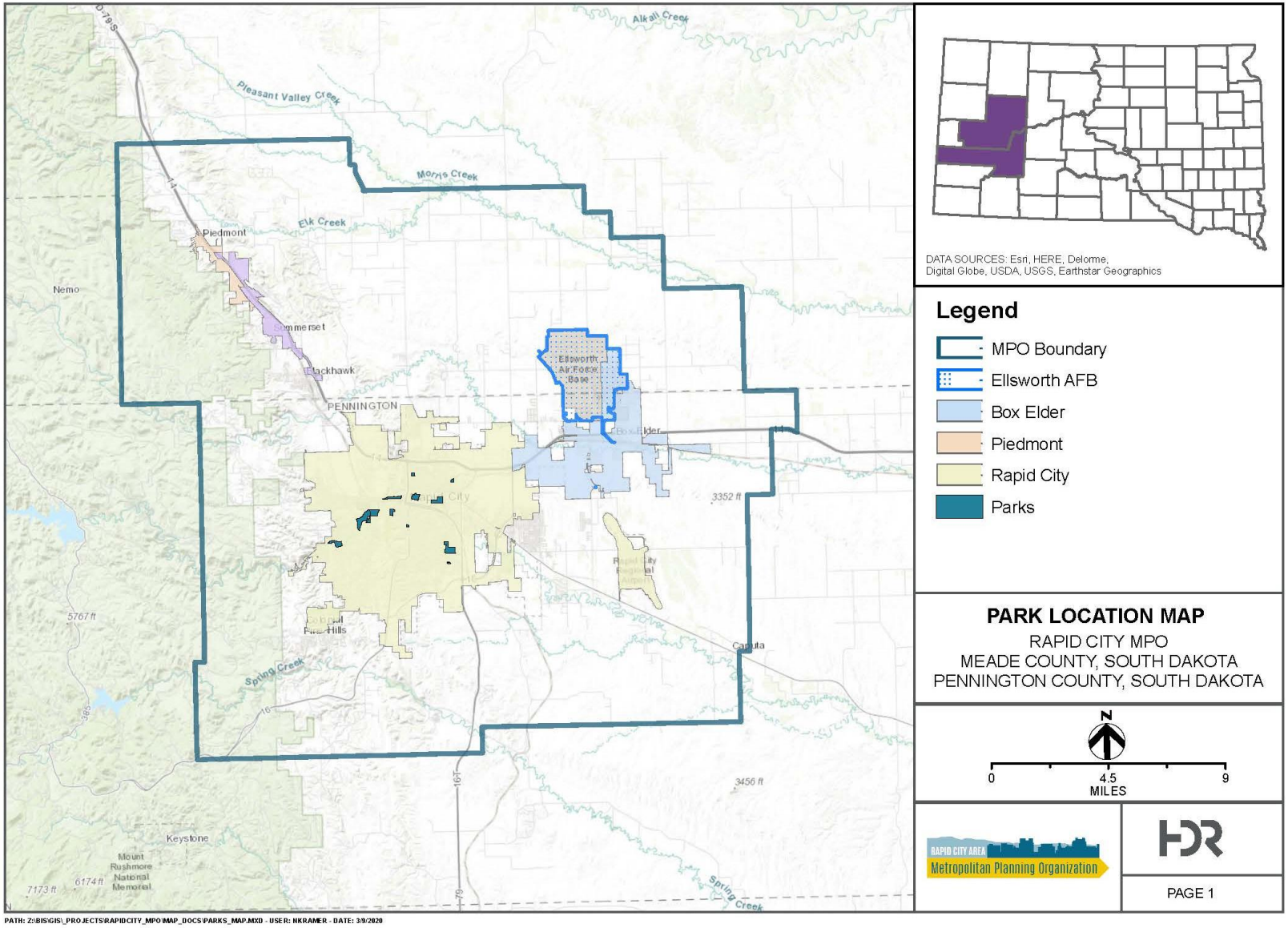


Figure 7: Bike Paths Map

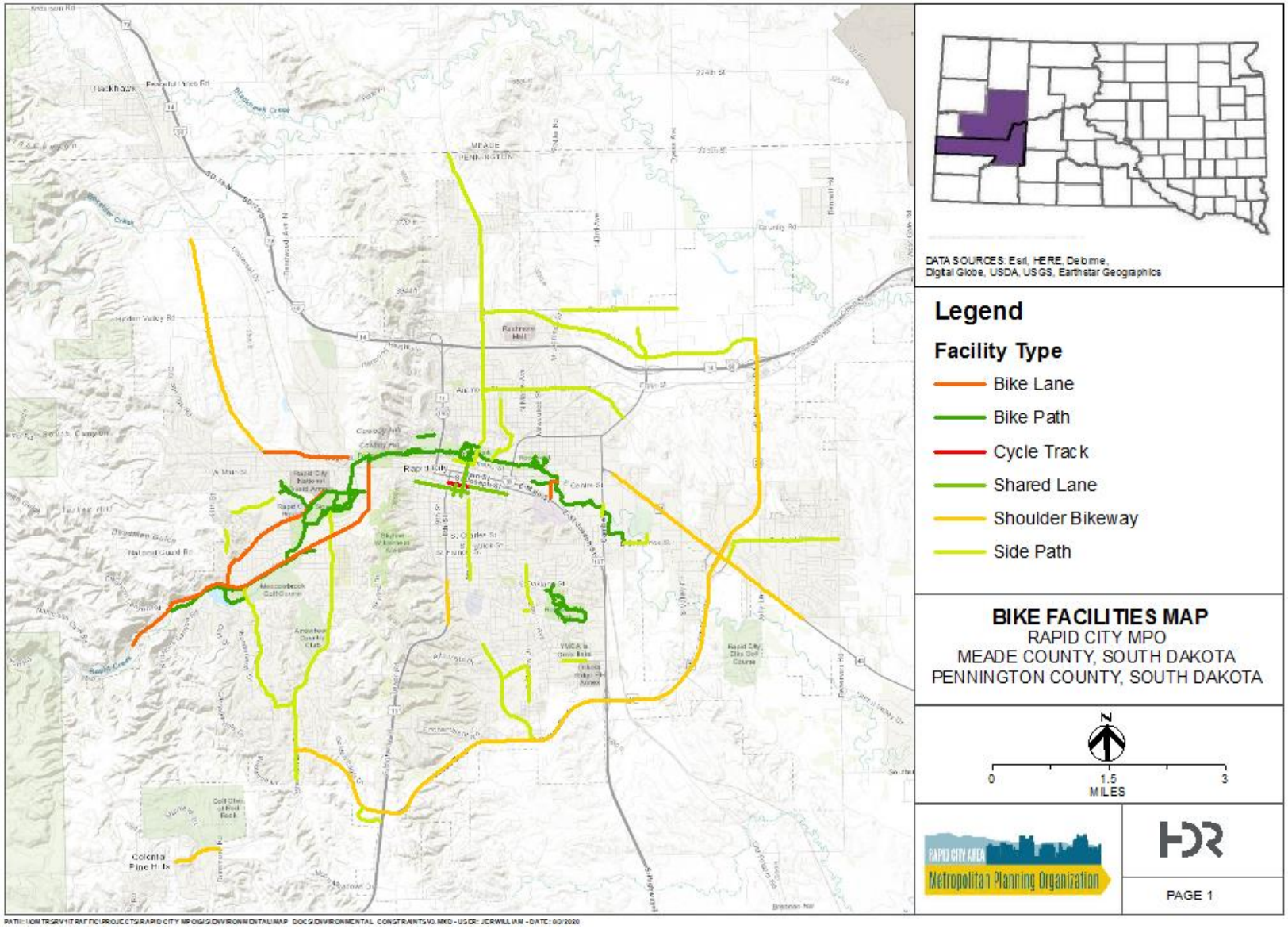


Figure 8: Black Hills National Forest Map

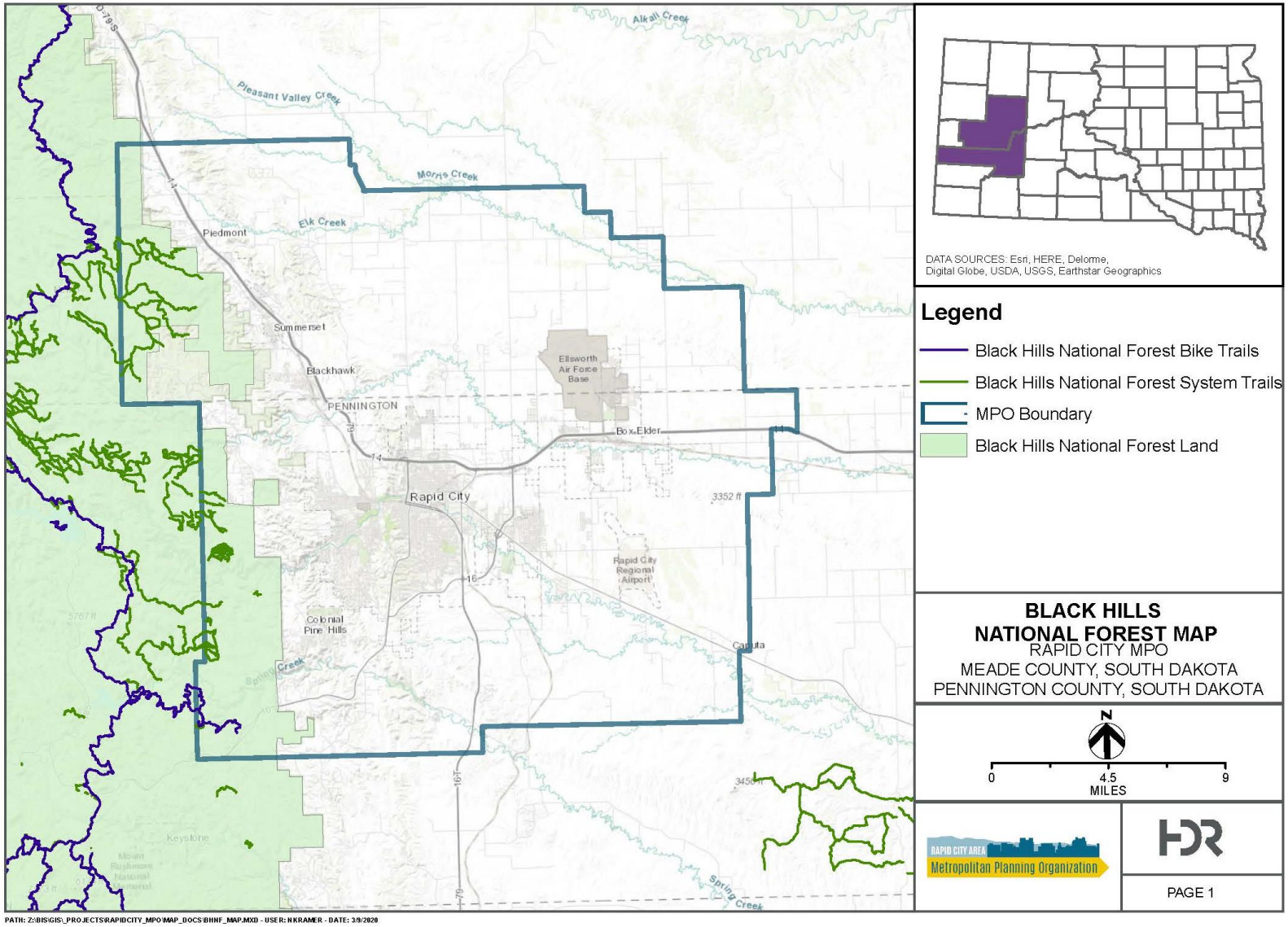


Figure 9: Floodplain Map

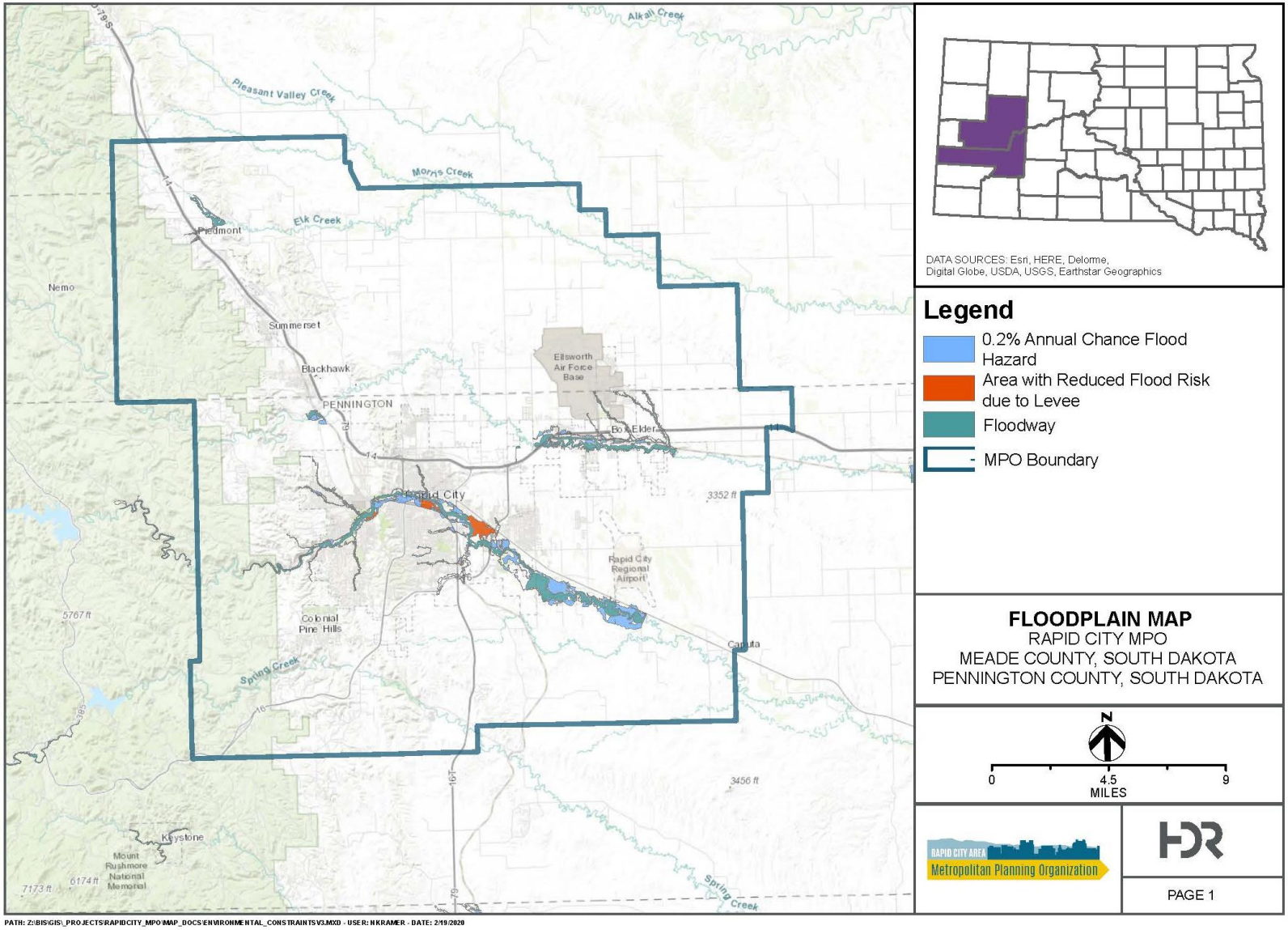


Figure 10: SDDENR Recorded Spills Map

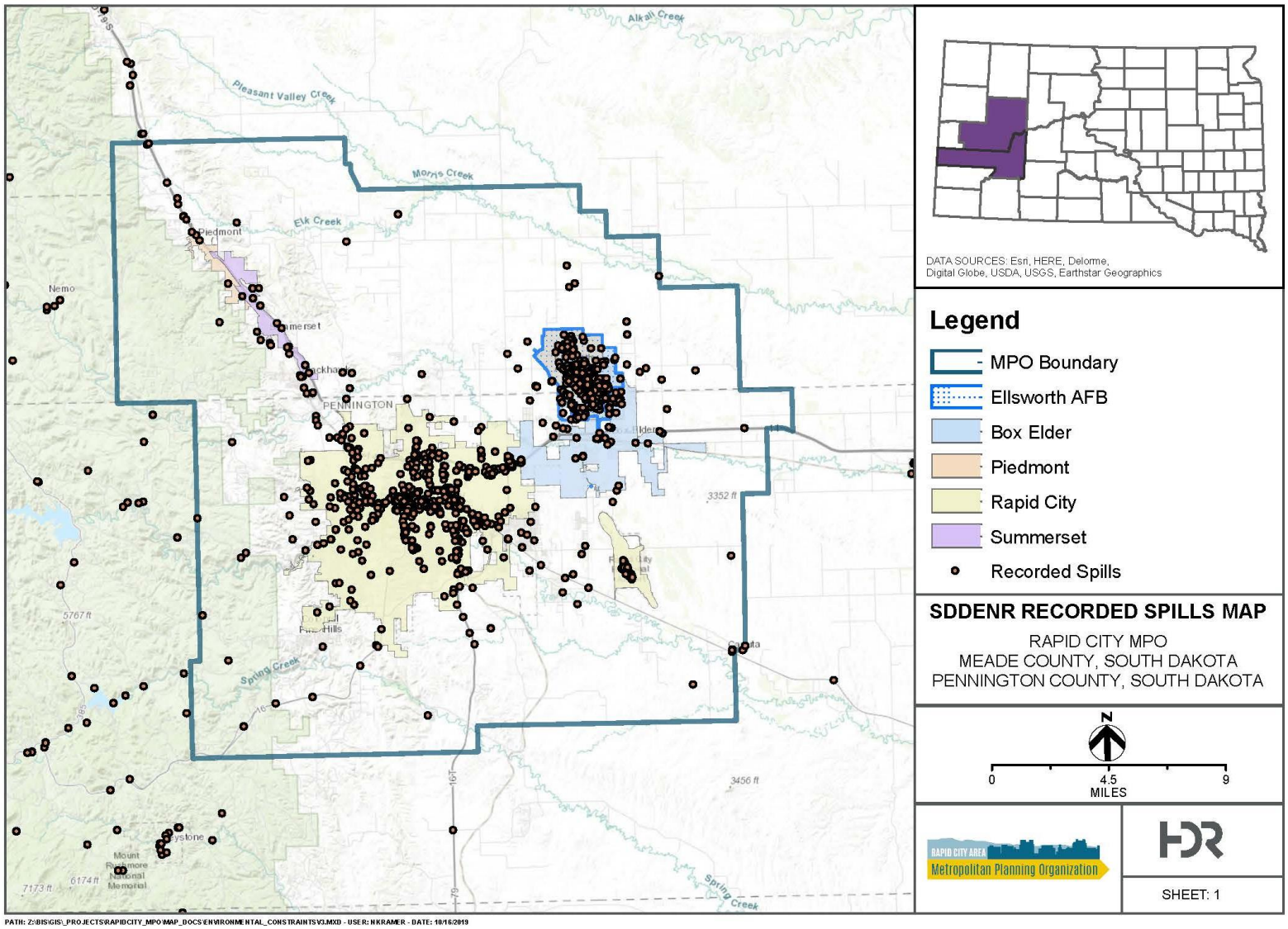
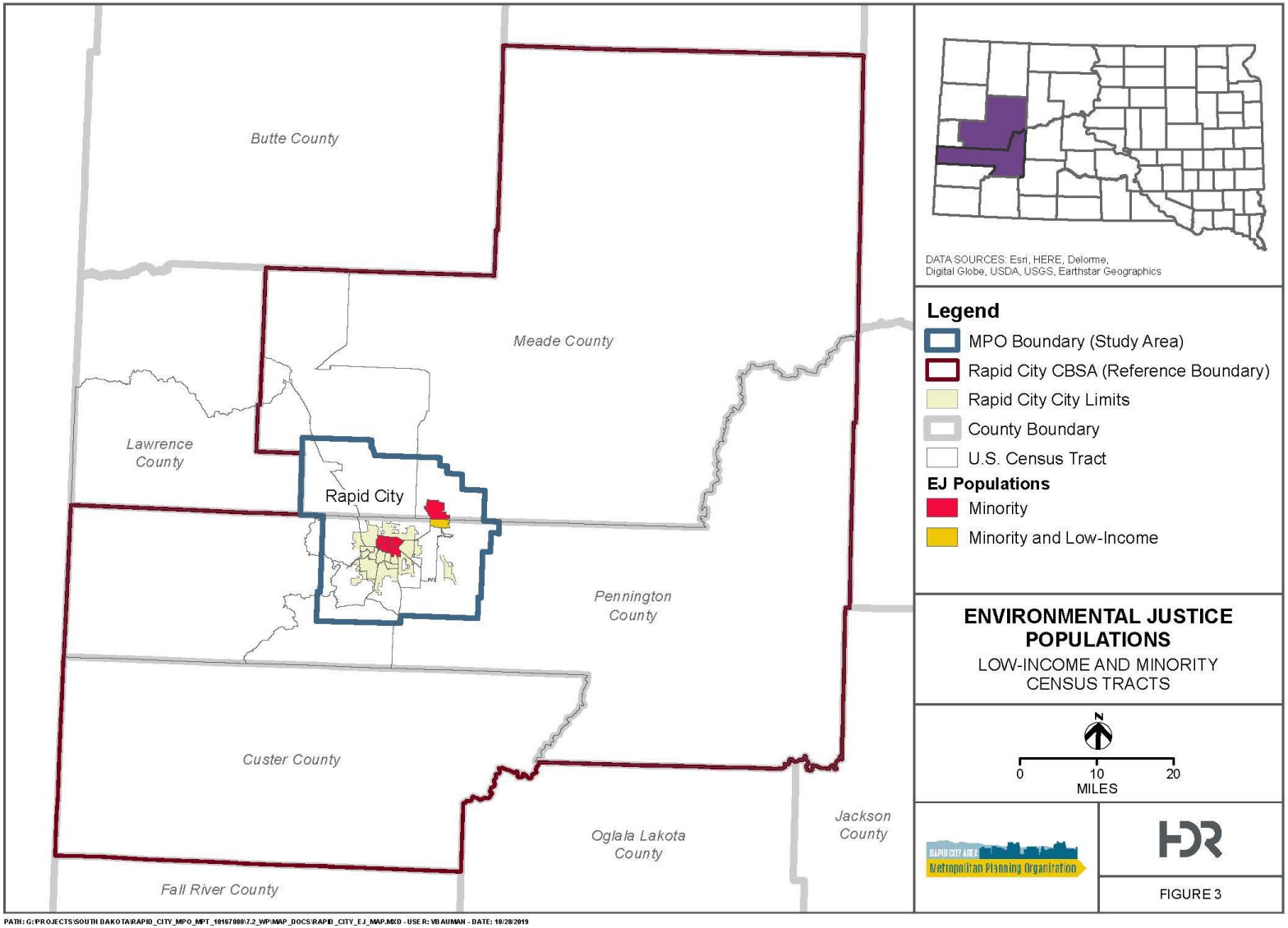


Figure 11: Environmental Justice Population Map



Attachment A:
SOV Mailing

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Dakota Ecological Services
420 South Garfield Avenue, Suite 400
Pierre, South Dakota 57501-5408

IN REPLY REFER TO:
Rapid City
Metropolitan
Transportation Plan

January 23, 2020

Mr. Dustin Hamilton
HDR
703 Main Street, Suite 200
Rapid City, South Dakota, 57701

Dear Mr. Hamilton:

This letter is in response to your request dated December 30, 2019 for environmental comments regarding updates to the Rapid City Metropolitan Transportation Plan. The Rapid City Metropolitan Planning Organization (MPO) is preparing an update to the Metropolitan Transportation Plan for improvements to various travel modes within the Rapid City MPO boundary.

According to the National Wetlands Inventory, (available online at www.fws.gov/wetlands/) wetlands exist within the project boundary. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible, then minimization of any adverse impacts, and finally replacement of any lost acres, in that order. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted, and the methods of replacement should be prepared and submitted to the resource agencies for review.

The following recommendations should be implemented in the construction plans for the placement of any service lines that cross streams and wetlands in order to minimize potential environmental impacts:

1. Crossing of wetland basins should be done when dry conditions exist.

2. Stream bottoms and wetlands impacted by constructions activities should be restored to pre-project elevations. In cases where wetland basins to be crossed are formed because of impermeable soils, the soil area should be packed to reestablish the impermeability of the basin's floor.

3. Stream crossings should not be undertaken during fish spawning period. Most spawning occurs in April, May and June.

4. Streams should be crossed perpendicular to flow.

5. Removal of vegetation and soil should be accomplished in a manner to reduce soil erosion and to disturb as little vegetation as possible.

6. Grading operations and reseeding of native species should begin immediately following trench backfilling.

Work requiring the alteration or disturbance of wetlands or streams may require a permit from the U.S. Army Corps of Engineers (Corps) according to the regulations set forth in section 10 of The Rivers and Harbors Act, or section 404 of The Clean Water Act. You may contact the Corps Regulatory Office at 28563 Powerhouse Rd, Rm 118, Pierre, SD 57501, Telephone (605) 224-8531.

In accordance with section 7(c) of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), we have determined that the following federally listed species may occur in the project area (this list is considered valid for 90 days):

Species	Status	Expected Occurrence
Least Tern (*Sterna antillarum*)	Endangered	Migration or nesting
Northern Long-eared Bat (*Myotis septentrionalis*)	Threatened	Summer resident, seasonal migrant, known winter resident in Black Hills
Rufa Red Knot (*Calidris canutus rufa*)	Threatened	Rare seasonal migrant
Whooping Crane (*Grus americana*)	Endangered	Migration

Least terns and piping plovers use sparsely vegetated interchannel sandbars, islands, and shorelines for nesting, foraging and brood-rearing. They are sensitive to human disturbances, which can limit reproduction. Surveys for nesting piping plovers and least terns should be performed prior to any construction, and no construction should take place within 1/4 mile of any known piping plover or least tern nest. The birds typically breed in South Dakota between the dates of May 1 and August 15.

Whooping cranes migrate through South Dakota on their way to northern breeding grounds and southern wintering areas. They occupy numerous habitats such as cropland and pastures; wet meadows; shallow marshes; shallow portions of rivers, lakes, reservoirs, and stock ponds; and both freshwater and alkaline basins for feeding and loafing. Overnight roosting sites frequently require shallow water in which to stand and rest. Should construction occur during spring or fall migration, the potential for disturbances to whooping cranes exists; particularly because your

project involves construction in counties adjacent to major river systems. Disturbance (flushing the birds) stresses them at critical times of the year. We recommend remaining vigilant for these birds. There is little that can be done to reduce disturbance besides ceasing construction at sites where the birds have been observed. The birds normally do not stay in any one area for long during migration. Any whooping crane sightings should be reported to this office.

The northern long-eared bat is a medium-sized brown bat listed as threatened under the Endangered Species Act. Northern long-eared bats are known to be present in South Dakota year-round, primarily roosting singly or in colonies underneath bark, in cavities or in crevices of both live and dead trees in the summer. Some hibernacula have been documented in caves/mines in the Black Hills. The species has been documented in other forested areas in the state during the summer months and along the Missouri River during migration. Summer survey guidelines for this species are identical for those established for the Indiana Bat (available online at: https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html). White nose syndrome - a fungus affecting hibernating bats - is considered a significant threat to this species, but individuals may be harmed by other activities such as modifications to hibernacula, timber harvest, human disturbance, and collisions with wind turbines.

The rufa red knot is a robin-sized shorebird listed as threatened under the Endangered Species Act (see: < http://www.gpo.gov/fdsys/pkg/FR-2014-12-11/pdf/2014-28338.pdf> for more information). The red knot migrates annually between its breeding grounds in the Canadian Arctic and several wintering regions, including the Southeast United States, the Northeast Gulf of Mexico, northern Brazil, and Tierra del Fuego at the southern tip of South America. Although it is primarily a coastal species, small numbers of rufa red knots are reported annually across the interior United States (i.e., greater than 25 miles from the Gulf or Atlantic Coasts) during spring and fall migration. These reported sightings are concentrated along the Great Lakes, but multiple reports have been made from nearly every interior State, including South Dakota. The red knot likely uses South Dakota habitats similar to those of the least tern and piping plover. The species does not breed in this state.

If the Federal action agency or their designated representative determines that the project will have "no effect" on federally listed species, Service concurrence is not necessary per section 7 of the ESA. If the Federal action agency or their designated representative determines that this project "may adversely affect" listed species in South Dakota, it should request formal consultation from this office. If a "may affect - not likely to adversely affect" determination is made for this project, it should be submitted to this office for concurrence. For more information regarding Federal action agency responsibilities as related to section 7 of the ESA, please refer to the Service's Endangered Species Act Consultation Handbook, available online at: http://www.fws.gov/endangered/consultations/index.html.

If changes are made in the project plans or operating criteria, or if additional information becomes available, the Service should be informed so that the above determinations can be reconsidered.

The Service appreciates the opportunity to provide comments. If you have any questions on these comments, please contact Dylan Turner of this office at (605) 224-8693, Extension 233.

Sincerely,

Scott Larson

Scott Larson
Field Supervisor
North and South Dakota Field Office

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

January 24, 2020

Planning, Programs, and Project Management Division

Mr. Dustin Hamilton
HDR
703 Main Street, Suite 200
Rapid City, South Dakota 57701

Dear Mr. Hamilton:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated December 30, 2019 (received January 7, 2020) regarding the environmental review of the proposed Metropolitan Transportation Plan update, in Rapid City, South Dakota. It is understood that the proposed update would include improvements to various travel modes within the Rapid City Area Metropolitan Planning Organization boundary. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

It should be ensured that the proposed project is in compliance with floodplain management criteria of Meade and Pennington Counties and the State of South Dakota. As a minimum, the design should ensure that the one percent annual chance floodwater surface elevation of any stream affected that has a designated floodway, is not increased relative to pre-project conditions. If a designated floodway has not been identified then the design should ensure that the one percent annual chance floodwater surface elevation is not increased by more than one-foot relative to pre-project conditions. It is desirable, however, that water surface elevations either remain the same or decrease as a result of this project.

Since the proposed project does not appear to be located within Corps owned or operated lands, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Meade and Pennington Counties and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota
South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-ODR-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

If you have any questions, please contact Ms. Shelly McPherron of my staff at (402) 995-2507 or michelle.m.mcpherron@usace.army.mil and reference PD# 8258 in the subject line.

Sincerely,

Eric A. Laux, PMP
Chief, Environmental & Cultural Resources

Appendix F.
Current Transportation Improvement Program

Rapid City Area Transportation Improvement Program

(Fiscal Years 2020-2023)

Final
August 2019

Prepared By:
The Cities of Rapid City, Box Elder, Summerset and Piedmont,
Meade County and Pennington County,
Rapid City Regional Airport,
Ellsworth Air Force Base
Rapid City Area School District,
Rapid City Long Range Planning Division, and the
South Dakota Department of Transportation

In Cooperation With:
Rapid City Public Works Department
Pennington County Highway Department
Meade County Highway Department
City of Box Elder
South Dakota Department of Transportation
Federal Highway Administration and the
Federal Transit Administration
of the United States Department of Transportation

Adopted by:
The Executive Policy Committee
of the Rapid City Area Metropolitan Planning Organization

The Rapid City Area Metropolitan Planning Organization (MPO) provides services without regard to race, color gender, religion, national origin, age or disability, according to the provisions contained in SDCL 20-13, Title VI of the Civil Rights Act of 1964, the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990 and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994.

Any person who has questions concerning this policy or who believes they have been discriminated against should contact the Rapid City Area MPO at 605-394-4120.

"The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation."

RAPID CITY AREA TRANSPORTATION IMPROVEMENT PROGRAM

(Fiscal Years 2020 - 2023)

TABLE OF CONTENTS

IV. LIST OF PROJECTS (con't)

RAPID CITY AREA TRANSPORTATION IMPROVEMENTS PROGRAM

(Fiscal Years 2020 - 2023)

- ABBREVIATIONS USED IN THIS DOCUMENT -

AC	Asphalt Concrete
ADA	Americans with Disabilities Act of 1990. Mandates changes in building codes, transportation, and hiring practices to prevent discrimination against persons with disabilities. This act affects all existing and new public places, conveyances, and employers. The significance of ADA in transportation will be most obvious in transit operations, capital improvements, and hiring practices.
AIP	Airport Improvement Program
C & G	Curb and Gutter
CIP	Capital Improvement Plan
CY	Calendar Year
DOT	United States Department of Transportation
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
IM	Relates to either the interstate maintenance project funding category or the state system structure funding category (Resurfacing, Restoration and Rehabilitation) provided by the DOT under the terms of the ISTEA of 1991.
MPO	Metropolitan Planning Organization
PCC	Portland Cement Concrete
PE	Preliminary Engineering
PL	Metropolitan Planning Funds. Highway Trust Funds which have been set aside for transportation planning activities in Urbanized Areas. Funding is on an 81.95% - 18.05% federal/local basis.
RCATPP	Rapid City Area Transportation Planning Process. The local cooperative transportation planning program.

ABBREVIATIONS USED IN THIS DOCUMENT (Cont.)

RCP&E Rapid City, Pierre, and Eastern Railroad

RCRA Rapid City Regional Airport

ROW Right-Of-Way

SEC 5307 Federal Program for capital improvements, i.e. terminals, shelters, mechanical equipment other than buses, computers, office equipment, etc. These funds, formerly known as Section 9 funds, have been available since FY 1984 through the Urban Mass Transportation Act of 1964 as amended by the Federal Transit Act of 1991. They provide resources for planning, capital and operating assistance. The match on planning and capital is 80% federal and 20% local; while the operating subsidy is 50% federal and 50% local.

SEC 5310 These funds, formerly known as Section 16 funds, are available through the Urban Mass Transportation Act of 1964 as amended. This authorizes capital grants to non-profit organizations to assist in providing transportation for the elderly and the handicapped. FTA provides 80% of the costs for equipment, and the 20% match must come from other than federal funds.

SEC 5339 A formula program that provides funding for capital projects to replace, rehabilitate, and purchase buses and bus-related equipment, and to construct bus-related facilities. This program was established under Moving Ahead for Progress in the 21st Century (MAP-21), replacing the previous Section 5309 discretionary program established under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

SDDOT South Dakota Department of Transportation

STIP State Transportation Improvement Program

STP Surface Transportation Program

TIP Transportation Improvement Program

METROPOLITAN TRANSPORTATION PLANNING PROCESS SELF-CERTIFICATION STATEMENT

In accordance with 23 CFR 450.336, the **South Dakota Department of Transportation** and the **Rapid City Area Metropolitan Planning Organization** for the **Rapid City, South Dakota urbanized area** hereby certify that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

(1) 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;

(2) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;

(3) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;

(4) Section 1101(b) of the FAST Act (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in DOT funded projects;

(5) 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;

(6) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR parts 27, 37, and 38;

(7) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;

(8) Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and

(9) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

Rapid City, South Dakota MPO
Metropolitan Planning Organization

Amanda Scott
Signature

proxy for Chair Larson
Title

6-13-2019
Date

South Dakota Department of Transportation
State Department of Transportation

Signature

Secretary of Transportation
Title

06/24/19
Date

RAPID CITY AREA TRANSPORTATION IMPROVEMENT PROGRAM
(Fiscal Years 2020- 2023)

I. INTRODUCTION

A. The Transportation Improvement Program

A Transportation Improvement Program (TIP) is a staged, multi-year program of transportation improvements including highway and transit projects. The TIP is a four (4) year priority list, including a financial plan. The Rapid City Area Metropolitan Planning Organization (MPO) and the State Department of Transportation (SDDOT) cooperate in project selection. All projects funded by the Fixing America's Surface Transportation Act (FAST Act) must be included in the TIP.

The TIP should contain at least the following basic elements:

1. Identification of the project;
2. Estimated total cost and amount of federal funds proposed to be obligated during the program period;
3. Proposed source of federal and non-federal matching funds;
4. Identification of the recipient and, state and local agencies responsible for carrying out the project;
5. A priority list of projects and project segments; and,
6. A financial plan.

The TIP is a "living" document. It can be amended with the approval of the Executive Policy Committee (EPC). The TIP focuses on projects that will require four (4) or less years to implement. Within the first four (4) years of the TIP, projects may be delayed or accelerated according to present needs, without requiring an amendment. This flexibility provides coordination among local and state agencies, saves money and decreases disruptions to the transportation system. The TIP is evaluated at year-end, and an annual increment of improvements is added to maintain a full multi-year program.

The TIP does not constitute an appropriation of funds, nor does it replace the normal funding program. The TIP is intended to serve as a fiscal management tool to assist state and local agencies in matching needs with resources. All major projects eligible for placement in the TIP must be selected from an approved Metropolitan Transportation Plan previously called the Long Range Transportation Plan (MTP/LRTP).

In developing the program, the MPO shall provide citizens, affected public agencies, representatives of transportation agency employees, other affected employee representatives, private transportation providers, and other interested parties a reasonable opportunity to comment on the proposed program. Because public involvement is a very important component of the TIP process, the public is given several opportunities to comment. The TIP is brought twice before the Rapid City Planning Commission, the Rapid City Council, and the MPO committees. Public notices are printed in the local newspaper for all of the above meetings, and special public meeting notices are printed specifically for review of the TIP before the MPO committees. The public is given the opportunity to comment in person at the meetings or submit comments during a specified comment period. Responses are made in reply to any comment received, and significant

comments are discussed between the staff involved in the TIP process and ultimately the MPO committees for further discussion as identified in 23 CFR 450.316 (a)(2).

B. The Transportation Improvement Program in Perspective

FAST Act projects in urbanized areas must be included in a TIP that is based on a continuing, comprehensive planning process carried on cooperatively by the state and local communities. The rationale for requiring a TIP can be summarized in three (3) key points.

1. Transportation issues should be approached in a comprehensive fashion with participation from all affected parties;

2. A systematic, comprehensive approach to planning and initiating transportation improvements assists decision-makers in determining the location, timing and financing of needed improvements; and,

3. A cooperatively developed program of transportation improvements should facilitate the coordination of public and private improvements thereby eliminating duplication of effort and expense. The TIP development provides local officials and the general public the opportunity to identify, evaluate, and select short-range community transportation improvements.

The Rapid City Area TIP includes all identifiable transportation related improvement projects that may be undertaken in the planning area over the next four (4) years. Emphasis has been on area needs stated in the LRTP, called RapidTRIP 2040, the Box Elder Strategic Transportation Plan, the Pennington County Transportation Plan, and the Meade County Transportation Plan. The guiding principle used in developing the Rapid City Area TIP was that "the document should be a comprehensive transportation planning and fiscal management tool designed to assist state and local officials in the task of matching needed transportation improvements with available resources to accomplish the community's transportation goals as efficiently and effectively as possible.

II. IDENTIFYING, EVALUATING AND SELECTING CANDIDATE PROJECTS

A. Project Selection and Prioritization

The 2020-2023 Rapid City Area TIP represents a prioritized program of transportation improvements in the following multi-modal areas: streets and highways, public transportation, bicycles, and pedestrians. Projects are prioritized within each program year by funding category. The Rapid City Area TIP is developed cooperatively by the SDDOT, the local participating units of government, agencies, and the MPO committees. The Rapid City Area TIP development is a result of a series of meetings between state and local transportation officials in which the transportation-related needs, concerns, and priorities of each participant are discussed and evaluated. Project-oriented solutions have been developed and initiated into the Rapid City Area TIP by the governmental entity having jurisdiction.

State projects included within the TIP are also found in SDDOT’s Statewide Transportation Improvement Program (STIP). The projects identified in the STIP have been prioritized based on overall needs at the state level and the availability of funds for each the regions in South Dakota. The South Dakota Transportation Commission approves the STIP after the MPO acts on the TIP.

Projects located within the cities are either drawn from the city's Capital Improvements Program (CIP), as in the case of Rapid City, or developed internally through other planning and budgeting processes. County projects are developed internally and funding sources are included in the annual provisional budget for the highway departments.

The improvement projects listed in the TIP must conform to the MTP/LRTP for the MPO. The most recent MTP/LRTP was approved in September 2015. *RapidTRIP 2040*can be found on the MPO website at http://rapidcityareampo.org/documents/longrange-transportation-plan. Only major projects identified in the approved MTP/LRTP are selected as potential TIP projects. Currently, projects within the TIP are considered to be in compliance with the MTP/LRTP.

Consistent with the project prioritization and evaluation criteria noted in the MTP/LRTP, the TIP projects are prioritized in accordance with the policies and strategies that guide the activities of the Rapid City Area MPO process, including the FAST Act Planning Factors. The planning factors found in the FAST Act include:

- Support the economic vitality of the metropolitan area by enabling global competitiveness, productivity, and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the ability of the transportation system to support homeland security and safeguard the personal security of all motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- Protect and enhance the environment, promote energy conservation, and improve quality of life;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation;
- Emphasize the preservation of the existing transportation system;
- Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- Enhance travel and tourism.

In terms of selecting a project for construction, the FAST Act provides additional flexibility within the period of the first four (4) years. Any projects identified within the initial four (4) year period may be accelerated or moved back based on current funds, needs or priorities. If a newly identified project is to be considered for placement in the TIP, then it must be presented to the transportation planning committees for approval. If approved, an amendment is then placed on the existing TIP to identify the new project. See Appendix A for the amendment process details.

B. Financial Constraint

The FAST Act requires that the Rapid City Area TIP be financially constrained and include a financial plan which demonstrates that funding is available for programmed projects. The Rapid City Area TIP has been developed to meet this requirement, and outlines the available funding in the respective project categories. The following funding sources have been identified for funding street projects.

1. **Assessments** – Cost recoveries levied against real property based upon the cost of improvements made by the city.

2. **Bond funds** – Funds derived from the issuance of general obligation or revenue bonds by the City. These bonds constitute an obligation of the City to repay principal and interest over a specified number of years from general or other revenues of the City.

3. **Enterprise Funds** – Cost recoveries from user fees or surcharges against real property based upon the cost of improvement by the City. These costs are charged within a specific enterprise fund (water, wastewater, landfill, etc.).

4. **Federal Funds** – Grants or loans from the federal government, which are required to be used for specific purposes or projects.

5. **General Fund** – The fund used to account for all financial resources, except those required to be accounted for in another fund. The City's general fund accounts for revenues and expenditures of general property taxes, first penny sales tax, licenses and permits, etc.

6. **Other Funds** – Special revenue or trust funds that account for revenues restricted for specific purposes.

7. **State Funds** – Grants or loans from the State of South Dakota for specific purposes or projects.

8. **Sales Tax (2nd Penny)** – An additional one percent tax levied on gross receipts of retail business and service within the City's jurisdiction that may be used for specific purposes, primarily capital improvement projects and debt retirement.

9. **Tax Increment Financing** – Financing used to fund public investments in an area by capturing, for a time, all of the increased property tax revenue that results when public investment stimulates private investment.

10. **State Fuel Revenue Tax**

11. **Motor Vehicle Excise Tax**

12. **User Fees –** Fees charged for goods and services to recover the costs associated with providing those goods and services, including transit fares and bus advertising.

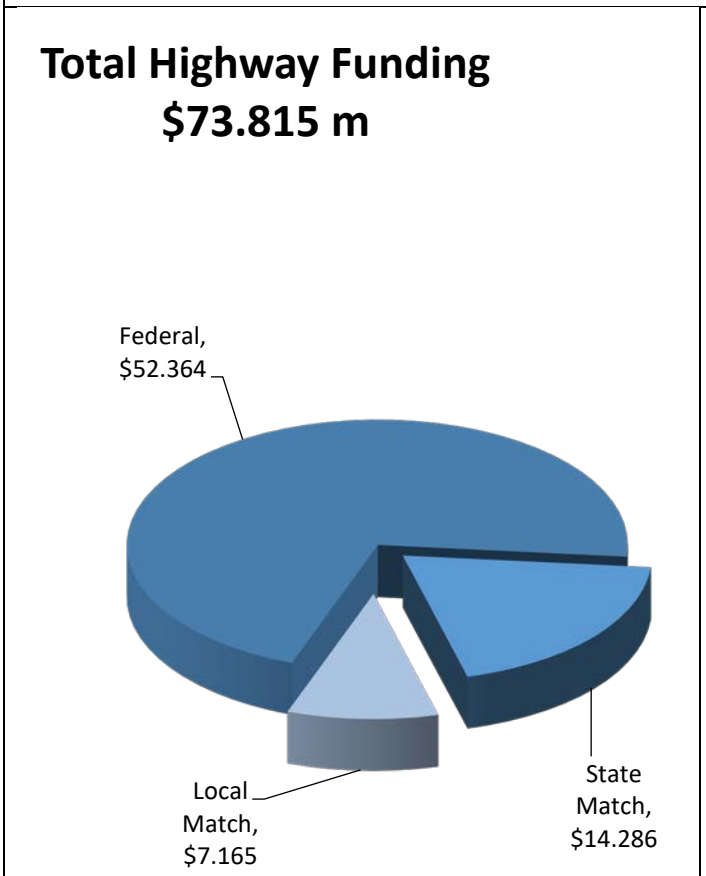
Figure 1 below depicts the annual construction totals for the federally and non-federally funded projects. The South Dakota Department of Transportation has committed the State and Federal funds for the expenditures in Figure 1. State match is funded from the State Highway Trust Fund. The State Highway Trust fund generates most of its revenue from the state gas tax. City and County governments have committed funding for the required local match. (Both Rapid City and Box Elder, Class 1 cities, list the proposed construction projects utilizing the Federal Highway Administration's Local Urban Systems funds in the respective Capital Improvements Program and included in this report.)

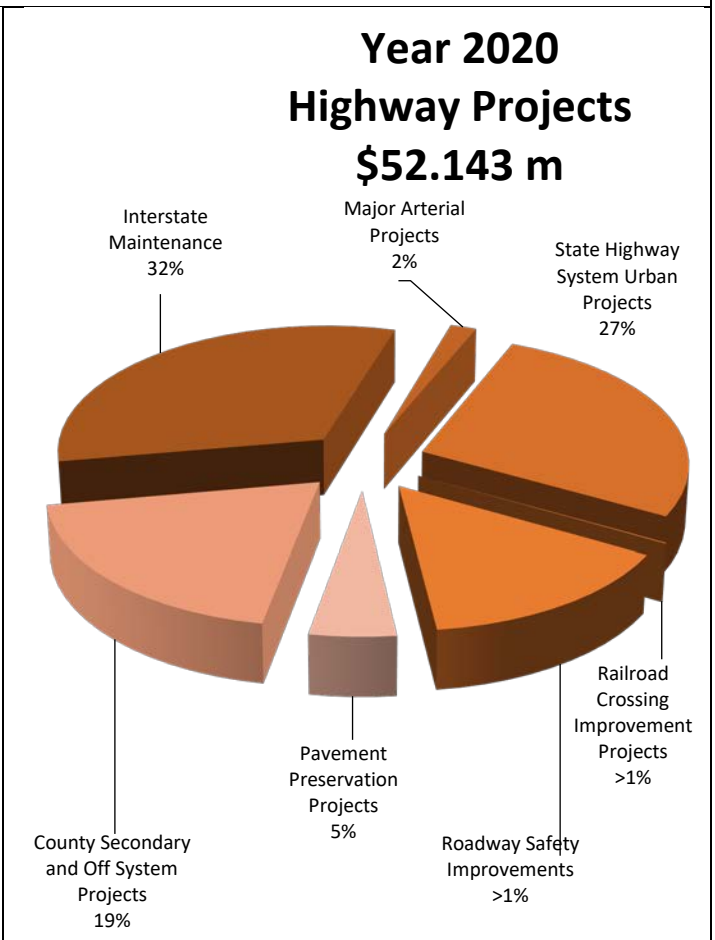
Figure 1 - Federally and Non-Federally Funded Programmed Projects by Project Type within the Metropolitan Planning Area					
	2020	**2021**	**2022**	**2023**	**Total**
Interstate Maintenance					
Federal	$14,584,000	$1,166,000	$1,647,000	$311,000	$17,708,000
State Match	$2,253,000	$116,000	$164,000	$31,000	$2,564,000
Interstate Maintenance	$16,837,000	$1,282,000	$1,811,000	$342,000	$20,272,000
Major Arterial Projects					
Federal	$0	$0	$0	$0	$0
State Match	$900,000	$0	$0	$0	$900,000
Major Arterial Projects	$900,000	$0	$0	$0	$900,000
Minor Arterial Projects					
Federal	$0	$0	$0	$0	$0
State Match	$0	$0	$0	$0	$0
Minor Arterial Projects	$0	$0	$0	$0	$0
State Highway System Urban Projects					
Federal	$11,359,000	$0	$0	$0	$11,359,000
State Match	$2,710,000	$0	$0	$0	$2,710,000
State Highway System Urban Projects	$14,069,000	$0	$0	$0	$14,069,000
Railroad Crossing Improvement Projects					
Federal	$45,000	$0	$0	$0	$45,000
State Match	$5,000	$0	$0	$0	$5,000
Local Match	$0	$0	$0	$0	$0
Railroad Crossing Improvement Projects	$50,000	$0	$0	$0	$50,000
Roadway Safety Improvements					
Federal	$6,568,000	$2,573,000	$785,000	$2,678,000	$12,604,000
State Match	$1,155,000	$106,000	$0	$110,000	$1,371,000
Local	$0	$0	$0	$0	$0
Roadway Safety Improvements	$7,723,000	$2,679,000	$785,000	$2,788,000	$13,975,000
Pavement Preservation Projects					
Federal	$2,029,000	$2,209,000	$444,000	$905,000	$5,587,000
State Match	$445,000	$487,000	$97,000	$199,000	$1,228,000
Pavement Preservation Projects	$2,474,000	$2,696,000	$541,000	$1,104,000	$6,815,000
County Secondary and Off System Projects					
Federal	$4,453,000	$0	$0	$0	$4,453,000
Local	$5,543,000	$496,000	$496,000	$496,000	$7,031,000
State Match	$94,000	$94,000	$94,000	$94,000	$376,000
County Secondary and Off System Projects	$10,090,000	$590,000	$590,000	$590,000	$11,860,000
Transportation Alternative Projects					
Federal	$0	$608,000	$0	$0	$608,000
Local Match	$0	$134,000	$0	$0	$134,000
Transportation Alternative Projects	$0	$742,000	$0	$0	$742,000
Americans with Disabilities Act (ADA) Projects					
Federal	$0	$0	$0	$0	$0
State Match	$0	$5,132,000	$0	$0	$5,132,000
Americans with Disabilities Act (ADA) Projects	$0	$5,132,000	$0	$0	$5,132,000
Highway Total for Fiscal Year	$52,143,000	$13,121,000	$3,727,000	$4,824,000	$73,815,000

Figure 1 - Federally and Non-Federally Funded Programmed Projects by Project Type within the Metropolitan Planning Area (con't.)					
	2020	**2021**	**2022**	**2023**	**Total**
Public Transportation Projects					
Federal	$1,565,664	$1,593,170	$1,621,226	$1,649,843	$6,429,903
State Match	$37,837	$37,837	$37,837	$37,837	$151,348
Local (Rapid City)	$1,083,710	$1,103,999	$1,124,745	$1,145,905	$4,458,361
Public Transportation Projects	$2,687,211	$2,735,006	$2,783,808	$2,833,585	$11,039,612
Total FHWA and FTA Funding for Fiscal Year	$54,830,211	$15,856,006	$6,510,808	$7,657,585	$84,854,612

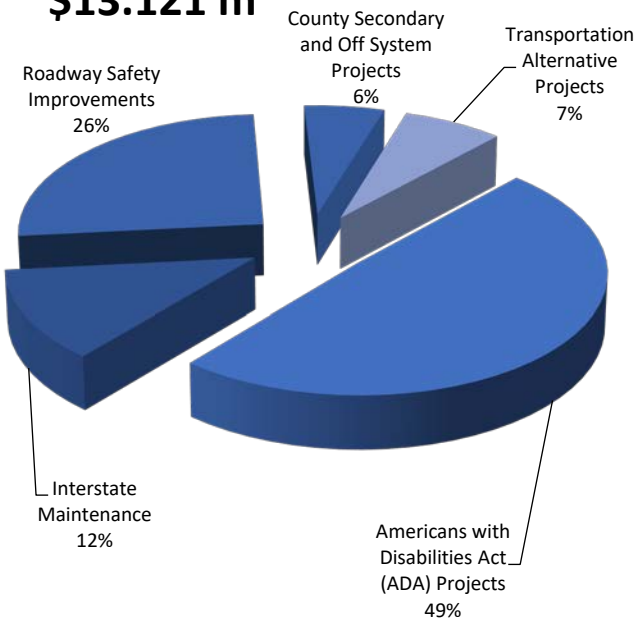
Figure 2 charts the yearly highway funding sources by year and the four year transit funding by funding sources within the Metropolitan Planning Area.

Figure 2 - Federally and Non-Federally Funded Programmed Projects by Yearly Funding Source within the Metropolitan Planning Area

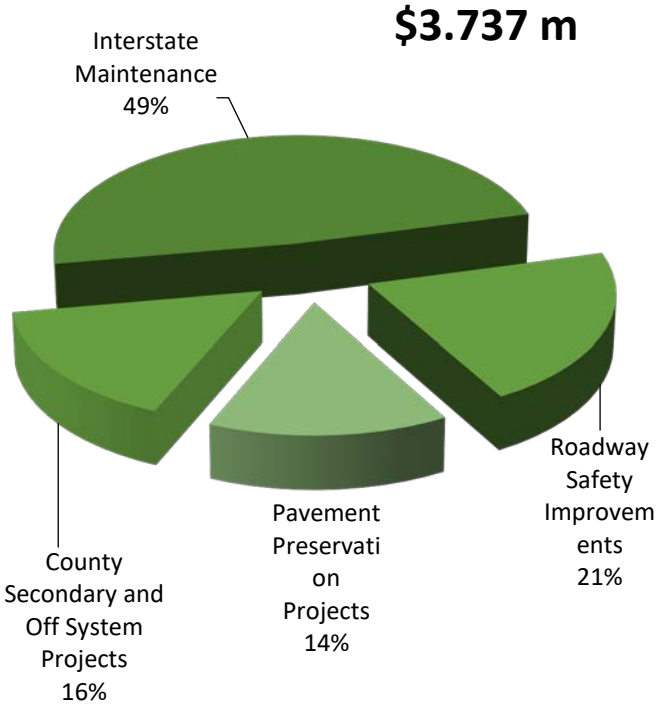




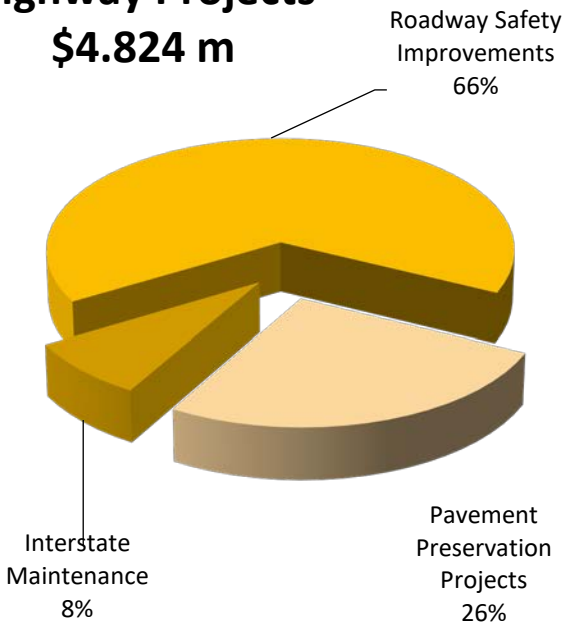
Year 2021 Highway Projects $13.121 m



Year 2022 Highway Projects $3.737 m



Year 2023 Highway Projects $4.824 m



Total Public Transit Funding $11.039 m

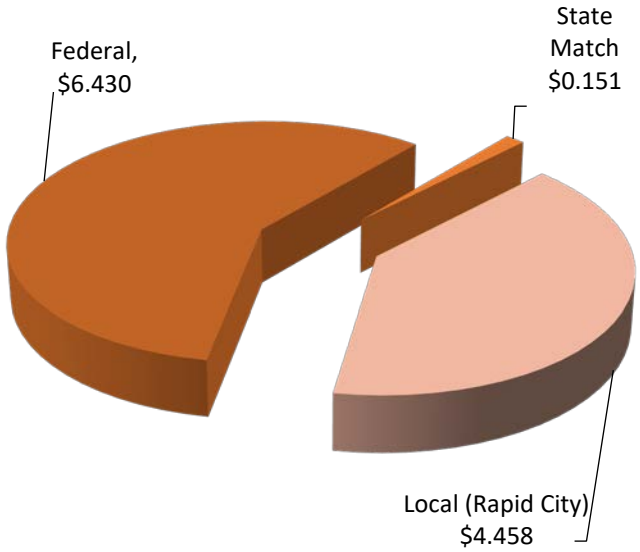


Figure 3 identifies the regionally significant local projects by the MPO member agencies throughout the Metropolitan Planning Area.

Figure 3 – Regionally Significant Non-Federally Funded Projects in the Metropolitan Planning Area

ENTITY	2020	2021	2022	2023	Total
Rapid City Regional Airport Improvements Program					
Local	$0	$8,500,000	$0	$0	$8,500,000
Box Elder Capital Improvements Program					
Local	$10,000,000	$0	$0	$7,000,000	$17,000,000
Rapid City Capital Improvements Program					
Local	$5,425,890	$6,040,000	$5,295,000	$1,140,000	$17,900,890
Meade County Road and Bridge Fund					
Local	$2,200,000	$0	$1,100,000	$0	$3,300,000
Pennington County Road and Bridge Fund					
Local	$1,200,000	$0	$0	$0	$1,200,000

The SDDOT provides the match for State sponsored federally funded projects using State Fuel Tax Revenue and Motor Vehicle Excise Tax. The 2020-2024STIP is included on pages 13 - 22.

All projects sponsored by the City of Rapid City are excerpts from the City's Capital Improvement Program (CIP). The CIP is a five-year plan for construction and infrastructure improvements. The five-year plan is revised and updated annually. The CIP Committee reviews the proposed projects and formulates the five-year plan based on available funding and priority. The plan is then presented to the Mayor, Planning Commission and City Council for approval. Projects programmed for the upcoming year (2020) will be adopted as a part of the City budget. Projects scheduled for subsequent years (2021-2023) are tentatively programmed for implementation in those respective years. All projects beyond the current year are subject to annual review. Local funding will be provided by developer contributions, tax increment financing and other local sources. Adequate funds have been committed to fund the City's local match for transportation projects. The City of Rapid City's Capital Improvements Projects are found on pages 23-24.

Rapid City Public Transit receives funding from the Federal Transit Administration, the South Dakota Department of Transportation and the City of Rapid City. The breakdown of these funds and the Transit Program for 2020-2023 is included on page 25. Rapid City Public Transit also receives funds to assist with programming expenditures from fare box and bus advertising revenues.

Rapid City Regional Airport receives funding from the Federal Aviation Administration, the State of South Dakota, and the Airport Enterprise Fund. The Airport Improvement Projects for 2019-2022 are listed on page 26.

The City of Box Elder presently receives funding from the City's general fund and The State of South Dakota. The City of Box Elder Five-Year Construction Program for 2018-2023 is included on pages 27-28.

Meade County presently receives funding from the County's general fund. The Meade County Five-Year Construction Program for 2019-2023 is included on pages 29-30.

Pennington County presently receives funding from the County's general fund. Pennington County has committed funds to those County Secondary and Off System Projects (SDDOT) listed within this TIP. The Pennington County Five-Year Construction Program for 2019-2023 is included on pages 30-33.

FAST Act directs MPOs to consider operation and maintenance (O&M) of the system as part of fiscal constraint, in addition to capital projects. O&M costs represent what is required to operate and maintain existing transportation facilities. To support this assessment, MPOs are charged with providing credible cost estimates in the TIP. The table below was developed in consultation with SDDOT and the local governments. The total O&M costs for the MPO area are greater than $23 million per year. Figure 4 depicts the O&M costs in each entity's fiscally constrained budget.

Figure 4 – Projected Operations and Maintenance Costs in the Metropolitan Planning Area

Entity	2020	2021	2022	2023	Total
SDDOT	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$8,400,000
Box Elder	$950,000	$950,000	$950,000	$950,000	$3,800,000
Rapid City	$6,119,587	$6,119,587	$6,119,587	$6,119,587	$24,478,348
Summerset	$75,000	$75,000	$75,000	$75,000	$300,000
Meade County	$5,086,366	$5,086,366	$5,086,366	$5,086,366	$20,345,464
Pennington County	$8,673,603	$8,673,603	$8,673,603	$8,673,603	$34,694,412
Total Projected O&M Costs	$23,004,556	$23,004,556	$23,004,556	$23,004,556	$92,018,224

C. Performance Management Requirements

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) promote the use of an objectives-driven, performance-based approach to planning for operations as an effective way to integrate operations into planning and programming. This approach focuses on short- and long-term system performance rather than simply focusing on implementation of projects as a measure of success.

FHWA defines Transportation Performance Management as a strategic approach using system information to make investment and policy decisions to achieve national performance goals. It is systematically applied and a regular ongoing process; provides key information to help decision makers allowing them to understand the consequences of investment decisions across transportation assets or modes; improves communication between decision makers, stakeholders, and the traveling public; and ensures that performance targets and measures are developed through cooperative partnerships and based on data and objective information.

As a part of Moving Ahead for Progress in the 21st Century (MAP-21), and continued under the Fixing America's Surface Transportation (FAST) Act, states are to invest resources in projects that, collectively, will make progress toward achieving seven national goal areas that include:

- Safety
- Infrastructure Condition
- Congestion Reduction
- System Reliability
- Freight Movement and Economic Vitality
- Environmental Sustainability
- Reduced Project Delivery Delay

Safety Performance Management (PM1)

Safety was the first national performance goal area for which states and MPOs were required to set performance. The Safety Performance Measures Final Rule supports the Highway Safety Improvement Program (HSIP) as it establishes safety performance management requirements for the purpose of carrying out the HSIP and assesses fatalities and serious injuries on all public roads.

The Safety Performance Management Final Rule establishes five performance measures:

1. Number of Fatalities
2. Rate of Fatalities per 100million Vehicle Miles Traveled (VMT)
3. Number of Serious Injuries
4. Rate of Serious Injuries per 100million VMT
5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries

Rather than setting its own safety targets, the Rapid City MPO has chosen to support the South Dakota DOT's safety targets as published in the South Dakota Highway Safety Improvement Program 2017 Annual Report. The MPO supports those targets by reviewing and programming all Highway Safety Improvement Program (HSIP) projects within the MPO boundary that are included in the DOT's TIP. Any South Dakota DOT sponsored HSIP projects within the MPO area were selected based on safety performance measures and were approved by the South Dakota Transportation Commission.

The South Dakota DOT conferred with stakeholder groups, including the Rapid City MPO, as part of its target setting process. Working in partnership with local agencies, South Dakota DOT safety investments were identified and programmed which will construct effective countermeasures to reduce traffic fatalities and serious injuries. South Dakota DOT projects chosen for HSIP investment are based on crash history, roadway characteristics, and the existence of infrastructure countermeasures that can address the types of crashes present. The South Dakota DOT continues to utilize a systemic safety improvement process rather than relying on "hot spot" safety improvements.

Pavement and Bridge Performance Measures (PM2)

The Federal Highway Administration (FHWA) published a final rule establishing performance measures for State Departments of Transportation (DOTs) to use in managing pavement and bridge performance on the National Highway System (NHS). State DOT targets should be determined from asset management analyses and procedures and reflect investment strategies that work toward achieving a state of good repair over the life cycle of assets at minimum practicable cost. State DOTs may establish additional measures and targets that reflect asset management objectives.

The Final Rule establishes the Pavement Performance Measures as follows.

1. % of Interstate pavements in Good condition
2. % of Interstate pavements in Poor condition
3. % of non-Interstate NHS pavements in Good condition
4. % of non-Interstate NHS pavements in Poor condition

The Final Rule also establishes the Bridge Performance Measures as:

1. % of NHS bridges by deck area classified as in Good condition
2. % of NHS bridges by deck area classified as in Poor condition

Rather than setting its own pavement and bridge performance targets, the Rapid City MPO has chosen to support the South Dakota DOT's pavement and bridge targets and will coordinate with the South Dakota DOT in the development of pavement and bridge targets.

System Performance (PM3)

A final rule establishes performance measures that report on the performance of the Interstate and non-Interstate National Highway System (NHS) to carry out the National Highway Performance Program (NHPP); freight movement on the Interstate system to carry out the National Highway Freight Program (NHFP); and traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

The Final Rule establishes six performance measures:

1. Percent of reliable person-miles traveled on the Interstate
2. Percent of reliable person-miles traveled on the non-Interstate NHS
3. Percentage of Interstate system mileage providing for reliable truck travel time – Truck Travel Time Reliability Index
4. Total emissions reductions by applicable pollutants under the CMAQ program

5. Annual hours of peak hour excessive delay per capita

6. Percent of non-single occupancy vehicle travel which includes travel avoided by telecommuting

Rather than setting its system performance targets, the Rapid City MPO has chosen to support the South Dakota DOT's system performance and will coordinate with the South Dakota DOT in the development of system performance targets.

III. RECOMMENDED PROJECTS AND PROGRAMS

A listing of projects, programs, and funding sources during Fiscal Years 2020– 2023 follows. The projects are listed in order of priority as designated by private citizens, the Citizen's Advisory Committee, the Technical Coordinating Committee, the Executive Policy Committee, Planning Staff, and the South Dakota Department of Transportation (SDDOT). The recommended projects and programs have been grouped into "System or Functional Element" categories.

IV. LIST OF PROJECTS

South Dakota Transportation Improvement Program

Tentative 2020 - 2023

Report Date 08/05/2019

By Category — Interstate Maintenance Projects

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
25.00	*IM 0902(112)59	6568	Pennington	0.0	I90E I90W	I90 - Exit 59, (LaCrosse Street) in Rapid City	Interchange Reconstruction, PCC Surfacing, Aux. Lane Addition (WB & EB), Str Widening, Deck Overlay, Approach Slabs	10.893	2020	12.756
	Construction planned for 2020 & 2021.									
26.00	IM 0901(181)0	04NH	Lawrence Pennington	0.0	I90E I90W	I-90 - Rapid City Region	Crossroad Improvements	0.900	2020	1.012
907.00	IM 0902(178)67	07CN	Pennington	11.1	I90E I90W	I90 E&W - Fm Exit 67 to Exit 78	Interstate Fence	0.236	2020	0.260
924.00	IM Z403(14)	03VR	Statewide	0.0		Statewide on the Interstate System	Dynamic Message Boards	2.555	2020	2.809
							2020 11.1 **Miles**		16.837	
39.00	IM-P 0901(193)7	04W4	Lawrence Meade	0.0	I90E I90W SD34	I90 - Strs, Over Co Rd & Over Spearfish Creek, 3.0 W & 0.3 W of the US85N Interchange; Co Rd over I90, 2.2 W of the SD34N Interchange; Over RR, 0.8 W of SD34N Interchange; SD34 Interchange; Over Whitewood Crk, 1.0 E of SD34N Interchange; Over RR, 0.2 SE of US14A Interchange; Co Rd Over I90, 3.2 NW of the Tilford Interchange; The Tilford Interchange; Co Rd over I90, 3.1 NW of the SD231 Interchange	Zone Painting, Diaphram Weld Repair	1.166	2021	1.282
							2021 0.0 **Miles**		1.282	

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
56.00	IM-NH-P 0040(234)	04W7	Jackson Pennington	0.0	I90E I90W SD240 US14E	I90 - Strs, 1.5 W of Exit 67 Over S Gate Road & a Crk; 1.4 W of Exit 67 over RR Track; 4.0 E of the Box Elder Intch over 154th Ave; 0.5 W of SD240 Over RR; 0.3 E of Wasta Over the Cheyenne River; 1.9 NW of the W Wall Intch Under Cedar Butte Road; 6.3 NW of the SD240 S Intch Over Whitewater Crk; On the US014 WB Off ramp at the I90 Intch; US14 – Str, US14 & I 90 Intch; SD240 – Str, At the W Wall Intch Over I90	Zone Painting	1.647	2022	1.811
							2022	0.0 **Miles**		1.811
75.00	IM 1902(67)0	065K	Pennington	0.0	I190N	I190 - Anamosa St Str over I190	Low Slump Dense Concrete Overlay	0.311	2023	0.342
							2023	0.0 **Miles**		0.342

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
907.00	NH 0016(00)59	07HD	Pennington	0.0	US16E	US16 - Jct of US16/Croell Quarry Access	Intersection Improvement	0.000	2020	0.900

2020	0.0	**Miles**	0.900	

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
6.00	*NH 0044(167)44 P 0231(13)79	027K 03CP	Pennington	1.2	SD231 SD231N SD231S SD44 SD44E SD44W	SD44 (Omaha St) - Fm Mt. View Rd to the start of the divided lanes Near 12th St.; SD231 (W Chicago/W Omaha) - Fm Sheffer St to Mt View Rd (SD44) in Rapid City	Urban Grading, Storm Sewer, Curb & Gutter, Sidewalk, Traffic Signals, PCC Surfacing, Lighting; Str Repair & Widening Over Rapid Creek	11.097	2020	13.541
7.00	P 0445(00)74	06WX	Pennington	0.3	SD445	SD445 - Deadwood Ave and Krebs Drive	Install Left Turn Lane at Deadwood Ave & Krebs Dr	0.262	2020	0.320
905.00	*NH 0016(93)64	6874	Pennington	0.0	US16E US16EB US16W US16WB	US16/US16B - Intersection	Preliminary Engineering	0.000	2020	0.208
								2020	1.5 **Miles**	14.069

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
34.00	PH-PS 3230(05) PH 3269(02)	01DJ 074E	Pennington	0.0		Box Elder - Pennington Co Rd 14-16 - Radar Hill Rd Intersection and Commercial Gate Road Intersection; Radar Hill Road, S of Hwy1416 Intersection, DOT#190122B, RCP&E Railroad; Box Elder - Radar Hill Rd Approaches to Pennington Co Rd 14-16 Intersection	Intersection Reconstruction, Add Turn Lanes, Lighting; Crossing Surface Rehabilitation, Approach Work & Relocate Existing Signals	0.045	2020	0.050

Also Funded In:

Item	Category		Total Project Cost
10.00	Roadway Safety Improvement	3.601	3.651

Coordinate with PCN 05RH

2020	0.0	**Miles**	0.050	

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
10.00	PH-PS 3230(05) PH 3269(02)	01DJ 074E	Pennington	0.0		Box Elder - Pennington Co Rd 14-16 - Radar Hill Rd Intersection and Commercial Gate Road Intersection; Radar Hill Road, S of Hwy1416 Intersection, DOT#190122B, RCP&E Railroad; Box Elder - Radar Hill Rd Approaches to Pennington Co Rd 14-16 Intersection	Intersection Reconstruction, Add Turn Lanes, Lighting; Crossing Surface Rehabilitation, Approach Work & Relocate Existing Signals	3.242	2020	3.601
	Also Funded In: Item Category 34.00 Railroad Crossing Improvement Projects Coordinate with PCN 05RH						0.050	Total Project Cost 3.651		
42.00	PH 0040(317)	062J	Lawrence Meade Pennington	0.0	I90E I90W	Various Locations in the Rapid City Region	Interstate Median Protection for Rapid City Region	0.624	2020	0.624
47.00	PH 8052(71)	04L4	Pennington	0.0		Various County, City, & Township Roads in Pennington County	Signing & Delineation	1.510	2020	2.157
	Construction planned to begin in 2021.									
54.00	PH 0040(222)	04JP	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Pavement Marking	0.208	2020	0.208
55.00	PH 0040(223)	04JQ	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Pavement Marking	0.338	2020	0.338
70.00	PH 0040(332)	06K3	Fall River Pennington	0.0	SD79S US18	Various Locations in the Rapid City Region	Intersection Improvements	0.408	2020	0.453
71.00	PH 000S(395)	06TT	Regionwide	40.0		Various locations on the local system in the Rapid City and Pierre Region	Rumble Stripes and High Grade Polymer Pavement Markings	0.238	2020	0.238
932.00	PH 0016(91)61	06X3	Pennington	0.0	US16W	US16 - Intersection of US16 & Neck Yoke Rd	Preliminary Engineering	0.000	2020	0.104

2020	40.0	**Miles**	7.723		

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
91.00	PH 0040(231)	04KH	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.212	2021	0.212
92.00	PH 0040(232)	04KJ	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.345	2021	0.345
108.00	PH 0040(335)	06TR	Regionwide	1.5		Various Locations on the state and local systems in the Rapid City Region	High Friction Surface Treatment	0.955	2021	1.061
924.00	PH 0040(340)	07AM	Regionwide	0.0		Rapid City Region	Corridor Signing, PE	1.061	2021	1.061
							2021 1.5 **Miles**		2.679	
118.00	PH 0040(233)	04RT	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.352	2022	0.352
129.00	PH 000S(397)	06U6	Regionwide	40.0		Various locations on the local system in the Rapid City and Pierre Region	Rumble Stripes and High Grade Polymer Pavement Markings	0.433	2022	0.433
							2022 40.0 **Miles**		0.785	
148.00	PH 0040(239)	05GA	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Cold Plastics Durable Pavement Marking	0.304	2023	0.304
149.00	PH 0040(324)	05GC	Regionwide	0.0		Various locations on the State System in the Rapid City Region	Sprayable Durable Pavement Marking	0.276	2023	0.276
164.00	PH 0040(338)	06U3	Regionwide	1.5		Various Locations on the state and local systems in the Rapid City Region	High Friction Surface Treatment	0.994	2023	1.104
925.00	PH 0040(342)	07AN	Regionwide	0.0		Rapid City Region	Corridor Signing, PE	1.104	2023	1.104
							2023 1.5 **Miles**		2.788	

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
60.00	NH-P 0041(163)	06FK	Areawide	0.0		Various Locations Throughout the Rapid City Area	2020 Areawide Pipe Work Projects	0.427	2020	0.520
61.00	IM 0041(171)	06YA	Meade Pennington	22.1	I190N I190S I90E I90W	Various Routes in the Rapid City Area	Pavement Restoration	1.302	2020	1.588
72.00	IM-NH 0041(170)	06YL	Lawrence Meade Pennington	33.9	I190N I190S I90E I90W SD34 US385	Various Routes in the Rapid City Area	Rout and Seal	0.300	2020	0.366
							2020 56.0 **Miles**		2.474	
65.00	IM-NH 0040(323)	06FY	Harding Pennington Perkins	0.0	I90E I90W SD73 SD79 US16WB US85	Various Locations Throughout the Rapid City Region	2021 Regionwide Approach Slab Repair	1.774	2021	2.165
104.00	NH-P 0041(168)	06FL	Areawide	0.0		Various Locations Throughout the Rapid City Area	2021 Areawide Pipe Work Projects	0.435	2021	0.531
							2021 0.0 **Miles**		2.696	
113.00	NH-P 0041(169)	06UR	Areawide	0.0		Various Locations Throughout the Rapid City Area	2022 Areawide Pipe Work Projects	0.444	2022	0.541
							2022 0.0 **Miles**		0.541	
901.00	P 0040(341)	07CW	Regionwide	0.0		Various Locations Throughout the Rapid City Region	2023 Regionwide Approach Slab Repair	0.905	2023	1.104
							2023 0.0 **Miles**		1.104	

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
7.00	P 6480(04)	5777	Pennington	9.7		Sheridan Lake Road from Jct. of US385 to Alberta Road	Grading, Base Course, C&G, AC Surfacing	4.453	2020	9.500
	Total = $9.5; STP/Match = $5.434; Local Funds = $4.066									
9.00	P 000S(00)236	04LY	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2020	0.590
	State funds at 60/40 (State CAP - $0.094, County - $0.062); Remainder 100% Local - $0.434.									
							2020 9.7 **Miles**		10.090	
13.00	P 000S(00)225	04M3	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2021	0.590
	State funds at 60/40 (State CAP - $0.094, County - $0.062); Remainder 100% Local - $0.434.									
							2021 0.0 **Miles**		0.590	
903.00	P 000S(00)	07DQ	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2022	0.590
	State funds at 60/40 (State CAP - $0.094, County - $0.062); Remainder 100% Local - $0.434.									
							2022 0.0 **Miles**		0.590	
907.00	P 000S(00)	07DV	Regionwide	0.0		Various Locations in the Rapid City Region	County Pavement Marking	0.000	2023	0.590
	State funds at 60/40 (State CAP - $0.094, County - $0.062); Remainder 100% Local - $0.434.									
							2023 0.0 **Miles**		0.590	

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
7.00	P TAPU(15)	05CC	Pennington	0.5		Rapid City - Along I190 and SD44 / Omaha St, from approximately 850' N of the Rapid Creek Bridge along I190 to N Mount Rushmore Rd	PE, CE and Construction of Shared Use Path	0.138	2021	0.169
14.00	P TAPU(09)	04UA	Pennington	0.9		Rapid City - On the east side of Cambell St. from the end of the side path south of Rocker Dr., N to E. Omaha St./Hwy. 44.	PE, CE and Construction of Shared Use Path	0.470	2021	0.573
							2021	1.4 **Miles**		0.742

¥ Costs reflect anticipated inflation

Item	Project Number	PC #	County	Length	Route	Location of Project	Type of Improvement	Federal Funds ¥	Fiscal Year	Total Cost(Mil $) ¥
5.00	NH 0044(00)46	04PD	Pennington	3.4	SD44	SD44 - Fm LaCrosse St to Covington St in Rapid City	ADA Curb Ramp Upgrades, Intersection Improvement, Sidewalk	0.000	2021	5.132

2021	3.4	**Miles**	5.132		

¥ Costs reflect anticipated inflation

Rapid City Capital Improvement Project Name	CIP #	Year	Estimated Project Cost
East Anamosa Storm Sewer Repair	51153	2020	$70,000.00
Skyview Dr Water Main Replacement	51072	2020	$120,000.00
12" High Pressure Water Main Imp	51016	2020	$125,000.00
Red Rock Drainage Basin Design Plan 2017	51183	2020	$150,000.00
Bridge Maintenance	50752	2020	$180,000.00
St Cloud Street Reconstruciton West Blvd to 9th St	51174	2020	$341,000.00
Meade Street Watermain Reconstruction	51077	2020	$405,000.00
Idlewild Box Culvert	50715	2020	$450,000.00
West Omaha Water Transmission Main-Design	50457.0	2020	$600,000.00
Winners/Crown/Squire/Gallery/Hallmark St Repair	51134	2020	$600,000.00
Inflow & Infiltration Project 1	50849.1-1	2020	$750,000.00
Lindbergh Avenue Reconstruction	51088	2020	$860,000.00
St. Patrick Street Reconstruction	50456	2020	$900,000.00
Wentworth Drive Reconstruction	51039	2020	$1,380,000.00
Robbinsdale - Phase 5	50390.5-1	2020	$1,527,000.00
Robbinsdale Elm Avenue and Fairlane Drive Reconstruction	51149	2020	$1,530,000.00
Silverleaf Reconstruction	50837	2020	$1,560,000.00
St Patrick St Mt Rushmore Rd to 5th	51126	2020	$1,678,390.00
Southeast Area Trunk Sewer Reconst ElmPrairie	50829	2020	$1,750,000.00
Wonderland - Phase 1	51070.1	2020	$2,186,000.00
Trunk Sewer Master Plan-E.Blvd to St. Patrick	50878	2020	$2,250,000.00
Sheridan Lake Rd Reconst - CLD to W Main	50967	2020	$2,847,500.00
Robbinsdale - Phase 6	50941.6-2	2020	$3,350,000.00
Highway 44 Diversion Sewer	51093	2020	$3,750,000.00
Robbinsdale - Ivy, E Iowa, E Tallent	50389.4-1	2020	$4,205,000.00
WRF Sludge Processing Facility	51064	2020	$12,070,000.00
Eglin Street Traffic Impact Study	51213	2021	$60,000.00
Airport 12" Water Main Valve Replacement	51038	2021	$165,000.00
Inflow & Infiltration Project 2	50849.1-2	2021	$250,000.00
Trenchless Sanitary Sewer Rehabilitation-Project 1	50818.2	2021	$300,000.00
Skyline - Design	50153.0	2021	$320,000.00
San Marco Street Bridge Repair	51194	2021	$650,000.00
E Waterloo St Reconstruction - Milwaukee to Lacrosse	50919	2021	$985,000.00
Signal Dr Sanitary Sewer Replacement	51170	2021	$1,030,000.00
Jackson Blvd DBDP Element 23	50349	2021	$1,187,500.00
Kellogg Place Sanitary Sewer Replacement	51173	2021	$1,360,000.00
Southeast & Terracita Zone Watermain Loop	50455	2021	$1,600,000.00
W. Blvd NE Reconstr North to Anamosa	50879	2021	$1,650,000.00
Jackson Blvd & W. Main ST Intersection Reconstruction	50858	2021	$1,990,000.00
North Maple Ave Reconstruction	51113	2021	$2,400,000.00
East Boulevard Water Transmission Main	50463	2021	$2,600,000.00
West Omaha Water Transmission Main-Project 1	50457.1	2021	$3,310,000.00
Country Road Trunk Sewer Design	51220	2022	$250,000.00
Clark Street and Tompkins Street	50797	2022	$439,000.00
Elmhurst Drive Reconstruction	51098.1	2022	$915,000.00
Watermain Replacement - Sitting Bull, Red Cloud, Crazy Horse	51074	2022	$1,000,000.00
Forest Street and Juniper Street Reconstruction	51098.2	2022	$1,080,000.00
Arrowhead 10" Watermain Loop	50281	2022	$1,125,000.00
44th Street Phase 2 - W. Main to W. Chicago	50719	2022	$1,570,000.00
Girl Scout Gallery Building Reconst	50341	2022	$1,825,000.00
Trenchless Sanitary Sewer Rehabilitation-Project 2	50819.3	2022	$2,000,000.00
Robbinsdale - Oakland	50390.5-2	2022	$3,725,000.00
Maple Street Alley SS Replacement	51040	2023	$65,000.00

Reservoir and Booster Station Site Selection	50661	2023	$100,000.00
Carriage Hills Drive - Corral Drive/Canyon Drive Reconstruction	51165	2023	$150,000.00
Carriage Hills Drive - Corral to Parkridge Reconstruction	51164	2023	$200,000.00
Sewer Utility Master Plan Update	51019	2023	$225,000.00
Sheffer Street Storm Sewer Improvements	51114	2023	$250,000.00
West Blvd Recon St Joe to Main St	51127	2023	$250,000.00
Inflow & Infiltration Project 3	50849.1-3	2023	$500,000.00
Sanitary Sewer Reconstruction - Blk 3, 10, 11, 18	50982	2023	$705,000.00
Skyline - Phase 1	50153.1	2023	$890,000.00
Box Elder Creek Lift Station	TBD	2023	$1,000,000.00
Dakota Dr Watermain Reconstr W.Main to CLD	50399	2023	$1,550,000.00
WRF Activated Sludge Phase 1 Improvements	51130	2023	$22,830,000.00
Haines Avenue DBDP Element 1 Improvements	51191	2024	$60,000.00
Upstream Elm Avenue Drainage - Phase 2	51009	2024	$225,000.00
East Rapid Lift Station & Force Main	51223	2024	$500,000.00
Inflow & Infiltration Project 4	50849.1-4	2024	$500,000.00
Country Road Trunk Sewer Phase 1	51221	2024	$1,500,000.00
Wonderland - Phase 2	51070.2	2024	$1,618,125.00
Upstream Elm Avenue Drainage - Phase 1	51008	2024	$1,960,000.00
Robbinsdale - Phase 5	50390.5-5	2024	$2,000,000.00
West Omaha Water Transmission Main-Project 2	50457.2	2024	$2,175,000.00
Sheridan Lake Rd - Corral to Catron	51122	2024	$11,615,000.00
Bridge Inspections	50630	Annual	$1,000.00
Erosion Control	50695	Annual	$5,000.00
Railroad Signal and Track Upgrades	50969	Annual	$5,000.00
Geotechnical/Infrastructure QA Program	50637	Annual	$25,000.00
Guardrail Project	51112	Annual	$35,000.00
Water Rights Acquisition	50303	Annual	$50,000.00
ADA Compliance Project	50761	Annual	$60,000.00
Annual Channel Replacement/Improvement	51051	Annual	$60,000.00
Out-of-the-Dust, Various Locations	50297	Annual	$60,000.00
Annual Miscellaneous Drainage Replace/Improve	51050	Annual	$75,000.00
Manhole Adjustments Annual	50846	Annual	$75,000.00
Oversize Reimbursement Stormwater	51049	Annual	$100,000.00
Water Service Lines Matching Funds	50294	Annual	$100,000.00
Well Electrical Improvements	51163	Annual	$110,000.00
Traffic Operations Upgrades	51047	Annual	$180,000.00
Miscellaneous Improvement Projects (MIP)	50298	Annual	$210,000.00
Oversize Reimbursement Sewer	50293	Annual	$250,000.00
Oversize Reimbursement Water	50295	Annual	$250,000.00
Collector & Arterial Street Maintenance	50798	Annual	$290,000.00
Street Rehabilitation	50549	Annual	$1,500,000.00
Street Rehabilitation - Utility Support Fund	50844	Annual	$1,500,000.00
Fire Hydrant Installation Project-Semi-Annual	50808	Semi-Annual	$100,000.00

Public Transit

Fiscal Year	Funding Category	County	Location	Type	Federal Funds	State Funds	Local Funds	Total
2020	Federal (Sec 5307)	Pennington	Rapid Transit System	Operating and Capital Assistance for Fixed Route and ADA paratransit service	$1,253,708.00	$37,837.00	$1,016,994.00	$2,308,539.00
2020	Federal (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	$190,382.06	$0.00	$38,076.41	$228,458.47
2020	Federal (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	$121,574.00	$0.00	$28,640.00	$150,214.00
2021	Federal (Sec 5307)	Pennington	Rapid Transit System	Operating and Capital Assistance for Fixed Route and ADA paratransit service	$1,278,782.00	$37,837.00	$1,037,283.00	$2,353,902.00
2021	Federal (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	$190,382.06	$0.00	$38,076.41	$228,458.47
2021	Federal (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	$124,006.00	$0.00	$28,640.00	$152,646.00
2022	Federal (Sec 5307)	Pennington	Rapid Transit System	Operating and Capital Assistance for Fixed Route and ADA paratransit service	$1,304,358.00	$37,837.00	$1,058,029.00	$2,400,224.00
2022	Federal (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	$190,382.06	$0.00	$38,076.41	$228,458.47
2022	Federal (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	$126,486.00	$0.00	$28,640.00	$155,126.00
2023	Federal (Sec 5307)	Pennington	Rapid Transit System	Operating and Capital Assistance for Fixed Route and ADA paratransit service	$1,330,445.00	$37,837.00	$1,079,189.00	$2,447,471.00
2023	Federal (Sec 5310)	Pennington / Meade	Various agencies in the Rapid City Metropolitan Planning Area	Passenger vehicles for non-profit agencies that provide services to Seniors and Persons with Disabilities	$190,382.06	$0.00	$38,076.41	$228,458.47
2023	Federal (Sec 5339)	Pennington	Rapid City Metro	Capital Assistance	$129,016.00	$0.00	$28,640.00	$157,656.00

Rapid City Regional Airport Capital Improvement Program

23-Apr-19

			PROJECT YEAR 2019			
			FAA Funding			
			Entitlements	Discretionary		
Term Rehab Phs 2 Vertical Circulation Terminal Construction	5283	$ 3,000,000	$ 2,700,000		$ 150,000	$ 150,000
Term Rehab Phs 2 Chiller Replacement Construction	5273	$ 317,751	$ 285,976		$ 15,888	$ 15,888
Term Rehab Phs 2 Escalator, Chiller CA/CO	5273, 5283	$ 415,251	$ 373,726		$ 20,763	$ 20,763
Term Rehab Design	5271	$ 850,000	$ 765,000		$ 42,500	$ 42,500
Grant Administration, legal, advertise, etc.	NA	$ 10,000	$ 9,000		$ 500	$ 500
Design for relocate of hold Lines and assocated signage		$ 50,000	$ 45,000		$ 2,500	$ 2,500
Design for rehabiliation of runway marking		$ 10,000	$ 9,000		$ 500	$ 500
RTR and GA Access Road Design		$ 200,000	$ 180,000		$ 10,000	$ 10,000
Equipment Specifications		$ 25,000	$ 22,500		$ 1,250	$ 1,250
Total Projects		**$ 4,878,002**	**$ 4,390,202**		**$ 243,900**	**$ 243,900**

			PROJECT YEAR 2020			
			FAA Funding			
			Entitlements	Discretionary	State	RAP
Relocate of hold Lines and assocated signage	TBD	$ 250,000	$ 225,000		$ 12,500	$ 12,500
Rehabilitation of runway marking		$ 350,000	$ 315,000		$ 17,500	$ 17,500
General Aviation Redevelopment Design/construction	TBD	$ 2,250,000	$ 2,025,000		$ 112,500	$ 112,500
Grant Administration, legal, advertise, etc.	NA	$ 10,000	$ 9,000		$ 500	$ 500
RTR Road Rehabilitation (*Construction and CACO)*	TBD	$ 1,000,000	$ 900,000		$ 50,000	$ 50,000
Construct New GA Access Road (*Construction and CACO)*	TBD	$ 1,035,400	$ 931,860		$ 51,770	$ 51,770
SRE (Blower/Sweeper, Blower)	TBD	$ 1,000,000	$ 900,000		$ 50,000	$ 50,000
Total Projects		**$ 5,895,400**	**$ 5,305,860**		**$ 294,770**	**$ 294,770**

			PROJECT YEAR 2021			
			FAA Funding			
			Entitlements	Discretionary	State	RAP
Term Rehab Phs 3 Sewage Lagoon Design	5279	$ 470,000	$ 423,000	$ 423,000	$ 23,500	$ 23,500
Passenger Boarding Bridge Construction & CA/CO (3)	TBD	$ 2,000,000	$ 1,800,000	$ 1,800,000	$ 100,000	$ 100,000
Grant Administration, legal, advertise, etc.	NA	$ 10,000	$ 9,000	$ 9,000	$ 500	$ 500
Term Rehab Phs 3 Sewage Lagoon Sewer Line Construction	5279	$ 2,100,000	$ 1,890,000	$ 1,890,000	$ 105,000	$ 105,000
Terminal Rehab Queuing, ticket counters, bag makeup area	5271	$ 6,500,000	$ 5,850,000	$ 3,579,909	$ 325,000	$ 325,000
Total Projects		**$ 11,080,000**	**$ 9,972,000**	**$ 9,000**	**$ 554,000**	**$ 554,000**

			PROJECT YEAR 2022			
			FAA Funding			
			Entitlements	Discretionary	State	RAP
Replace SRE Building (Design, Construct, demo old)	TBD	$6,500,000.00	$ 5,850,000	$ 3,579,909	$ 325,000	$ 325,000
Grant Administration, legal, advertise, etc.	NA	$10,000.00	$ 9,000	$ 9,000	$ 500	$ 500
Total Projects		**$6,510,000.00**	**$ 5,859,000**	**$ 3,588,909**	**$ 325,500**	**$ 325,500**

City of Box Elder 2018 - 2023 CIP

5/1/2018

		Project Name	Project Year	Total Estimated Project Cost
1	PWS-4-2018	East Mall Drive	2018-2019	$7,595,000.00
2	PWP-1-2018	Memorial Park Baseball Field Upgrades	2018	$250,000.00
3	PWW-1-2018	Water System Upgrades, VRC Water	2018	$405,000.00
4	PWSS-1-2018	Sewer System Upgrades: VRC Sewer Extension	2018	$150,000.00
5	PWSS-2-2018	Westgate Sanitary Sewer Lift Station upgrade	2018	$100,000.00
6		Elk Vale Road Study	2018	$11,000.00
7	PWS-2-2018	Gravel Street Project	2018	$180,000.00
8	PWS-3-2018	Chip Seal Radar Hill Road and re-stripe	2018	$140,000.00
9	PWS-1-2018	Fillets and pans - Prairie View Sub.	2018	$75,000.00
10	PWS-5-2018	Street striping (other than Radar Hill Road)	2018	$15,000.00
11		Ellsworth Rd./Prairie Rd./225th-Liberty Traffic Study	2018	$50,000.00
12	PWW-2-2018	Water Connection (Main Loop) 150th and Radial	2018	$20,000.00
13	PWS-1-2019	City Hall Parking Lot Expansion	2019	$400,000.00
14	PWS-2-2019	Degeest Rail Crossing	2019	$1,500,000.00
15	PWSS-1-2019	Camera all Sanitary Sewer Lines/north of Box Elder Rd.	2019	$200,000.00
16	PWS-3-2019	Concrete street repair Creekside/Thunderbird Sub.	2019	$50,000.00
17	PWS-4-2019	Crack sealing (City wide)	2019	$20,000.00
18	PWW-1-2019	New Well	2019	$2,500,000.00
19	PWS-5-2019	Gravel Street Reconstruction	2019	$150,000.00
20	PWSS-2-2019	Jet Vac. Sewer Mains	2019	$25,000.00
21	PWST-1-2018	Thunderbird Drainage Engineering Design/Construction	2018-2019	$280,000.00
22	PWP-1-2019	Parks Master Plan Study	2019	$40,000.00
23	PWP-2-2019	Memorial Park Baseball Fields Upgrade, Phase 2	2019	$250,000.00
24	PWB-1-2019	City Hall Upgrades/Remodel Project(S)	2018-2019	$800,000.00
25	PWS-6-2019	Traffic Study/Design/Construction School system	2018-2019	$400,000.00
26	PWS-6-2019	Patching and Chip Seal Bennet Road	2019	$175,000.00

5/1/2018

		Project Name	Project Year	Total Estimated Project Cost
27	PWS-7-2019	Chip Seal Res. Streets Thunderbird Sub.	2019	$150,000.00
28	PWS-8-2019	Street striping	2019	$20,000.00
29	PWSS-2-2020	Camera Thunderbird Sub. Sewer Mains	2020	$180,000.00
30	PWW-1-2020	Tower Road Water Main Extension	2020	$1,200,000.00
31	PWW-2-2020	Water Booster Pump/PRV Relocation to Liberty	2020	$618,000.00
32	PWS-1-2020	Radar Hill Road Rebuild (Bridge 2020)	2020-2021	$10,000,000.00
33	PWSS-1-2020	Sanitary Sewer I & I Repair	2020	$500,000.00
34	PW-1-2020	New Public Works Building, Equipment Storage	2020	$1,800,000.00
35	PWS-2-2020	Chip Seal residential streets (TBD)	2020	$175,000.00
36	PWS-3-2020	Crack sealing (City wide)	2020	$15,000.00
37	PWSS-1-2020	Thunderbird Sewer upgrades after cameraing results	2020	??
38	PWS-4-2020	Street striping	2020	$16,000.00
39	PWP 1-2020	Memorial Park Baseball Field Upgrades, Phase 3	2020	$250,000.00
40	PWSS-1-2021	East Sanitary Sewer Collector (Westgate to 151st Ave)	2021	$2,000,000.00
41	PWS-1-2021	Chip sealing residential streets	2021	$175,000.00

42	PWS-2-2021	Crack sealing (City wide)	**2021**	**$17,000.00**
43	PWW-1-2021	Radar Hill Road Water Main replacement	**2021**	**$3,108,000.00**
44	PWSS-2-2021	Jet Vac Sewer Mains	**2021**	**$25,000.00**
45	PWSS-2-2021	Upsize 14/16 Sewer Main to East Mall (Phase 1)	**2021**	**$4,200,000.00**
46	PWP-1-2021	Memorial Park Baseball Fields Upgrade, Phase 4	**2021**	**$300,000.00**
47	PWS-1-2022	150th, Liberty to 225th	**2022**	**$2,000,000.00**
48	PWW-1-2022	Complete Creekside to Prairie Main upsizing	**2022**	**$920,000.00**
49	PWSS-1-2022	Upsize 14/16 Sewer Main to East Mall (Phase 2)	**2022**	**$4,200,000.00**

5/1/2018

		Project Name	Project Year	Total Estimated Project Cost
50	PWSS-1-2023	Upsize 14/16 Sewer Main to East Mall (Phase 3)	**2023**	**$2,700,000.00**
51	PWS-1-2023	Radar Hill Road Reconstruction	**2023**	**$7,000,000.00**
		Grand Total of Projects Listed		**$50,350,000.00**

MEADE COUNTY
FIVE-YEAR PROGRAMMED PROJECT LISTING

Project Location	Project Description	Year	Proposed Five-Year Project Funding Information						Total Project Cost
			Local Funding	Federal Funding	State Funding	Unfunded	Anticipated Grant	Total Funding	
Elk Vale Rd from 225th St at S Co line, N 6 mi to Elk Creek Rd	AC Surfacing	2019	$ 2,117,000.00					$ 2,117,000.00	$ 2,117,000.00
New Underwood Rd from Hwy 34 South 22.5 miles	Chip Seal	2019	$ 700,000.00					$ 700,000.00	$ 700,000.00
Structure No. 47-460-128, 11.8 mi S of Hwy 212 on Stoneville Rd.	Design Engineering	2019	$ 40,000.00					$ 40,000.00	$ 40,000.00
Erickson Ranch Rd	Full Depth Process in place new 6" base course and 4" asphalt	2020	$ 2,200,000.00					$ 2,200,000.00	$ 2,200,000.00
Alkali Rd from Ft. Meade Way East 5 mi to Titan Rd	2" overlay of existing asphalt	2020	$ 1,100,000.00					$ 1,100,000.00	$ 1,100,000.00
High Meadows Rd Bottom 1 mile	Fix Drainage and replace culverts	2020	$ 170,000.00					$ 170,000.00	$ 170,000.00
Structure No. 47-460-128, 11.8 mi S of Hwy 212 on Stoneville Rd.	Replace Bridge	2020	$ 80,000.00				$ 320,000.00	$ 400,000.00	$ 400,000.00
Structure No. 47-549-149, 21.1 mi W & 13.9 mi S of Faith (Pine Creek Rd)	Replace Structure	2020	$ 150,000.00					$ 150,000.00	$ 150,000.00
New Underwood Rd from Pennington Co. line N 3.1 miles	Reconstruct & New AC Surfacing	2021	$ 3,750,000.00					$ 3,750,000.00	$ 3,750,000.00
Rolling Hills Rd From Nemo Road North 2 mi.	Fix Drainage	2021	$ 34,000.00					$ 34,000.00	$ 34,000.00
Avalanch Rd from Lazelle St to Alder Place	Chip Seal	2021	$ 30,000.00					$ 30,000.00	$ 30,000.00
Whitewood Service Rd from Sturgis City limits to Lawerance County Line	Chip Seal	2021	$ 16,000.00					$ 16,000.00	$ 16,000.00
Blucksburg Rd from Service Rd to Blucksburg entrance	Chip Seal	2021	$ 17,000.00					$ 17,000.00	$ 17,000.00
Pleasant Valley Rd. from Service Rd to I-90	Chip Seal	2021	$ 60,000.00					$ 60,000.00	$ 60,000.00
Stage Stop Rd from I-90 to end of asphalt	Chip Seal	2021	$ 16,000.00					$ 16,000.00	$ 16,000.00
Anderson Rd from Service Rd to end of asphalt	Chip Seal	2021	$ 30,000.00					$ 30,000.00	$ 30,000.00
Peaceful Pines West of I-90, from the Service Rd to end of asphalt	Chip Seal	2021	$ 65,000.00					$ 65,000.00	$ 65,000.00
West Elm and Seaire St. in Black Hawk	Chip Seal	2021	$ 37,000.00					$ 37,000.00	$ 37,000.00

Vanocker Canyon Rd. from Sturgis City limits to Lawerance Co. line	Chip Seal	2021	$ 350,000.00					$ 350,000.00	$ 350,000.00
Engineer North 2.4 miles Ft. Meade Way	PE Engineering	2021	$ 35,000.00					$ 35,000.00	$ 35,000.00
Structure No. 47-370-587, on the New Underwood Rd 3.2 mi N of the Pennington Co. line	Epoxy Chip -Seal	2022	$ 50,000.00				$ 200,000.00	$ 250,000.00	$ 250,000.00
Structure No. 47-378-444, 5 mile East of Hereford	Epoxy Chip -Seal	2022	$ 56,000.00				$ 224,000.00	$ 280,000.00	$ 280,000.00
Mnt. Shadows Rd. off of 2nd Street in Piedmont	Chip Seal	2022	$ 31,000.00					$ 31,000.00	$ 31,000.00
Norman Ave. from Peaceful Pines N to end of county asphalt	Chip Seal	2022	$ 78,000.00					$ 78,000.00	$ 78,000.00
Deadwood Ave and Peaceful Pines east of I-90 to Pennington County Line	Chip Seal	2022	$ 67,000.00					$ 67,000.00	$ 67,000.00
Sidney Stage Rd	Full depth reclamation and AS Surfacing	2022	$ 1,100,000.00					$ 1,100,000.00	$ 1,100,000.00
New Underwood Rd form Elk Creek Rd South 4.3 miles	Reconstruct & New AC Surfacing	2022	$ 3,750,000.00					$ 3,750,000.00	$ 3,750,000.00
Avalanch Rd from Alder Pl. N 3 mi to Eden Rd	Reconstruct & New AC Surfacing	2023	$ 3,200,000.00					$ 3,200,000.00	$ 3,200,000.00
Ft. Meade Way from Hwy 34 2.4 miles South	Regrade	2023	$ 1,000,000.00					$ 1,000,000.00	$ 1,000,000.00
Structure No. 47-060-305, 3 mi. E &12.5 mi. N of Sturgis (130th Ave)	Replace Bridge	2023	$ 100,000.00				$ 400,000.00	$ 500,000.00	$ 500,000.00
Structure No. 47-110-518, 8 mi. E & 8.8 mi. S of Sturgis (Morris Creek Pl.)	Replace Bridge	2023	$ 100,000.00				$ 400,000.00	$ 500,000.00	$ 500,000.00
	TOTALS		$ 20,529,000.00	$ -	$ -	$ -	$ 1,544,000.00	$ 22,073,000.00	$ 22,073,000.00

Local Funding Includes: Match on BIG funding, traditional BRO & BRF projects, TAP projects, etc., and some shortfalls/balances on misc. projects. Also STP Payout funds.
Federal Funding Includes: 100% of Signing & Delineation projects, and approx. 80% of STP, BRO, BRF, and TAP projects. Federal portion of ER/FEMA projects.
State Funding Includes: 80% of awarded BIG projects and approx. 20% match on STP projects.
Anticipated Grant (BIG): 80% of total

Pennington County Five-Year Programmed Project Listing

Segment or Bridge	Road Name	Project	Year	Road & Bridge	Federal Bridge Fund	Federal Priority or Safety Fund	STP Funding	Anticipated Grant	Total
		Bridge Projects	**2019**						
359325	Dark Canyon Road	Repair	2019	$ 140,000					$ 140,000
361325	Dark Canyon Road	Repair	2019	$ 45,000					$ 45,000
363326	Dark Canyon Road	Repair	2019	$ 15,000					$ 15,000
305300	Sonquist Lane	Design	2019	$ 25,000					$ 25,000
		Road Projects	**2019**						$ -
122802, 3, & 4	Sheridan Lake Road	ROW & Consultant	2019	$ 218,691					$ 218,691
323301	Silver Mountain Road	Guardrail	2019	$ 83,000					$ 83,000
121201	Radar Hill Road	Overlay	2019	$ 360,000					$ 360,000
444101	156th Avenue	Overlay	2019	$ 310,000					$ 310,000
		Crack Seals	2019	$ 181,000					$ 181,000
		Chip Seals	2019	$ 518,000					$ 518,000
		Pavement Marking	2019	$ 225,000					$ 225,000
		Year Totals	**2019**	**$ 2,120,691**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,120,691**
		Bridge Projects	**2020**						
909240	223rd Street	Replace with culverts	2020	$ 41,000					$ 41,000
162272	Rochford Road South	Reconstruct	2020	$ 80,000	$ 320,000				$ 400,000
305300	Sonquist Lane	Reconstruct & Inspect	2020	$ 320,000					$ 320,000
316316	Thunderhead Falls Road	Design	2020	$ 25,000					$ 25,000
317318	Thunderhead Falls Road	Design	2020	$ 25,000					$ 25,000
		Road Projects	**2020**						
126001	Deadwood Avenue	Reconstruct	2020	$ 1,200,000					$ 1,200,000
130901	Slate Road East	Lower Hill	2020	$ 250,000					$ 250,000
131202	Rochford Road	Chipseal from Rochford East 3 miles	2020	$ 100,000					$ 100,000
123401	South Canyon Road	High Friction Surface	2020	$ 7,600		$ 76,000			$ 83,600
130801	Deerfield Road	High Friction Surface	2020	$ 7,600		$ 76,000			$ 83,600
130602, 3	Rochford Road South	Reconstruct	2020	$ 1,520,000		$ 4,480,000			$ 6,000,000
122802, 3, & 4	Sheridan Lake Road	Reconstruct	2020	$ 2,333,333			$ 4,333,333		$ 6,666,666
122002	Lower Spring Creek Road	Overlay	2020	$ 701,000					$ 701,000
123405	Nemo Road	Grade & Overlay	2020	$ 348,200		$ 3,133,800			$ 3,482,000
		Crack Seals	2020	$ 104,000					$ 104,000
		Chip Seals	2020	$ 670,000					$ 670,000
		Pavement Marking	2020	$ 225,000					$ 225,000
		Year Totals	**2020**	**$ 7,957,733**	**$ 320,000**	**$ 7,765,800**	**$ 4,333,333**	**$ -**	**$ 20,376,866**

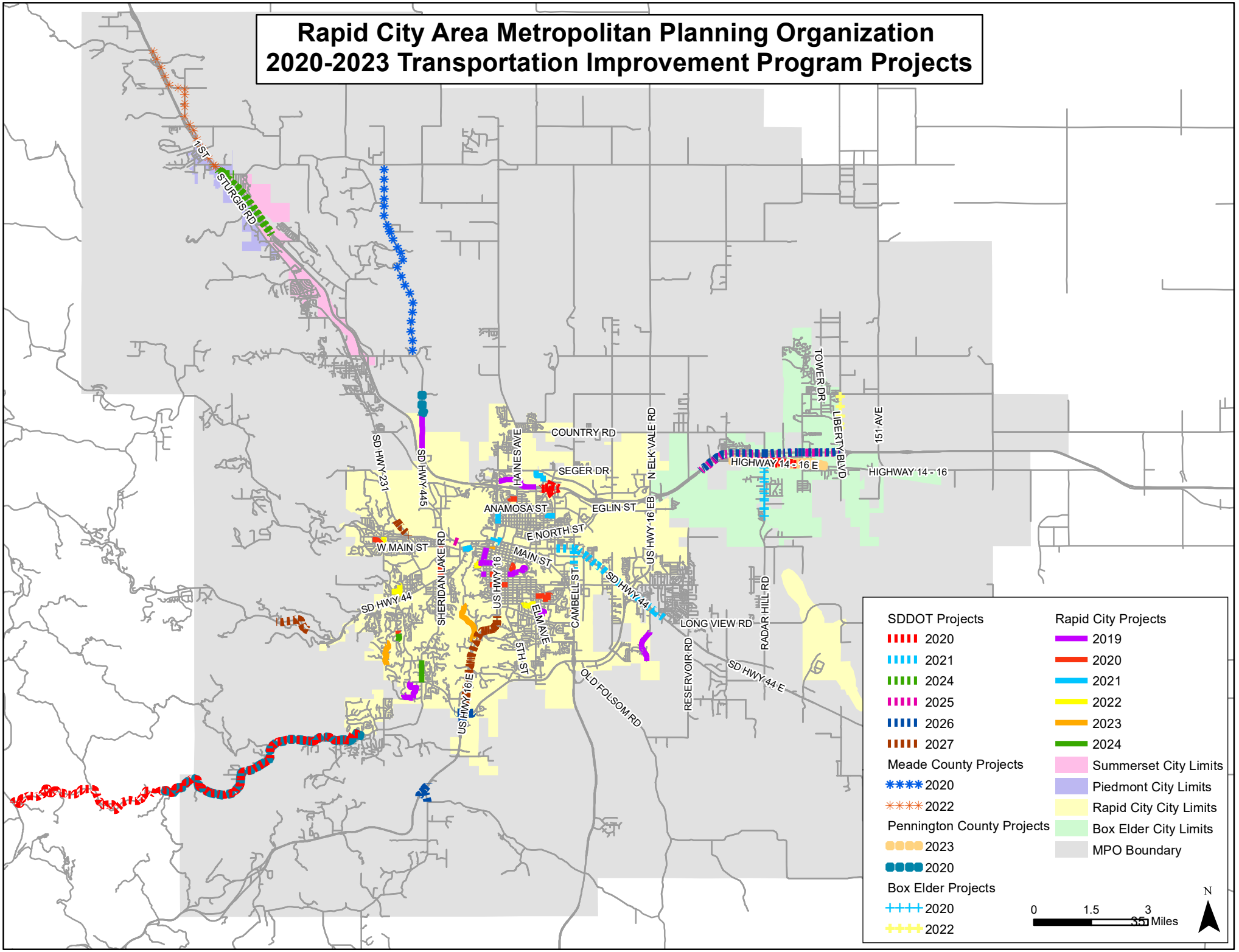
Pennington County Five-Year Programmed Project Listing

Segment or Bridge	Road Name	Project	Year	Road & Bridge	Federal Bridge Fund	Federal Priority or Safety Fund	STP Funding	Anticipated Grant	Total
		Bridge Projects	**2021**						
316316	Thunderhead Falls Road	Reconstruct	2021	$ 60,000		$ 240,000			$ 300,000
317318	Thunderhead Falls Road	Reconstruct	2021	$ 300,000					$ 300,000
		Road Projects	**2021**						
130602, 3	Rochford Road South	Reconstruct	2021	$ 1,520,000		$ 4,480,000			$ 6,000,000
122802, 3, & 4	Sheridan Lake Road	Reconstruct	2021	$ 2,333,333			$ 4,333,333		$ 6,666,666
145902	160th Avenue	Chipseal	2021	$ 43,000					$ 43,000
122002	Lower Spring Creek Road	Overlay	2021	$ 701,000					$ 701,000
		Crack Seals	2021	$ 163,000					$ 163,000
		Chip Seals	2021	$ 686,000					$ 686,000
		Pavement Marking	2021	$ 225,000					$ 225,000
		Year Totals	**2021**	**$ 6,031,333**	**$ -**	**$ 4,720,000**	**$ 4,333,333**	**$ -**	**$ 15,084,666**
		Bridge Projects	**2022**						
952341	Paulson Road	Repair	2022	$ 78,000					$ 78,000
837220	Trask Road	Reconstruct	2022	$ 400,000					$ 400,000
		Road Projects	**2022**						$ -
122802, 3, & 4	Sheridan Lake Road	Reconstruct	2022	$ 2,333,334			$ 4,333,334		$ 6,666,668
453201	Paulson Road	Roadway & Creek Realignment	2022	$ 90,000					$ 90,000
124101	Univeral Drive	Overlay	2022	$ 303,000					$ 303,000
		Crack Seals	2022	$ 204,000					$ 204,000
		Chip Seals	2022	$ 687,000					$ 687,000
		Pavement Marking	2022	$ 225,000					$ 225,000
		Year Totals	**2022**	**$ 4,320,334**	**$ -**	**$ -**	**$ 4,333,334**	**$ -**	**$ 8,653,668**

Pennington County Five-Year Programmed Project Listing

Segment or Bridge	Road Name	Project	Year	Road & Bridge	Federal Bridge Fund	Federal Priority or Safety Fund	STP Funding	Anticipated Grant	Total
		Bridge Projects	**2023**						
896490	Huether Road	Repair	2023	$ 76,000					$ 76,000
909490	Huether Road	Repair	2023	$ 4,000					$ 4,000
261399	Robins Roost Road	Replace with box culvert	2023	$ 200,000					$ 200,000
246298	Sherman Street	Repair	2023	$ 200,000					$ 200,000
		Road Projects	**2023**						$ -
241401	Highway 1416	Reconstruct	2023	$ 337,000		$ 3,029,000			$ 3,366,000
144501	161st Ave	Reconstruct	2023	$ 800,000					$ 800,000
		Crack Seals	2023	$ 183,000					$ 183,000
		Chip Seals	2023	$ 687,000					$ 687,000
		Pavement Marking	2023	$ 225,000					$ 225,000
		Year Totals	**2023**	**$ 2,712,000**	**$ -**	**$ 3,029,000**	**$ -**	**$ -**	**$ 5,741,000**
		5-Year Totals		**$ 23,142,091**	**$ 320,000**	**$ 15,514,800**	**$ 13,000,000**	**$ -**	**$ 51,976,891**

Rapid City Area Metropolitan Planning Organization
2020-2023 Transportation Improvement Program Projects



Attachment 2

Rapid City Area Metropolitan Planning Organization

CERTIFICATION

I hereby certify and approve that the Rapid City Area Transportation Study Area Boundary depicted hereon was established by the Executive Policy Committee of the Rapid City Area Metropolitan Planning Organization and local officials in cooperation with each other pursuant to the Moving Ahead for Progress in the 21st Century (MAP-21) of July 2012.

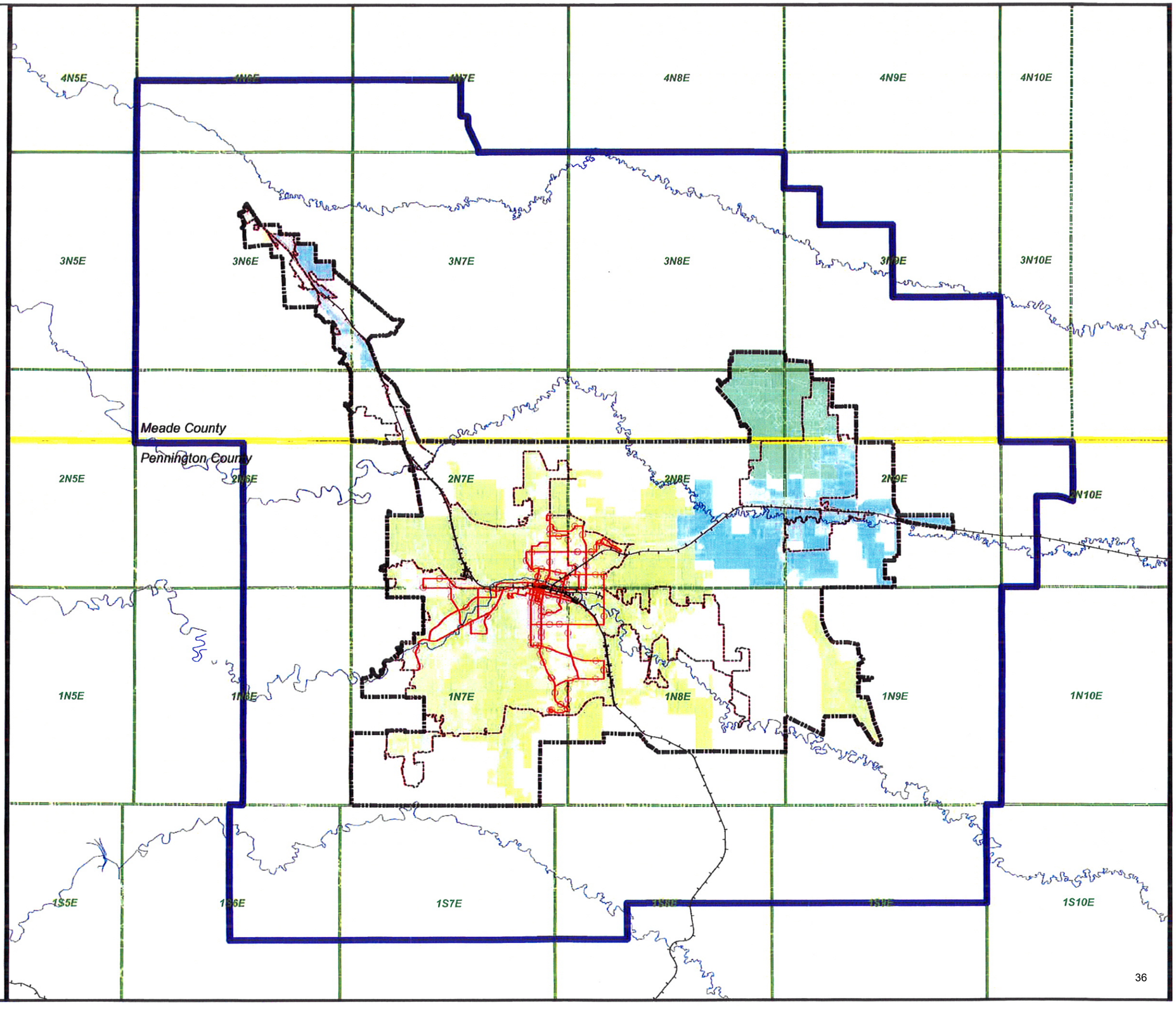
7/10/13

Secretary
SD Department of Transportation — Date

APPROVAL

6/13/13

Executive Policy Committee Chair
Rapid City Area Metropolitan
Planning Organization — Date



Legend

- MPO Boundary 2013
- FHWA Urbanized Area 2013
- Census Urban Boundaries 2010
- Box Elder City Limits
- Ellsworth AFB Limits
- Piedmont City Limits
- Rapid City Limits
- Summerset City Limits
- Townships
- Roads
- Transit Routes
- Railroads
- Rivers

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June 2013

Disclaimer

This GIS Data is provided "as is" without warranty of any representation of accuracy, timeliness, or completeness. The burden for determining accuracy, completeness, timeliness, merchantability, and fitness for or the appropriateness for use rests solely on the user. Rapid City, Pennington County and Meade County make no warranties, express or implied, as to the use of the Data. There are no implied warranties of merchantability or fitness for a particular purpose. The user acknowledges and accepts the limitations of the Data, including the fact that the data is dynamic and is in a constant state of maintenance, correction, and update.

APPENDIX A

Rapid City Area Metropolitan Planning Organization
Guidelines for Non-Transit Administrative Amendments and Revisions to The Rapid City MPO Transportation Improvement Program (TIP)

Revising an Approved TIP:

The TIP may be revised at any time. A formal TIP revision will be required for any new projects added during the course of the year, project limit changes, change in type of work, etc. Projects within the Metropolitan Planning Organizations (MPO) established Metropolitan Planning Area Boundaries require both a TIP and STIP revision. A TIP revision is any change to the project listings, and/or funding tables in an existing TIP. Revisions require federal approval. A major STIP/TIP revision will require additional public involvement prior to FHWA approval. The MPO's public involvement process will be sufficient for metropolitan area TIP revisions. SDDOT will e-mail a STIP/TIP revision to FHWA requesting approval of the addition or change made and stating the source of funding to maintain a balanced STIP/TIP. Cost changes made to the second, third and fourth year of the TIP will be balanced during the TIP update process.

A revision to the TIP is:

a. Adding a new project or phase(s) to the TIP, not programmed in the previously approved TIP

b. Increasing the Federal Funds by more than 100% of the total project cost (minimum of $250,000 change).

c. Increasing the total cost of a project the greater of $3.0 million or 10%.

d. A change in funding source from 100% non-federal funds to partial or fully-funded with Federal funds.

e. A change in funding sources across modes for existing projects in the TIP (the funding for a project change from FHWA to FTA or vice versa).

f. A major change in the project scope or improvement type that changes the intent of the project.

Administrative Amendments to an Approved TIP:

An administrative amendment to the TIP does not require public involvement or FHWA approval. The TIP administrative amendment process consists of notification to all involved parties of the latest changes to the TIP. SDDOT Project Development staff will notify the FHWA by e-mail showing the change made.

An Administrative Amendment to the TIP is:

a. Shifting funds within TIP project categories or Federal funding categories without a change in total program TIP funding amounts.

b. Increases in the Federal funds less than $250,000 and cost increases less than 100% of the total project cost.

c. Increasing the total cost of any project with federal funding that doesn't exceed the greater of $3.0 million or 10%.

d. Obvious data entry errors.

e. Splitting or combining projects already in the program that result in no change in overall project schedule or funding.

f. Changes or clarifying elements of a project location or improvement description that does not change the funding or alter the original project intent.

g. Movement of a project or phase thereof within the first four years of the approved TIP.

h. A change in funding source from partial or fully-funded with Federal funds to 100% non-federal funds.

i. Cost increases for 100% state or local funded projects do not require an amendment, regardless of the State/local source.

Modification of existing STIP/TIP projects in order to make STIP/TIP documents match provided the modification involves minor changes in the scope or funding of a project as provided by this section.

Approved by: Sherry Lawson

Vice Chairman
Executive Policy Committee
Rapid City Metropolitan Planning Organization

Date: 4/12/18

Approved by: M S

Michael Behm
Division of Planning and Engineering
South Dakota Department of Transportation

Date: 4/23/18

Appendix B
Metropolitan Transportation Planning Self-Certification
For the Rapid City Area Metropolitan Planning Organization (RCAMPO)
Fiscal Year 2020-2023

The following is to demonstrate and resolve that the Rapid City Area Metropolitan Planning Organization's transportation planning process meets all applicable requirements of Self Certification Process (23 CFR 450.334).

1. Metropolitan Planning Organization (MPO) *(Ref: 23 USC 134(b) and 23 CFR 450.306)*

Describe the Entity Designated as the MPO
The Rapid City Area Metropolitan Planning Organization is an association of local and state governments made up the City of Rapid City, the City of Box Elder, Pennington County and Meade County. The South Dakota Department of Transportation (SDDOT), Ellsworth Air Force Base, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the local school districts also participate. The hosting agency that provides staff and all administrative support to the Metropolitan Planning Organization is the City of Rapid City.

2. Geographic Scope *(Ref: 23 USC 134(c) and 23 CFR 450.308)*

Describe the Physical Boundaries/Provide a Map
The Rapid City Urbanized Area includes the lands within the City of Rapid City urban growth boundary and the densely populated adjoining areas of Pennington and Meade Counties. The area is shown in the attached map.

3. **Agreements** *(Ref: 23 USC 134(d) and 23 CFR 450.310)*

A. Agreements in force among the participating agencies relative to the transportation planning process include:
1. Intergovernmental Agreement for the Purpose of Establishing the Rapid City Area Metropolitan Planning Organization and Specifying MPO Cooperation with the State Department of Transportation signed in December 2007 by the South Dakota Department of Transportation and the parties in the Rapid City Area Metropolitan Planning Organization;
2. Operations Plan was adopted in December 2016. The Operations Plan outlines the procedures and requirements for adopting transportation products and plans for the Metropolitan Planning Organization.

B. Agreements between the State and the MPO include:
1. Annual FHWA and FTA planning funds agreement between SDDOT and City of Rapid City acting as the Rapid City Area Metropolitan Planning Organization;

C. Agreements between the MPO and other entities include:
1. Intergovernmental/Interagency Agreement between the Rapid City Area Metropolitan Planning Organization and the City of Box Elder.
2. Intergovernmental/Interagency Agreement between the Rapid City Area Metropolitan Planning Organization and Meade County.

4. Responsibilities, Cooperation and Coordination *(Ref: 23 CFR 450.312)*

A. *Cooperative Metropolitan Planning Process*

The Rapid City Area Metropolitan Planning Organization member entities, including SDDOT, collaborate in carrying out the requirements of the Metropolitan Transportation Planning Process. The Rapid Transit system is owned by the City of Rapid City, a member of the Rapid City Area Metropolitan Planning Organization. This cooperative process includes city and state participation in the decision-making processes of the Rapid City Area Metropolitan Planning Organization Executive Policy Board, Technical Coordinating Committee (TCC), and the Citizen Advisory Committee (CAC). Rapid Transit is represented on the TCC. SDDOT, FHWA and FTA designate staff to serve on the TCC.

The metropolitan transportation planning process includes:

1. Development and maintenance of a Long Range Transportation Plan (RapidTRIP2040 adopted September 2015)
2. Development and maintenance of a Transportation Improvement Program (TIP)
3. Review of specific transportation and development proposals for consistency with RapidTRIP2040
4. Coordination of transportation decisions among local jurisdictions and state agencies
5. Development of an annual work program

B. *Agreed Responsibilities for Development of UPWP, Long Range Transportation Plan, and Transportation Improvement Program*

1. Rapid City staff currently provides Travel Demand Modeling Services for all Rapid City Area Metropolitan Planning Organization related work.
2. The Rapid City Area Metropolitan Planning Organization leads development and maintenance of the Unified Planning Work Program, RapidTRIP2040, and Transportation Improvement Program. This work is coordinated with all of the Rapid City Area Metropolitan Planning Organization agencies.

5. Metropolitan Transportation Planning Products

A. *Unified Planning Work Program (Ref: 23 CFR 450.314)*

The purpose of the Unified Planning Work Program is to describe the annual activities, planning studies, and products to be developed by the Metropolitan Planning Organization over a year time. The Unified Planning Work Program identifies who will be involved with the work tasks and the anticipated product or outcome. The Unified Planning Work Program also identifies funding for these tasks which includes total programmed expenditures for each one. The Metropolitan Planning Organization and its coordinating agencies work together to define work activities which will be performed over the year. The City of Rapid City oversees this work program in accordance with the agreements among the City of Rapid City, the City of Box Elder, Pennington County and Meade County. The South Dakota Department of Transportation (SDDOT), Ellsworth Air Force Base, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the local school districts also participate in the development of the Unified Planning Work Program as members of the Technical Coordinating Committee.

The tasks in the FY2019 UPWP for the Rapid City Area Metropolitan Planning Organization were developed with input from local entities to ensure all transportation issues within the Rapid City Metropolitan Planning Organization's boundaries were considered.

B. *Long Range Transportation Plan (Ref: 23 USC 134(g) and 23 CFR 450.322)*
The federally compliant RapidTRIP2040 Long Range Transportation Plan was adopted in September 2015.

C. *Transportation Improvement Program (TIP) (Ref: 23 USC 134(h) and 23CFR 450.23 & 26)*
The Rapid City Area Metropolitan Planning Organization develops the Transportation Improvement Program in cooperation and coordination with all of the members of the Rapid City Area Metropolitan Planning Organization. The Rapid City Area Metropolitan Planning Organization will coordinate its prioritization process and its list of transportation project priorities with SDDOT.

6. Planning Emphasis Areas

The Rapid City Area Metropolitan Planning Organization planning process addresses the FHWA/FTA planning emphasis areas in all projects and policies. The following is a description of these considerations, and a brief explanation of how the factors will be addressed.

A. ***Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency***
It is among the goals of the Rapid City Area Metropolitan Planning Organization's transportation planning activities to support the economic vitality of the Rapid City Urbanized Area and beyond. The Rapid City Urbanized Area is the economic hub of the Black Hills region. Rapid City Area Metropolitan Planning Organization's transportation planning activities are to facilitate the movement of people and goods which is the key in promoting economic activities.

B. ***Increase the safety of the transportation system for motorized and non-motorized users***
The safety of the transportation system was among the criteria used by the Rapid City Area Metropolitan Planning Organization in prioritizing transportation projects for funding. The Rapid City Area Metropolitan Planning Organization prepares an annual Pedestrian/Bicycle Crash Report to identify high crash areas for pedestrians and bicyclist. The Rapid City Area Metropolitan Planning Organization also developed an Arterial Street Safety Study, which included a review of street segment crash statistics, identification of street segments exceeding the statistical critical rate, and recommendations to reduce crashes based on analysis of crash types. Some of the recommendations have been implemented since the completion of the study.

C. ***Increase the security of the transportation system for motorized and non-motorized users***
The security of the transportation system was among the criteria used by the Rapid City Area Metropolitan Planning Organization in prioritizing transportation projects for funding.

D. ***Increase the accessibility and mobility options available to people and for freight***
It is among the goals of the Rapid City Area Metropolitan Planning Organization's transportation planning activities to increase the accessibility and mobility options of people and freight in the Rapid City Urbanized Area. The Rapid City Area Metropolitan Planning Organization will continue working with local mobility advocacy groups, the cities, and counties to identify opportunities for increasing the accessibility and mobility options of all people in the Rapid City Urbanized Area. Rapid City Area Metropolitan Planning Organization staff has in the Coordinated Human Services Public Transportation Plans.

E. ***Protect and enhance the environment, promote energy conservation, and improve quality of life***
The Rapid City Area Metropolitan Planning Organization transportation planning activities include full consideration of environmental issues.

F. ***Enhance the integration and connectivity of the transportation system, across and between modes for people and freight***
The Rapid City Area Metropolitan Planning Organization transportation planning process is comprehensive and includes all modes of transportation and the mobility needs of all people. Multi-modal and intermodal transportation planning will help provide connectivity across all modes and for all users of the system.

G. ***Promote efficient system management and operations***
The Rapid City Metropolitan Planning Organization approved the ITS Master Plan for Integration Strategies in November 2003. The Rapid City Area Metropolitan Planning Organization will continue to use ITS measures as a means of enhancing the efficiency of existing transportation system and operations.

The Metropolitan Plan promotes a multi-modal transportation system. This approach will help to maximize transportation efficiency by providing multiple travel options. The ultimate goal will be to reduce the demand on the highway system, which will increase roadway capacity and reduce maintenance costs.

H. ***Emphasize the preservation of the existing transportation system***
Preservation of the existing transportation system is a priority in the Long Range Transportation Plan. Preservation of the existing system was a key consideration while identify future revenues. The estimated costs of preservation were taken "off the top" of the overall funding forecasts. The remaining funds were then allocated to capacity improvements and other non-preservation projects. The Long Range Transportation Plan devotes a large portion of available funds to the maintenance and preservation of existing transportation system.

I. ***Coordinate with State DOT consultation efforts with non-metropolitan local officials***
The adopted Rapid City Area Metropolitan Planning Organization Unified Planning Work Program contains tasks to coordinate transportation issues and activities with SDDOT.

J. ***Enhance the technical capability of the transportation planning processes***
The Rapid City Area Metropolitan Planning Organization programs funds in the Unified Planning Work Program and Transportation Improvement Program to upgrade the travel

demand model, update the underlying travel data by participating in joint surveys, and provide training opportunities for staff.

K. ***Linking the NEPA and planning processes***
The RapidTRIP 2040 Long Range Transportation Plan includes environmental considerations that identify known historical, cultural, archeological, and natural resources. This amendment also identifies potential mitigation activities. The data in this amendment will help improve the project development process and hopefully speed project delivery.

L. ***Coordination and provision of Human Service and Transportation Disadvantaged Services (ADA, Elderly, and Disabled)***
Metropolitan Planning Organization staff and local transit service providers began working in 2007 to develop a coordinated human services transportation plan. A plan was completed in October 2007, updated in 2013, and was recently updated in 2019. The goal of this project was to develop and implement a public transportation plan for the Rapid City Urbanized Area with a particular focus on providing access to critical services for lower income residents, seniors, and other special needs populations. The Rapid City Area Metropolitan Planning Organization has been involved in that effort to ensure the continued availability of federal transportation funds.

7. Public Involvement *(Ref: 23 CFR 450.316(b))*

Rapid City Area Metropolitan Planning Organization Public Participation Plan

The Rapid City Area Metropolitan Planning Organization adopted a MAP-21 compliant public participation plan in November 2016. This plan serves as the statement of transportation public participation policies adopted by the Rapid City Area Metropolitan Planning Organization. Participation of the public in transportation planning activities is vitally important to the Rapid City Area Metropolitan Planning Organization. The emphasis of the adopted policies in this report is on regional system planning products regularly produced in the transportation planning process. Various techniques will selectively be used to provide information and solicit public comment. Some examples of public participation activities are briefly described below.

A. Newspaper Advertisements
B. Web Site
C. Articles
D. Press Releases
E. Flyers
F. TV/Radio
G. Public Service Announcements
H. Interviews
I. Community Forums
J. Public Meetings
K. Public Hearings
L. Group Presentations
M. Advisory Committee

8. Title VI *(Ref: Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21)*

Title VI of the Civil Rights Act of 1964 states that “no person in the United States shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal

financial assistance" [42 USC 2000d]. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, was signed by President Clinton on Feb. 11, 1994 and published in the Feb. 16, 1994 Federal Register, Vol. 59, No. 32. The Executive Order and accompanying memorandum reinforced the requirements of Title VI of the Civil Rights Act of 1964 that focus federal attention on the environmental and human health condition in minority and low-income communities. Together these two laws promote non-discrimination in federal programs affecting human health and the environment, and provide minority and low income communities access to public information and an opportunity to participate in matters relating to transportation and the environment.

Through the regional planning process, the Metropolitan Planning Organization and partner agencies will thoroughly analyze the three fundamental environmental justice principles. The principles are:

- To avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects of programs, policies and activities on minority populations and low-income populations;
- To ensure full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction of, or significant delay in the receipt of transportation benefits by minority and low-income populations.

The Metropolitan Planning Organization staff developed a Title VI Policy that was adopted in 2012 to ensure compliance with the Civil Rights Act of 1964 and to provide the public with procedures to request assistance in addressing any issues that may surface. Additionally, the Metropolitan Planning Organization's public participation plan addresses the full and fair participation of all populations.

9. Disadvantage Business Enterprise (DBE) *(Ref: Section 1101(b) of Pub. L. 109-59, 49 CFR part 26)*

The Rapid City Area Metropolitan Planning Organization shows a good faith effort to solicit Disadvantage Business Enterprises (DBEs) when procuring assistance from private contractors. The Rapid City Area Metropolitan Planning Organization awards an additional five points out of 100 points to private contractors who are DBEs or have a DBE subcontractor. It is the policy of Rapid City Area Metropolitan Planning Organization to ensure no discrimination on the basis of race, color, creed, national origin, sex, or age in any employment or business opportunity.

10. Americans with Disabilities Act (ADA) *(Ref: Americans with Disabilities Act of 1990, Pub. L. 101-366, 104 Stat. 327, as amended, and 49 CFR 27, 37, and 38)*

The Americans with Disabilities Act of 1990 (ADA) requires involving persons with disabilities in the development and improvement of transportation services. Planners, engineers, and builders must provide access for the disabled at sidewalks and ramps, street crossings, and in parking or transit access facilities. Persons with disabilities must also be able to access the sites where public participation activities occur as well as the information presented. The Metropolitan Planning Organization's public participation plan addresses the Americans with Disabilities Act.

Rapid City Area Metropolitan Planning Organization public meetings are held in places accessible to people with disabilities. The Rapid City Area Metropolitan Planning Organization office is located in an accessible building.

11. Air Quality *(Ref: 40 CFR 51; OAR 340-2-710 through 340-20-1080)*

A. Regional Air Quality Status of the Rapid City Area Metropolitan Planning Organization Area

The Rapid City Urbanized Area is not in violation of EPA's National Ambient Air Quality Standards (NAAQS). The area, therefore, is not designated nonattainment for any of the Air Quality Criteria Pollutants.

B. Describe Conformity Status of the Rapid City Area Metropolitan Planning Organization Plan and TIP

According to the Clean Air Act Amendments (CAAA) of 1990, the Rapid City Urbanized Area is not required to demonstrate Air Quality Conformity of its transportation plans, programs and projects to the State Implementation Plan.

12. Lobbying Prohibition *(Ref. 49 CFR 20)*

The funding agreement and all contracts with the Rapid City Area Metropolitan Planning Organization include language regarding breech of any federal statutes, rules, program requirements and grant provisions applicable to the federal funds. Through approval of that agreement, the Rapid City Area Metropolitan Planning Organization agrees to follow all applicable rules.

13. Employment & Business Opportunity Discrimination *(Ref. 49 USC 5332)*

The federal code states: A person may not be excluded from participating in, denied a benefit of, or discriminated against under, a project, program, or activity receiving financial assistance under this chapter because of race, color, creed, national origin, sex, or age.

It is the policy of Rapid City Area Metropolitan Planning Organization to ensure no discrimination on the basis of race, color, creed, national origin, sex, or age in any employment or business opportunity.

14. Equal Employment Opportunity - Federal Aid Construction Projects *(Ref. 23 CFR part 230)*

This requirement is not applicable to the Rapid City Area Metropolitan Planning Organization. The Rapid City Area Metropolitan Planning Organization is a planning organization and does not construct projects.

15. Older Americans Act *(Ref. 42 USC 6101)*

The federal code states: It is the purpose of this chapter to prohibit discrimination on the basis of age in programs or activities receiving Federal financial assistance.

It is the policy of Rapid City Area Metropolitan Planning Organization to ensure no discrimination on the basis of age. The Metropolitan Planning Organization's public participation plan addresses the full and fair participation of all populations.

16. Gender Discrimination *(Ref. Section 324 of title 23 USC)*

The federal code states: No person shall on the ground of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal assistance under this title or carried on under this title.

It is the policy of Rapid City Area Metropolitan Planning Organization to ensure no discrimination on the basis of sex. The Metropolitan Planning Organization's public participation plan addresses the full and fair participation of all populations.

17. Discrimination Against Individuals with Disabilities *(Ref. 29 USC 794 and 49 CFR part 27)*

The federal code states: No otherwise qualified individual with a disability in the United States, as defined in section 705 (20) of this title, shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.

It is the policy of Rapid City Area Metropolitan Planning Organization to ensure no discrimination occurs on the basis of disability. The Metropolitan Planning Organization's public participation plan addresses the full and fair participation of all populations.

METROPOLITAN TRANSPORTATION PLANNING PROCESS SELF-CERTIFICATION STATEMENT

In accordance with 23 CFR 450.336, the **South Dakota Department of Transportation** and the **Rapid City Area Metropolitan Planning Organization** for the **Rapid City, South Dakota urbanized area** hereby certify that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

(1) 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart;

(2) Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;

(3) 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;

(4) Section 1101(b) of the FAST Act (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in DOT funded projects;

(5) 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;

(6) The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR parts 27, 37, and 38;

(7) The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;

(8) Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and

(9) Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

Rapid City, South Dakota MPO
Metropolitan Planning Organization

Amanda Scott
Signature

proxy for Chair Larson
Title

6-13-2019
Date

South Dakota Department of Transportation
State Department of Transportation

Signature

Secretary of Transportation
Title

06/24/19
Date

CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-5035

Community Development Department

300 Sixth Street

RECEIVED
SEP 09 2019
DRINKING WATER PROGRAM

Kelly Brennan, Planner II
Long Range Planning Division
city web: www.rcgov.org

Phone: 605-394-4120
Fax: 605-394-6636
e-mail: Kelly.brennan@rcgov.org

DRINKING WATER QUALITY DETERMINATION
It appears, based on the information provided, that this project will not have adverse environmental effects to drinking water in this area. This project is approved.
Approved by: Mark Mayer
Date: 10/7/19 ID No.: 20190857
605-773-3754 Fax 605-773-5286
SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT & NATURAL RESOURCES

August 28, 2019

Mr. Mark Mayer
SD Dept of Environment & Natural Resources
Joe Foss Building, 523 E Capitol Avenue
Pierre, SD 57501

Dear Mr. Mayer:

The Rapid City Area Metropolitan Planning Organization (MPO) is comprised of the City of Rapid City, the City of Box Elder, the City of Piedmont, the City of Summerset, portions of Pennington County and portions of Meade County. By law, all urbanized areas with a population of 50,000 or greater are required to have a Metropolitan Planning Organization that is responsible for area transportation planning and programming activities.

The Rapid City Area Metropolitan Planning Organization is currently updating its Transportation Improvements Program (TIP) for the years 2020-2023. The TIP is a five year plan for proposed capital and operation expenditures for public transportation, including potential funding sources, for the Rapid City Metropolitan Area. I have enclosed a draft of the 2020-2023 TIP for the Rapid City Metropolitan Area for your review and comment. An electronic version can be viewed at:

http://www.rapidcityareampo.org/application/files/6215/5977/5348/19TP015_-_2020_-_2023_Transportation_Improvement_Program_Draft_Report.pdf

Please respond within 30 days with any comments or questions. Thank you for your time and consideration of this matter.

Sincerely,

Kelly Brennan, Planner II
Long Range Planning

Enclosure

RECEIVED
OCT 10 2019
RAPID CITY DEPARTMENT OF COMMUNITY DEVELOPMENT

EQUAL HOUSING OPPORTUNITY

EQUAL OPPORTUNITY EMPLOYER

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
1616 CAPITOL AVENUE
OMAHA NE 68102-4901

OCT 01 2019

Planning, Programs, and Project Management Division

Ms. Kelly Brennan
City of Rapid City
300 Sixth Street
Rapid City, South Dakota 58402-2035

Dear Ms. Brennan:

The U.S. Army Corps of Engineers, Omaha District (Corps) has reviewed your letter dated August 28, 2019 (received September 5, 2019) regarding the Transportation Improvements Program (TIP) for years 2020-2023 for Rapid City, South Dakota. It is understood that the TIP details proposed capital and operation expenditures for public transportation. We offer the following comments for your consideration:

Your plans should be coordinated with the state water quality office that has jurisdiction within the area where the project is located to ensure compliance with federal and state water quality standards and regulations mandated by the Clean Water Act and administered by the U.S. Environmental Protection Agency. Please coordinate with the South Dakota Department of Environment & Natural Resources concerning state water quality programs.

If you have not already done so, it is recommended you consult with the U.S. Fish and Wildlife Service and the South Dakota Department of Game, Fish and Parks, regarding fish and wildlife resources. In addition, the South Dakota State Historic Preservation Office should be contacted for information and recommendations on potential cultural resources in the project area.

It should be ensured that the proposed project is in compliance with floodplain management criteria of Pennington and Meade Counties and the State of South Dakota. As a minimum, the design should ensure that the one percent annual chance floodwater surface elevation of any stream affected that has a designated floodway, is not increased relative to pre-project conditions. If a designated floodway has not been identified then the design should ensure that the one percent annual chance floodwater surface elevation is not increased by more than one-foot relative to pre-project conditions. It is desirable, however, that water surface elevations either remain the same or decrease as a result of this project.

Since the proposed project area may contain federal flood control projects, your plans should be submitted to the local floodplain administrator for review and approval prior to construction. It should be ensured that the proposed project is in compliance with the floodplain management criteria of Pennington and Meade Counties and the State of South Dakota. In addition, please coordinate with the following floodplain management office:

South Dakota Division of Emergency Management
Attention: Mr. Marc Macy
118 W. Capitol Avenue
Pierre, South Dakota 57501
Telephone: 605-773-3231
Fax: 605-773-3580
Email: marc.macy@state.sd.us

RECEIVED
OCT 07 2019
RAPID CITY DEPARTMENT OF
COMMUNITY DEVELOPMENT

Any proposed project that may alter Corps civil works projects requires Department of the Army authorization under Section 408 (33 USC 408) of the Rivers and Harbors Act. The Section 408 review is to ensure the proposed activities will not impair the usefulness of federal projects and are not injurious to the public interest. If this is a federal flood risk reduction project, the alteration request should be coordinated through the local sponsor. The local sponsor point of contact may be provided by the Omaha District contact below. Please coordinate with the Omaha District contact to determine the level of Section 408 review that is necessary. Also please make note of the Programmatic Environmental Assessment for the state of South Dakota that identifies Section 408 actions deemed categorical permissions and the steps needed to process requests in an expedited fashion.

U.S. Army Corps of Engineers, Omaha District
Operations Branch
Attention: Mr. Heath R. Kruger, CENWO-ODT-N
1616 Capitol Ave.
Omaha, Nebraska 68102-4901

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. You can visit the Omaha District's Regulatory website for permit applications and related information. Please review the information on the provided website (http://www.nwo.usace.army.mil/Missions/RegulatoryProgram.aspx) to determine if this project requires a 404 permit. For a detailed review of the permit requirements, preliminary and final project plans should be sent to:

U.S. Army Corps of Engineers
Pierre Regulatory Office
Attention: Mr. Steve Naylor, CENWO-ODR-SD
28563 Powerhouse Road, Room 120
Pierre, South Dakota 57501

In addition, please update your records with our current mailing address:

U.S. Army Corps of Engineers, Omaha District
Planning Branch
Attention: Mr. Eric Laux, CENWO-PMA-C
1616 Capitol Ave.
Omaha, Nebraska 68102-4901

If you have any questions, please contact Mr. Christopher Weber of my staff at (402) 995-2694 or Christopher.r.weber@usace.army.mil and reference PD# 8214 in the subject line.

Sincerely,

Eric A. Laux, PMP
Chief, Environmental & Cultural Resources

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 30, 2019

Kelly Brennan, Planner I
Long Range Planning Division
City of Rapid City
300 Sixth Street
Rapid City, SD 57701-5035

Re: The Rapid City Area Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) 2020 – 2023, Pennington and Meade Counties, South Dakota

Dear Ms. Brennan:

The South Dakota Department of Environment and Natural Resources' Ground Water Quality program has reviewed the above-referenced TIP plan update. Based on the information submitted in your letter dated August 28, 2019, the department has no specific groundwater concerns at this time. However, the department will comment on specific projects later when notification is received confirming the status of individual projects, or at a time when more details become available.

If you would like to do an initial review of one possible environmental concern, please note that there have been numerous petroleum and other chemical releases throughout the state. There have been a significant number of releases have occurred in the Rapid City region over time, and residual contamination from some releases may be encountered during the proposed construction projects. You can obtain more data regarding releases reported in South Dakota at the following website: http://arcgis.sd.gov/server/denr/spillsviewer/.

If construction activities for these projects disturb one or more acre(s) of soil, a storm water permit may be required. For more information or to obtain a storm water permit, please contact the Department at 1-800-SD-Storm or visit: http://denr.sd.gov/des/sw/StormWaterandConstruction.aspx.

If contamination is encountered during construction activities or caused by the construction work, the Rapid City Area MPO or its designated representative must report the contamination to the department at (605) 773-3296. Any contaminated soil encountered or caused by the construction must be temporarily stockpiled and sampled to determine disposal requirements, and the construction materials used in the contaminated area should be evaluated for chemical compatibility and adjusted accordingly.

Thank you for the Metropolitan Planning Organization's efforts to protect South Dakota's environment. If you have any questions regarding this letter, please contact me at (605) 773-3296 or georgina.smith@state.sd.us.

Sincerely,

Georgina M Smith

Georgina Smith
Environmental Scientist II

C: PJ Conover, Pennington County Planning Director, 130 Kansas City St. Suite 200, Rapid City, SD 57701
Rhea Crane, Meade County Director of Equalization/Planning, 1300 Sherman Street, Suite 222, Sturgis, SD 57785

CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-5035

Community Development Department

300 Sixth Street

RECEIVED
SEP 09 2019
Dept of Environment and Natural Resources
Waste Management

Kelly Brennan, Planner II
Long Range Planning Division
city web: www.rcgov.org

Phone: 605-394-4120
Fax: 605-394-6636
e-mail: Kelly.brennan@rcgov.org

Waste Management Determination
Hazardous Waste/Solid Waste/Asbestos
It appears, based on the information provided, that this project will have little or no impact on the waste management in this area.
Approved By: James L. Hinds
Date: 9-13-19
South Dakota Department of Environment & Natural Resources
Phone: (605) 773-3153 Fax: (605) 773-6035

August 28, 2019

Mr. Hunter Roberts
SD Dept of Environment & Natural Resources
Joe Foss Building, 523 E Capitol Avenue
Pierre, SD 57501

Dear Mr. Roberts:

The Rapid City Area Metropolitan Planning Organization (MPO) is comprised of the City of Rapid City, the City of Box Elder, the City of Piedmont, the City of Summerset, portions of Pennington County and portions of Meade County. By law, all urbanized areas with a population of 50,000 or greater are required to have a Metropolitan Planning Organization that is responsible for area transportation planning and programming activities.

The Rapid City Area Metropolitan Planning Organization is currently updating its Transportation Improvements Program (TIP) for the years 2020-2023. The TIP is a five year plan for proposed capital and operation expenditures for public transportation, including potential funding sources, for the Rapid City Metropolitan Area. I have enclosed a draft of the 2020-2023 TIP for the Rapid City Metropolitan Area for your review and comment. An electronic version can be viewed at:

http://www.rapidcityareampo.org/application/files/6215/5977/5348/19TP015_-_2020_-_2023_Transportation_Improvement_Program_Draft_Report.pdf

Please respond within 30 days with any comments or questions. Thank you for your time and consideration of this matter.

Sincerely,

Kelly Brennan, Planner II
Long Range Planning

Enclosure

RECEIVED
SEP 19 2019
RAPID CITY DEPARTMENT OF
COMMUNITY DEVELOPMENT

EQUAL HOUSING OPPORTUNITY

EQUAL OPPORTUNITY EMPLOYER

CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-5035

Community Development Department

300 Sixth Street

Kelly Brennan, Planner II
Long Range Planning Division
city web: www.rcgov.org

Phone: 605-394-4120
Fax: 605-394-6636
e-mail: Kelly.brennan@rcgov.org

August 28, 2019

Mr. Hunter Roberts
SD Dept of Environment & Natural Resources
Joe Foss Building, 523 E Capitol Avenue
Pierre, SD 57501

Dear Mr. Roberts:

The Rapid City Area Metropolitan Planning Organization (MPO) is comprised of the City of Rapid City, the City of Box Elder, the City of Piedmont, the City of Summerset, portions of Pennington County and portions of Meade County. By law, all urbanized areas with a population of 50,000 or greater are required to have a Metropolitan Planning Organization that is responsible for area transportation planning and programming activities.

The Rapid City Area Metropolitan Planning Organization is currently updating its Transportation Improvements Program (TIP) for the years 2020-2023. The TIP is a five year plan for proposed capital and operation expenditures for public transportation, including potential funding sources, for the Rapid City Metropolitan Area. I have enclosed a draft of the 2020-2023 TIP for the Rapid City Metropolitan Area for your review and comment. An electronic version can be viewed at:

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Please respond within 30 days with any comments or questions. Thank you for your time and consideration of this matter.

Sincerely,

Kelly Brennan, Planner II
Long Range Planning

Enclosure

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

September 17, 2019

Kelly Brennan
City of Rapid City
300 Sixth Street
Rapid City, SD 57701-5035

RE: Air Quality Review of the Rapid City Area Transportation Improvement Plan

Dear Kelly Brennan:

The review of the Rapid City Area Transportation Improvement Plan (TIP) for 2020-2023 has been completed by the Air Quality Program. No special transportation conformity planning is required in the TIP because the area is attaining the National Ambient Air Quality Standards. The Department finds the Rapid City Area TIP as supplied in compliance with the South Dakota Air Quality State Implementation Plan.

Transportation planning is an important tool in maintaining good air quality levels in the state. It is the intent of the South Dakota Department of Environment and Natural Resources to maintain an air quality site in the City of Rapid City. The site will evaluate air pollution trends and control measures, so this area continues to attain the National Ambient Air Quality Standards.

If you have questions or require further information, please contact me at 605-773-6706. Thank you for supplying the information to the Air Quality Program for review.

Sincerely,

Rick Boddicker
Environmental Scientist III
SD-DENR

U.S. Department of Transportation

Federal Highway Administration
South Dakota Division
116 E Dakota Ave, Ste A
Pierre, SD 57501
605.224.8033 – Phone
605.224.8307 – Fax

Federal Transit Administration
Region 8
1961 Stout St, Ste 13-301
Denver, CO 80294-3007
303.362.2400 – Phone
303.362.2424 – Fax

Darin Bergquist, Secretary
South Dakota Department of Transportation
700 E Broadway Ave
Pierre, SD 57501-3339

Subject: Approval of the SDDOT's 2020 – 2023 STIP

Dear Secretary Bergquist:

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have jointly reviewed the South Dakota Department of Transportation (SDDOT) 2020 – 2023 Statewide Transportation Improvement Program (STIP) and each Transportation Improvement Program (TIP) for the Sioux Falls, Rapid City, and Sioux City metropolitan planning areas. In accordance with 23 CFR 450.218, FHWA and FTA hereby find that the projects in the 2020 – 2023 STIP are based on a transportation planning process that substantially meets the requirements of 23 CFR Part 450 Subpart A, B, and C; 49 U.S.C. Sections 5303-5305; and 23 U.S.C. Sections 134 and 135. This finding is based on the certifications of the statewide and metropolitan transportation planning processes for, and within, the State of South Dakota and the FHWA's and FTA's participation in those transportation planning processes. Therefore, we hereby jointly approve, effective October1, 2019, South Dakota's 2020 - 2023 STIP.

We find that the TIPs in South Dakota urbanized areas were developed based on continuing, comprehensive transportation planning processes carried out cooperatively by SDDOT and local communities pursuant to the applicable regulations and laws. SDDOT has concurred in the self-certification of each metropolitan planning organization (MPO). Based on our involvement and knowledge of the various planning processes, we likewise concur that these planning processes are being conducted in conformance with applicable federal requirements. In addition, we accept the TIPs and accompanying self-certification by the Rapid City and Sioux Falls MPOs. Action on the Sioux City MPO TIP will be taken by the FHWA Iowa Division and FTA Region 7.

Included in your STIP submittal was the SDDOT "Statewide Transportation Planning Process Certification." With our ongoing knowledge and involvement in statewide planning in South Dakota, we concur that the SDDOT is in substantial compliance with the applicable planning statutes, regulations, and procedures.

When approving the STIP, the FHWA and FTA are required to make a planning finding documenting SDDOT's and the MPO's compliance with the planning requirements. Enclosed is a document titled *Federal Planning Finding South Dakota 2020- 2023 STIP*. Included are required corrective actions, recommendations for improvement, and commendations. Based on the federal involvement in the statewide and metropolitan planning processes, and review of required documents, FHWA and FTA have determined the statewide and metropolitan planning process

substantially meets the requirements of statute and regulation. Below is a summary of the issues identified with the 2020 -2023 STIP Planning Finding.

Corrective Actions:

None

Recommendations:

The SDDOT Statewide Long Range Transportation Plan is over nine years old and should be updated. The SDDOT is encouraged to update the Statewide Long Range Transportation Plan prior to submission of the 2021 – 2024 STIP. The State's Public Involvement Plan is also over nine years old and is in need of being updated..

Commendations:

The South Dakota Department of Transportation has an excellent STIP public involvement process. SDDOT's STIP Tribal consultation process has consistently been recognized as a best practice. SDDOT has developed an excellent working relationship with the MPOs and planning and programming of projects is done in a cooperative manner.

We appreciate the efforts and cooperation of your staff in developing the STIP. If you have questions or need additional information, please contact Mark Hoines (FHWA) at 605.776.1010 or FTA's Ranae Tunison (FTA) at 303.362.2397.

Sincerely,

for R. Kirk Fredrichs
Division Administrator
FHWA SD Division

Sincerely,

for Cindy Terwilliger
Regional Administrator
FTA Region 8

Enclosure: *Federal Planning Finding South Dakota 2020 - 2023 STIP*

Ecc:

Joel Jundt, Deputy Secretary SDDOT
Mike Behm, SDDOT Division of Planning & Engineering
Kellie Beck, SDDOT Division of Finance and Management Administration
Ben Orsbon, SDDOT Office of the Secretary
Mark Leiferman, SDDOT Division of Planning & Engineering
Jerry Ortbahn, SDDOT Project Development
Dave Voeltz, SDDOT Project Development
Levi Briggs, SDDOT Project Development
Leah DeMers, SDDOT Project Development
Connie Johnson, SDDOT Project Development

Tammy Williams, SDDOT Local Transportation Programs
Jan Talley, SDDOT Financial Systems
Marliss Dean, SDDOT Financial Systems
Lynne Keller Forbes, South Eastern Council of Governments
Patsy Horton, Rapid City Area MPO
Jim Feeney, South Eastern Council of Governments

Connecting South Dakota and the Nation

Department of Transportation

Office of the Secretary

700 E Broadway Avenue
Pierre, South Dakota 57501-2586 605/773-3265
FAX: 605/773-3921

August 29, 2019

Mr. Robert Heidgerken, Chair
Executive Policy Committee
Rapid City Metropolitan Planning Organization
City of Rapid City
300 6th Street
Rapid City, SD 57701-1332

Dear Mr. Heidgerken:

The South Dakota Transportation Commission accepted and approved the 2020-2023 Transportation Improvement Program for the Rapid City, South Dakota Metropolitan Planning Area on August 29, 2019.

Sincerely,

Darin P. Bergquist, Secretary
Department of Transportation

Appendix G.
Methods and Assumptions

METHODS & ASSUMPTIONS

FOR THE
RAPID CITY AREA MPO METROPOLITAN TRANSPORTATION PLAN
AND BICYCLE AND PEDESTRIAN PLAN UPDATE

PREPARED BY HDR ENGINEERING

FOR THE

RAPID CITY AREA METROPOLITAN PLANNING ORGANIZATION

AND

THE SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

IN CONJUNCTION WITH

THE FEDERAL HIGHWAY ADMINISTRATION

May 30, 2019

This Methods and Assumptions Document was developed in preparation for the Methods and Assumptions Meeting held as part of the project kick-off meeting with representatives from the Rapid City Area Metropolitan Planning Organization (MPO), the South Dakota Department of Transportation (SDDOT), and the Federal Highway Administration (FHWA). This document is intended to serve as a historical record of the study process and methodologies, dates, and decisions made by the study team representatives for the Rapid City Area MPO Metropolitan Transportation Plan.

Stakeholder Acceptance Page

The undersigned parties concur with the Methods and Assumptions for the Rapid City Area MPO Metropolitan Transportation Plan as presented in this document.

MPO:

Signature

Long Range Planning Mgr.
Title

May 18, 2020
Date

SDDOT:

Sarah M. Gilkerson
Digitally signed by Sarah M. Gilkerson
Contact Info: sarah.gilkerson@state.sd.us
Date: 2020.05.15 08:29:29-05'00'

Signature

Title

Date

FHWA:

MARK D HOINES
Digitally signed by MARK D HOINES
Date: 2019.07.16 11:00:33 -05'00'

Signature

Planning/Civil Rights Specialist
Title

07/16/2019
Date

Notes:

(1) Participation on the Study Advisory Team and/or signing of this document does not constitute approval of the Rapid City Area MPO Metropolitan Transportation Plan's Final Report or conclusions.

(2) All members of the Study Advisory Team will accept this document as a guide and reference as the study progresses through the various stages of development. If there are any agreed upon changes to the assumptions in this document a revision will be created, endorsed and signed by all the signatories.

1. Introduction and Project Description

Background Information

Every five years, the Rapid City Area MPO produces a Metropolitan Transportation Plan (MTP), previously known as the Long Range Transportation Plan. The purpose of the plan is to encourage and promote a safe and efficient transportation system to serve future year transportation demands. Results of the MTP process are intended to serve the overall mobility needs of the area, while also being cost effective and consistent with state and local goals and objectives.

Location and Study Area

The Rapid City Area MPO is located in western South Dakota and area of study includes the City of Rapid City, the City of Summerset, the City of Box Elder, the City of Piedmont, unincorporated areas of Black Hawk and Rapid Valley, and the developing portions of Pennington and Meade Counties as depicted in **Figure 1**.

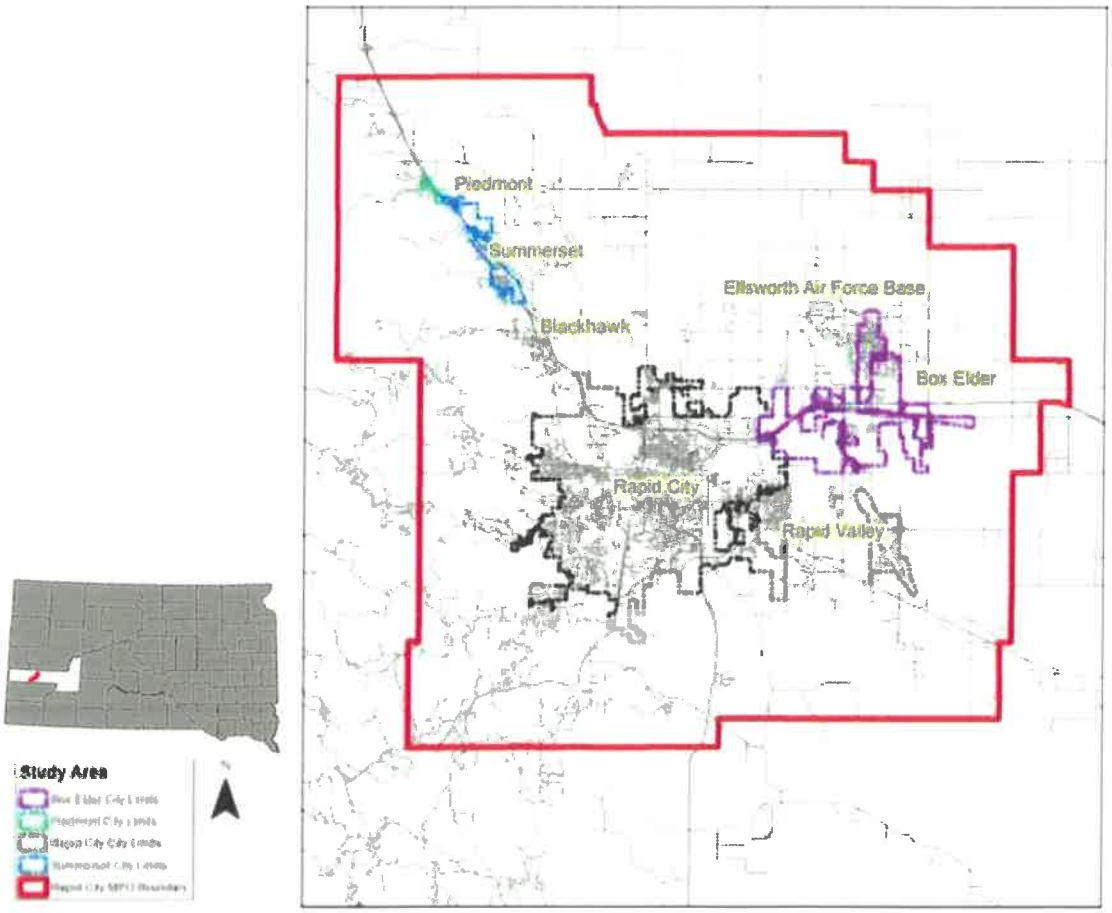

Figure 1: Study Area
(Obtained from RFP)

Need for Study

The MPO Manages the transportation network and mobility needs for the defined MPO area and recognizes the inter-connectivity between network accessibility and land use development patterns. Prior decision making has focused on producing a multi-modal transportation network consisting of roads, transit service, bicycle and pedestrian facilities, freight, and a regional airport. These modes of transportation provide a foundation for handling the flow of goods, and services to and from the area, as well as establish a system for area residents to access jobs, shopping and recreational facilities.

The Rapid City MPO Planning Area is designated by the Governor and The MPO Executive Policy Committee and encompasses the 20 year urbanized growth area, as defined in 23 CFR Part 450. As such, the transportation planning process is mandated to meet the requirements of MPO transportation plans as set forth in the CFR.

This study will develop a list of transportation projects to meet anticipated future demand needs of the Rapid City area through the year 2045. Major components of the study process include:

- Review and Analysis of the existing Major Street Plans for all of the MPO member agencies, as appropriate.
- Complete year 2045 traffic forecasts for the Rapid City Planning Area to identify future transportation needs by developing and validating the travel demand forecast model.
- Develop goals, strategies, and performance measures for the year 2045 to identify planning and prioritize elements within the MTP and fiscally constrain the future needs.
- Update of 2011 Bicycle and Pedestrian Plan.
- Consistency with federal and state guidelines and significant attention to public participation.

Study Schedule

Date	Task/Event
April 18, 2019	Notice to Proceed
March/April 2020	Draft Fiscally Constrained Plan
May/June 2020	Draft Report to SAT for Review
June 2020	Draft Report to MPO Committees
July 2020	Final Draft to SAT for Review
August 2020	Final Report to MPO for Review
August 2020	Final Report to MPO Committees
September 18, 2020	Study Completion

Facilities Affected by Study

The facilities affected by this project include the transportation network and systems identified in the Major Street Plans for the Rapid City Area MPO and its respective member agencies.

Previous Studies

The agency partners for this study have identified a few previous studies that would appear to benefit or provide background for this study:

- Rapid Trip 2040 (existing MTP for MPO)
  - http://www.rapidcityareampo.org/application/files/6115/3962/2450/RAPIDTRIP_2040..pdf
  - http://www.rapidcityareampo.org/application/files/7315/3962/2581/RapidTRIP_2040Appendices..pdf
  - http://www.rapidcityareampo.org/application/files/5115/2294/4096/18TP012_Resolution_2018-01_LRTP_Amendment_2.pdf
- Plan Rapid City (Rapid City Comprehensive Plan)
  - http://planrapidcity.com/images/uploads/documents/Rapid_City_Comprehensive_Plan_Adopted_April_2014_with_Maps__Appendices.pdf
- Pennington County Master Transportation Plan
  - http://www.sddot.com/transportation/highways/planning/specialstudies/docs/11-096PennFinalReport.pdf
- 2040 Moving Meade Forward (Meade County Master Transportation Plan)
  - http://www.sddot.com/transportation/highways/planning/specialstudies/docs/MeadeCountyTransportationPlanFinal.pdf
- Box Elder Strategic Transportation Plan
  - https://www.boxelder.us/documents/view/box-elder-strategic-transportation-plan-final-12-01-2014
- Bicycle and Pedestrian Master Plan
  - http://www.rapidcityareampo.org/application/files/6015/3963/4863/Bike-PedPlanCombined_forweb..pdf
- Rapid City Area MPO Transit Feasibility Study
  http://www.rapidcityareampo.org/application/files/8315/3919/8429/18TP016_Rapid_City_Area_MPO_Transit_Feasibility_Study_Final_Report..pdf
- Additional studies may be added at the discretion of the SAT.

Study Advisory Team Members

Participant	Agency
Kip Harrington	RCAMPO
Kelly Brennan	RCAMPO
Patsy Horton	RCAMPO
Mark Hoines	FHWA
Ranae Tunison	FTA
Jerry Ortbahn	SDDOT
Mike Carlson	SDDOT
Stacy Bartlett	SDDOT
Sallie Doty	SDDOT
Ted Johnson	Rapid City Public Works

Participant	Agency
Megan Gould	Rapid Transit
Bill Rich	Meade County
Joseph Miller	Pennington County
Bob Kaufman	Box Elder
Lonnie Harmon	Summerset
Matt Fitting	RCAMPO/Bike and Pedestrian
Dennis Berg	RC Area Schools

2. Analysis Years/Periods

The Study will evaluate transportation needs for the year 2045 planning horizon, with a baseline model year 2018. There are no interim years for analysis or model development assumed, although time bands for project implementation are assumed - Short-Term (2020-2025), Mid-Term (2026-2035), Long-Term (2036-2045).

3. Data Collection

Data collection needs for the study will be provided by the MPO and / or member jurisdictions, and are identified as follows:

- GIS Data including:
  - daily traffic volumes
  - major street plan
  - sidewalk inventory (existing and proposed)
  - transit routes and stops
  - existing and proposed bicycle facilities (bike lanes, paved shoulders, cycle tracks/separated bikeways, trails, side paths, signed routes, shared lane marking, crossing features such as RRFBs, pedestrian signals, etc.)
  - traffic signals
  - existing functional classifications
  - street inventory including existing lanes and posted speeds
  - pavement conditions
  - existing and future land uses
  - on-street parking locations and widths
  - key community destinations (schools, college/university, parks, civic/cultural destinations, recreational destinations, activity centers, community centers, hospitals, etc.)
- Historical TIP documents
- Traffic data, including volume counts, crash data
- Current CIPs and budgets for jurisdictions
- Recent and on-going studies at the City/Regional/State Level
- MPO Travel Demand Model Data Sets

- Socio-economic data files for the base year and for 2045, allocated to the model's TAZ structure.
- National Performance Management Research Data Set (NPMRDS)
- The consultant team will not be responsible for conducting traffic counts

4. Traffic Operations Analysis

Planning level volume-to-capacity (V/C) methodology based on daily traffic counts and estimates of peak-hour capacity (adjusted for daily volumes) will be provided for roadway segments. Specifically, this will include:

- The daily V/C approach will be tailored to represent worst peak hour conditions based on any peak-hour volume data available in the study area, and the operations results of any recent corridor studies. The traffic volumes which will be used are adjusted non-summer/non-peak season volumes.
- All functionally-classified streets with recent traffic volume counts will be included in the V/C analysis.
- Daily 2045 traffic forecasts will be completed for all modeled segments with existing traffic volume counts. Those segments with 2045 traffic forecasts will also have traffic operations analysis completed on them for future E+C conditions.

Travel reliability results will be reported for corridors with NPMRDS data provided (assumed to be National Highway System links only). This assessment will be consistent with the data reported for the last PM 3 System Performance / Freight / CMAQ reporting period.

5. Travel Forecasting

The MPO's travel demand model will be updated and revalidated to a baseline year 2018 and a model year 2045. The assumptions associated with this update involve:

- MPO staff will provide all base year and future year (2045) socio-economic data in TAZ format.
- MPO staff will provide all current model files for updating.
- MPO staff will identify projects constructed since the last model update that need to get added into the base year network. These projects will be coded into the base year network.
- Any "committed" projects in the region will be coded as a part of the "Existing-plus-Committed" (E+C) network scenario. MPO, local jurisdictions, and SDDOT will identify committed projects to be added to the network.
- MPO staff will provide traffic counts in a GIS format where they can be "spatial joined" to the roadway network for validation purposes.
- The model will be developed and validated to reflect daily traffic conditions for the non-summer / non-peak season.

- The model will be constructed within the guidelines and parameters outlined in *NCHRP 716: Travel Demand Forecasting: Parameters and Techniques*, when better local data are not available.
- Sources such as Census Transportation Planning Package (CTPP) will be used to validate trip distribution results.
- The model will be validated generally within the guidelines outlined in TMIP's *Travel Model Validation and Reasonableness Checking Manual, Second Edition.*
- Model validation and operation documentation shall be provided. FHWA will be provided a draft version for review and comment.
- Once the fiscally-constrained plan has been established, a 2045 planned network will be built and run. The planned network will include the E+C network, and the fiscally constrained projects that will impact the network operation (new links and capacity improvements).

For traffic forecasting applications in the MTP, where existing traffic counts are available a post-processing approach similar to NCHRP 255 will be applied. This adjusts future year traffic model output to reflect the deviation seen in the base year model between model assignments and observed counts.

6. Safety

- SDDOT will provide several years (2014 to 2018) of recent historical GIS-based crash data for the study area.
- Crash history data will be reviewed to identify:
  - 20 highest vehicular crash-rate intersections in the region.
  - 20 highest serious injury/fatal crash-rate intersections in the region.
  - 20 highest serious injury/fatal bike/ped crash frequency intersections in the region.
- MPO staff will provide calculations for the most recently five-year rolling averages for safety performance measures.
- Potential crash modification factors (CMF) treatments will be reviewed for potential inclusion as safety projects at the 20 highest frequency crash locations.

7. Multimodal Analysis

A Freight Assessment will be completed, using available data sources and studies. This will include:

- This section will report the Federal freight performance measure, the freight reliability on the Interstate System.
- Truck flow data from the Freight Analysis Framework will be utilized.
- Additional assessments will include freight-generating land use data, truck volumes, and rail data from FRA.

The Transit Assessment will summarize current operations data (either directly from the transit agency, or from the National Transit Database) and near-term programmed transit activities. The MPO's Transit Feasibility Study (December 2017) will also be

reviewed and local stakeholders will be engaged about the elements and recommendations from that plan to incorporate.

An intercity travel summary, including reviews of intercity bus, commercial air, and rail service will be completed.

The 2011 Bike and Pedestrian Plan will be updated under a separate cover and is described in Section 10 of this document.

8. Financial Plan

The fiscally-constrained plan will be developed in the following time-bands: Short-Term (2020-2025), Mid-Term (2026-2035), Long-Term (2036-2045).

It is assumed that planning-level estimates of operations and maintenance costs, and a reasonable list of reconstruction and major rehab projects, and associated cost estimates, will be provided by each responsible jurisdiction. Construction cost estimates will be calculated in base year (2020) dollars, but will be inflated to Year of Expenditure (YOE) dollars in the MTP. Similarly, revenues will also be inflated to YOE revenues. The inflation rates for each will be determined later in the project and the M&A document will be amended at that time to reflect the agreed-upon inflation values.

9. Alternatives Prioritization / Major Street Plan

The alternatives analysis will prioritize potential projects and strategies ("alternatives") for implementation into the Major Street Plan through project prioritization metrics:

- The project prioritization metrics will be based on the MTP goals, objectives, and regional system performance measures.
- The project prioritization will be tailored by the input of staff and the study review committee.
- Reconciliation of corridor consistency across individual member agency jurisdictional plans.

The Major Street Plan will include project details for each of the recommended projects, including:

- General project limits
- Planning-level cost estimates
- General purpose and need for each improvement
- General assessment of constructability
- High-level environmental screening.

10. Bike & Ped Plan

The assessment of the previous plan will require assistance from agencies in measuring progress against stated benchmarks in 2011 Bicycle and Pedestrian

Master Plan and identifying specific projects completed since adoption of the previous 2011 plan.

Level of Traffic Stress (LTS) will be calculated for all streets and bicycle facilities in the study area (dependent on availability of data, particularly for local streets) using the methodology in *Low-Stress Bicycling and Network Connectivity (Mineta Transportation Institute, 2012).*

Equity analysis will be based on census block group data available from the 2016 American Community Survey (ACS) for poverty, minority population, limited English proficiency, population age 65 or above, population age 18 or below, zero-vehicle households, and means of transportation to work other than personal motor vehicle. A composite equity score will be developed at the block group level based on the number of variables above the regional average.

Bicycle and pedestrian demand analyses will be completed based on 2045 socioeconomic data (TAZ format), which will use population and employment density and ratio of population to employment, as well as proximity to key community destinations.

Proposed projects from the 2011 plan will be evaluated to determine if they should be maintained as-is or be modified or removed. Modified or additional projects will be based on evaluation of LTS, equity, bike and ped demand, existing and proposed bike/ped networks, identified network gaps, connections to facilities and destinations, and public input with a specific focus on low-stress facilities and streets.

A primary reference for bicycle facility selection will be the *FHWA Bicycle Selection Guide (February 2019).*

11. Deviations/Justifications

There are no known deviations/justifications at this time. Any modifications to study methodologies or assumptions will be addressed through an amendment to this document.

12. Conclusion

All sections contained in this document will guide the development of the Metropolitan Transportation Plan.

13. Appendices

The appendix includes the following:

A. Methods and Assumptions Meeting Minutes

Meeting Minutes

Project: RCAMPO – MTP and Bike/Ped. Plan Update

Subject: M&A Meeting Minutes

Date: Monday, June 17, 2019

Location: SDDOT Rapid City Region Conference & Pierre Conference Rooms

Attendees:
Kip Harrington – RCAMPO
Kelly Brennan – RCAMPO
Megan Gould – Rapid Transit
Brad Remmich – SDDOT
Mike Carlson – SDDOT
Stacy Bartlett - SDDOT
Bob Kaufmann – City of Boxelder
Lonnie Harmon – City of Summerset
Dustin Hamilton – HDR
Jason Carbee – HDR
Jamie Krzeminiski - HDR

The Methods and Assumptions Document for the Rapid City Area MPO Metropolitan Transportation Plan and Bicycle and Pedestrian Plan Update was held immediately following the project Kick-off Meeting on Thursday, May 30, 2019 via Video Conference in the SDDOT Rapid City Region Conference Room and Pierre Video Conference Rooms. The Draft Methods and Assumptions Document was presented by HDR and the following items were specifically discussed with regard to each referenced section, with comments to be provided to HDR by June 14, 2019:

1. Study Schedule (Page 5) – The Schedule of the Draft Fiscally constrained plan deliverable was adjusted to March/April of 2020 as a result of the delay associated with the project Notice to Proceed.
2. Previous Studies (Page 6) – Kip Harrington and Brad Remmich identified additional and/or on-going previous studies that may be applicable to the project. Kip/Brad will provide a list of additional pertinent studies which should be referenced.
3. Study Advisory Team (Page 6) – It was noted that Brad Remmich will be replaced by Jerry Ortbahn as a result of Brad moving to a new position within the SDDOT.
4. Analysis Years/Periods (Page 7) – The baseline model year used will be 2018.
5. Analysis Years/Periods (Page 7) – Discussion was had regarding the project implementation time bands and clarification was needed from Mark Hoines (FHWA) to determine if the first ten years of implementation were required to be completed year-by-year or if five year time bands would be acceptable as with prior studies. Mark Hoines responded on June 13, 2019 (e-mail attached) stating that it would be acceptable to utilize five year increments as with past studies.
6. Traffic Operations Analysis (page 8) – It was suggested that it be clarified that the traffic volumes which will be used are adjusted non-summer/non-peak season volumes.
7. Travel Forecasting (Page 9) – It was discussed the model validation language should be revised as follows: "Model validation and operation documentation shall be provided. FHWA will be provided a draft version for review and comment".

8. Travel Forecasting (Page 9) – A new statement regarding model development should be added to read: "Once the fiscally constrained plan has been established, a 2045 planned network will be built and run. The planned network will include the E+C network, and the fiscally constrained projects that will impact the network operation (new links and capacity improvements).
9. Safety (Page 9) – Crash history data will be adjusted to reflect crash severity (major injury/fatal) and bike/ped/vechicular. The 20 highest vechicular crash rate intersections, 20 highest serious injury/fatal crash rate intersections, and 20 highest frequency serious injury/fatal bike/ped crash intersections will be identified.
10. Financial Plan (Page 10) – The fiscally constrained implementation time bands will be consistent with item 5 noted above.
11. Financial Plan (Page 10) – Language pertaining to construction cost estimates, revenues, and inflation for the fiscally constrained plan will be added as follows: "Construction cost estimates will be calculated in base year (2020) dollars, but will be inflated to Year of Expenditure (YOE) dollars in the MTP. Similarly, revenues will also be inflated to YOE revenues. The inflation rates for each will be determined later in the project and the M&A document will be amended at that time to reflect the agreed-upon inflation values".
12. Alternatives Prioritization/Major Street Plan (Page 10): Language to be added to identify reconciliation of corridor consistency across member agency jurisdictional plans will be addressed as part of the major street plan analysis.
13. Comments on the DRAFT M&A Document are due by June 14, 2019.

Appendix H.
Needs Plan

Table H-1: List of Identified Roadway Projects

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
3	Mall Dr	Haines Ave	Maple Ave	Capacity Improvement	$ 2,500,000
4	Haines Ave	Country Rd	Sitting Bull St	Capacity Improvement	$ 2,250,000
5	US 16	Rockerville Rd	Neck Yoke Rd	Safety/Intersections	$ 9,150,000
6	Cambell St	Minnesota St	Fairmont Blvd	Capacity Improvement	$ 1,250,000
7	St Patrick St	US 16	5th St	Capacity Improvement	$ 1,500,000
8	Sheridan Lake Rd	Catron Blvd	Corral Dr	Capacity Improvement	$ 9,600,000
9	Cambell St	E Omaha	E North	Capacity Improvement	$ 7,300,000
10	Cambell St	E North	Anamosa St	Capacity Improvement	$ 1,250,000
11	Haines Ave	Knollwood Dr	Lindbergh Ave	Corridor Improvement	$ 50,000
12	Reservoir Rd	Twilght Dr	Meadow Ridge Dr	Corridor Improvement	$ 2,600,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
13	Elk Creek	Elk Creek	I-90	Corridor Improvement	$ 4,450,000
14	Boulder Hill Rd	at Silver Mountain Rd		Intersection Improvement	$ 200,000
16	Plateau Lane	Twilight Dr	Williams St	Corridor Improvement	$ 2,250,000
17	I-90	At Exit 63 / Box Elder		Interchange	$ 20,000,000
18	Ellsworth Rd	Ellsworth Rd	Liberty Blvd	Intersection Improvement	$ 400,000
19	St Joseph St	St Joseph St	2nd St	Intersection Improvement	$ 10,000
20	St Joseph St	St Joseph St	3rd St	Intersection Improvement	$ 10,000
21	St Joseph St	St Joseph St	4th St	Intersection Improvement	$ 500,000
22	St Joseph St	St Joseph St	1st St	Intersection Improvement	$ 10,000
23	154th Ave	154th Ave	233rd St	Intersection Improvement	$ 350,000
24	Twilight Dr	Twilight Dr	Concourse Dr	Intersection Improvement	$ 10,000
25	S Rockerville Rd	at Neck Yoke Rd		Intersection Improvement	$ 50,000
26	Sheridan Lake Rd	at Dunsmore Rd		Intersection Improvement	$ 400,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
27	I-90	at Stagestop Rd		Interchange	$ 17,250,000
28	I-90	at Deadwood Ave		Interchange	$ 3,250,000
29	US 16	at Catron Blvd		Interchange	$ 32,000,000
30	Haines Ave	Haines Ave	Kathryn Ave	Intersection Improvement	$ 3,000,000
31	Haines Ave	Haines Ave	Country Rd	Intersection Improvement	$ 3,000,000
32	Memorial Park	Memorial Park	Omaha St	Intersection Improvement	$ 300,000
33	E St Patrick St	E St Patrick St	Elm Ave	Intersection Improvement	$ 300,000
34	W Omaha St	W Omaha St	Canal St	Intersection Improvement	$ 300,000
35	W Main St	at Mountain View Rd		Safety Improvements	$ 50,000
36	W Main St	W Main St	Jackson Blvd	Intersection Improvement	$ 50,000
37	E North St	E North St	N Cambell St	Intersection Improvement	$ 300,000
38	5th St	5th St	Main St	Intersection Improvement	$ 350,000
39	Main St	at Mount Rushmore Rd		Safety Improvements	$ 350,000
40	5th St	at E St Patrick st		Safety Improvements	$ 350,000
41	East Blvd	East Blvd	Omaha St	Intersection Improvement	$ 350,000
42	St Joseph St	at Mount Rushmore Rd		Safety Improvements	$ 300,000
43	Cheyenne Blvd	at Elk Vale Rd		Intersection Improvement	$ 300,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
44	North St	at Eglin St		Intersection	$ 300,000
44	Three Flags Lane	Norman Ave	Erickson Ranch Rd	New Corridor	$ 4,540,821
45	Three Flags Lane	Norman Ave	Erickson Ranch Rd	New Corridor	$ 4,247,429
46	Disk Dr	Mt Carmel St	Haines Ave	New Corridor	$ 150,000
47	Disk Dr	Mt Carmel St	Haines Ave	New Corridor	$ 150,000
48	Disk Dr	Mt Carmel St	Haines Ave	New Corridor	$ 150,000
49	Bunker Rd	Disk Dr	Mall Dr	New Corridor	$ 1,400,000
50	Disk Dr	Mt Carmel St	Haines Ave	New Corridor	$ 2,550,000
51	Hidden Valley Rd	SD 231	SD 445	New Corridor	$ 1,650,000
52	Hidden Valley Rd	SD 231	SD 445	New Corridor	$ 3,650,000
53	Lien St Extension	to SD 231		New Corridor	$ 3,812,056
54	Degeest Dr	Cheyenne Blvd	I-90	New Corridor	$ 1,050,000
55	I-90	at Exit 46 / Elk Creek		Interchange	$ 20,000,000
56	Cheyenne Blvd	US 16	Degeest Dr	New Corridor	$ 2,050,000
57	Degeest Dr	Cheyenne Blvd	Bernice St	New Corridor	$ 4,950,000
58	Degeest Dr	Berniece St	Anamosa St Extension	New Corridor	$ 1,350,000
59	Turbine Dr	Eglin St	Philadelphia St	New Corridor	$ 2,150,000
60	Turbine Dr	Philadelphia St	Anamosa St	New Corridor	$ 2,750,000
61	Concourse Dr	Philadelphia St	Anamosa St	New Corridor	$ 2,700,000
62	Valley Dr	N Creek Dr	Anamosa St Extension	New Corridor	$ 2,650,000
63	Valley Dr	N Creek Dr	Anamosa St Extension	New Corridor	$ 1,150,000
64	Valley Dr	Philadelphia St	Anamosa St	New Corridor	$ 1,850,000
65	Sturgis Rd	W Chicago	Pine Hills Dr	Capacity Improvement	$ 3,300,000
66	Hwy 1416	I-90	Cottonwood Dr	Reconstruction / Reconfiguration	$ 30,000,000
67	Philadelphia St	Anamosa St	Valley Dr	New Corridor	$ 2,300,000
68	Philadelphia St	Valley Dr	Concourse Dr	New Corridor	$ 2,800,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
69	Philadelphia St	east of Concourse Dr		New Corridor	$ 600,000
70	Philadelphia St	Turbine Dr	Elk Vale Rd	New Corridor	$ 550,000
71	Philadelphia St	west of Turbine Dr		New Corridor	$ 1,250,000
72	E Anamosa St Extension	Philadelphia St	Valley Dr	New Corridor	$ 2,650,000
73	E Anamosa St Extension	east of Menards		New Corridor	$ 550,000
74	E Anamosa St Extension	west of Philadelphia St		New Corridor	$ 400,000
76	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 250,000
77	US 16	Catron Blvd	Tower Rd	Capacity Improvement	$ 14,350,000
78	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 910,000
79	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 2,470,000
80	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 1,200,000
81	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 450,000
82	E Anamosa St Extension	west of Degeest Dr	Caputa Loop Extension	New Corridor	$ 600,000
83	E Anamosa St Extension	east of Elk Vale Rd	Caputa Loop Extension	New Corridor	$ 850,000
84	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 350,000
85	E Anamosa St Extension	west of E 53rd St	Caputa Loop Extension	New Corridor	$ 2,500,000
86	E Anamosa St Extension	east of Degeest Dr	Caputa Loop Extension	New Corridor	$ 2,500,000
87	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 4,900,000
88	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 5,150,000
89	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 1,300,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
90	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 1,300,000
91	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 1,300,000
92	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 1,300,000
93	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 5,100,000
94	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 5,000,000
95	E Anamosa St Extension	E Anamosa St	Caputa Loop Extension	New Corridor	$ 5,000,000
96	Caputa Loop Extension	E Anamosa St Extension	Caputa Loop	New Corridor	$ 5,050,000
97	Caputa Loop Extension	E Anamosa St Extension	Caputa Loop	New Corridor	$ 10,300,000
98	Caputa Loop Extension	E Anamosa St Extension	Caputa Loop	New Corridor	$ 5,450,000
99	Caputa Loop Extension	E Anamosa St Extension	Caputa Loop	New Corridor	$ 5,450,000
100	Caputa Loop Extension	E Anamosa St Extension	Caputa Loop	New Corridor	$ 5,450,000
101	Anderson Rd	Longview Rd	E Anamosa Extension	New Corridor	$ 3,398,858
102	Anderson Rd	Longview Rd	E Anamosa Extension	New Corridor	$ 5,050,000
103	Anderson Rd	Longview Rd	E Anamosa Extension	New Corridor	$ 3,500,000
104	Anderson Rd	Longview Rd	E Anamosa Extension	New Corridor	$ 1,500,000
105	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 900,000
106	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 900,000
107	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 2,550,000
108	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 2,500,000
109	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 4,950,000
110	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 5,100,000
111	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 5,000,000
112	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 5,000,000
113	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 5,000,000
114	New Road	west of Twilight Dr	154th Ave	New Corridor	$ 5,000,000
115	Carlin St Extension	Crane Dr		New Corridor	$ 2,500,000
116	Carlin St Extension	Crane Dr		New Corridor	$ 1,250,000
117	Carlin St Extension	Crane Dr		New Corridor	$ 1,300,000
118	Romel Dr	Anderson Rd	Long View Rd	New Corridor	$ 2,000,000
119	Romel Dr	Anderson Rd	Long View Rd	New Corridor	$ 2,850,000
120	Quarter Horse Dr	Radar Hill Rd	Mercury Dr	New Corridor	$ 2,350,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
121	Quarter Horse Dr	Radar Hill Rd	Mercury Dr	New Corridor	$ 4,450,000
122	Quarter Horse Dr	Radar Hill Rd	Mercury Dr	New Corridor	$ 1,250,000
123	Quarter Horse Dr	Radar Hill Rd	Mercury Dr	New Corridor	$ 1,100,000
124	Quarter Horse Dr	Radar Hill Rd	Mercury Dr	New Corridor	$ 750,000
125	Quarter Horse Dr	Radar Hill Rd	Mercury Dr	New Corridor	$ 750,000
126	New Road	Quarter Horse Dr	west of Candlelight Dr	New Corridor	$ 2,891,781
127	New Road	Long View Rd	Quarter Horse Dr	New Corridor	$ 1,607,290
128	Radar Hills Dr Extension	Radar Hill Rd	south of Ellsworth Rd	New Corridor	$ 4,900,000
129	Ellsworth Rd Extension	Edelweiss Ln	south of Ellsworth Rd	New Corridor	$ 3,300,000
130	New Road	Sunnydale Rd	Airport Rd	New Corridor	$ 6,500,000
131	New Road	Sunnydale Rd	Airport Rd	New Corridor	$ 4,300,000
132	New Road	Sunnydale Rd	Airport Rd	New Corridor	$ 1,300,000
133	New Road	Sunnydale Rd	Airport Rd	New Corridor	$ 1,300,000
134	New Road	Sunnydale Rd	Airport Rd	New Corridor	$ 4,950,000
135	New Road	Sunnydale Rd	Airport Rd	New Corridor	$ 5,650,000
136	New Road	Highway 14-16	north of 154th Ave	New Corridor	$ 2,350,000
137	New Road	Highway 14-17	north of 154th Ave	New Corridor	$ 2,350,000
138	New Road	Highway 14-18	north of 154th Ave	New Corridor	$ 8,950,000
139	New Road	Highway 14-19	north of 154th Ave	New Corridor	$ 4,200,000
140	154th Ave	east of Caputa Loop		New Corridor	$ 4,950,000
141	154th Ave	east of Caputa Loop		New Corridor	$ 5,050,000
142	154th Ave	east of Caputa Loop		New Corridor	$ 5,050,000
143	154th Ave	east of Caputa Loop		New Corridor	$ 5,000,000
144	154th Ave	east of Caputa Loop		New Corridor	$ 4,250,000
145	154th Ave	east of Caputa Loop		New Corridor	$ 4,250,000
146	Dawkins Rd	154th Ave	SD 44	New Corridor	$ 2,050,000
147	Dawkins Rd	154th Ave	SD 44	New Corridor	$ 2,050,000
148	Dawkins Rd	154th Ave	SD 44	New Corridor	$ 2,050,000
149	Dawkins Rd	154th Ave	SD 44	New Corridor	$ 2,050,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
150	Dawkins Rd	154th Ave	SD 44	New Corridor	$ 2,050,000
151	New Road	west of 154th Ave	SD 44	New Corridor	$ 5,000,000
152	New Road	west of 154th Ave	SD 44	New Corridor	$ 5,000,000
153	New Road	west of 154th Ave	SD 44	New Corridor	$ 5,050,000
154	New Road	west of 154th Ave	SD 44	New Corridor	$ 5,050,000
155	New Road	west of 154th Ave	SD 44	New Corridor	$ 4,350,000
156	New Road	Erickson Ranch Rd	Haines Ave	New Corridor	$ 5,100,000
157	New Road	Erickson Ranch Rd	Haines Ave	New Corridor	$ 6,450,000
158	New Road	Haines Ave	143rd Ave	New Corridor	$ 7,781,090
159	Antelope Creek Rd	Dawkins Rd	SD 44	New Corridor	$ 1,786,967
160	New Road	SD 44	south of 151st Ave	New Corridor	$ 2,500,000
161	New Road	SD 44	south of 151st Ave	New Corridor	$ 5,050,000
162	New Road	SD 44	south of 151st Ave	New Corridor	$ 5,000,000
163	New Road	SD 44	south of 151st Ave	New Corridor	$ 5,050,000
164	New Road	SD 44	south of 151st Ave	New Corridor	$ 5,050,000
165	New Road	SD 44	south of 151st Ave	New Corridor	$ 4,550,000
166	New Road	Long View Rd	south of Spruce Dr	New Corridor	$ 2,550,000
167	New Road	Long View Rd	south of Spruce Dr	New Corridor	$ 5,050,000
168	New Road	Long View Rd	south of Spruce Dr	New Corridor	$ 2,500,000
169	New Road	Long View Rd	south of Spruce Dr	New Corridor	$ 450,000
170	New Road	Long View Rd	south of Spruce Dr	New Corridor	$ 450,000
171	New Road	154th Ave	east of Rapid City Airport	New Corridor	$ 6,000,000
172	New Road	154th Ave	east of Rapid City Airport	New Corridor	$ 4,000,000
173	New Road	154th Ave	east of Rapid City Airport	New Corridor	$ 5,000,000
174	New Road	233rd St	east of Rapid City Airport	New Corridor	$ 7,500,000
175	New Road	233rd St	east of Rapid City Airport	New Corridor	$ 2,550,000
176	New Road	233rd St	east of Rapid City Airport	New Corridor	$ 5,050,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
177	New Road	north of Caputa Loop	154th Ave	New Corridor	$ 2,500,000
178	New Road	north of Caputa Loop	154th Ave	New Corridor	$ 5,000,000
179	Reservoir Rd extension	Lamb Rd	Antelope Creek Rd	New Corridor	$ 5,150,000
180	Reservoir Rd extension	Lamb Rd	Antelope Creek Rd	New Corridor	$ 9,750,000
181	New Road	Reservoir Rd extension	Bradsky Rd	New Corridor	$ 7,500,000
182	New Road	Reservoir Rd extension	Bradsky Rd	New Corridor	$ 6,950,000
183	New Road	Reservoir Rd extension	Bradsky Rd	New Corridor	$ 5,050,000
184	Bradsky Rd extension	Bradsky Rd	Antelope Creek Rd	New Corridor	$ 6,500,000
185	Bradsky Rd extension	Bradsky Rd	Antelope Creek Rd	New Corridor	$ 2,500,000
186	Bradsky Rd extension	Bradsky Rd	Antelope Creek Rd	New Corridor	$ 2,500,000
187	Bradsky Rd extension	Bradsky Rd	Antelope Creek Rd	New Corridor	$ 9,950,000
188	Bradsky Rd extension	Antelope Creek Rd	St Germaine Rd	New Corridor	$ 9,050,000
189	Bradsky Rd extension	Antelope Creek Rd	St Germaine Rd	New Corridor	$ 600,000
190	Bradsky Rd extension	Antelope Creek Rd	St Germaine Rd	New Corridor	$ 600,000
191	Bradsky Rd extension	Antelope Creek Rd	St Germaine Rd	New Corridor	$ 600,000
192	New Road	Reservoir Rd	south of Airport Rd	New Corridor	$ 7,550,000
193	New Road	Reservoir Rd	south of Airport Rd	New Corridor	$ 7,550,000
194	Airport Rd	SD 44	south of Airport Rd	New Corridor	$ 1,450,000
195	Airport Rd	SD 44	south of Airport Rd	New Corridor	$ 1,450,000
196	New Road	southwest of Redemption Rd		New Corridor	$ 5,300,715
197	New Road	Antelope Creek Rd	west of Brahmn Ln	New Corridor	$ 7,250,000
198	New Road	Antelope Creek Rd	west of Brahmn Ln	New Corridor	$ 7,250,000
199	New Road	Antelope Creek Rd	west of Brahmn Ln	New Corridor	$ 1,300,000
200	New Road	Antelope Creek Rd	west of Brahmn Ln	New Corridor	$ 1,300,000
201	New Road	south of Bradsky Rd	Antelope Creek Rd	New Corridor	$ 7,150,000
202	New Road	south of Bradsky Rd	Antelope Creek Rd	New Corridor	$ 7,500,000
203	E Minnesota St extension	Vinecliff Dr	Reservoir Rd	New Corridor	$ 2,750,000
204	E Minnesota St extension	Vinecliff Dr	Reservoir Rd	New Corridor	$ 2,400,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
205	E Minnesota St extension	Vinecliff Dr	Reservoir Rd	New Corridor	$ 3,100,000
206	San Francisco St	Cambell St	Creek Dr	New Corridor	$ 500,000
207	San Francisco St	Cambell St	Creek Dr	New Corridor	$ 750,000
208	Fairmont Blvd	Cambell St	S Valley Dr	New Corridor	$ 750,000
209	Fairmont Blvd	Cambell St	S Valley Dr	New Corridor	$ 550,000
210	Fairmont Blvd	Cambell St	S Valley Dr	New Corridor	$ 1,600,000
211	Fairmont Blvd	Cambell St	S Valley Dr	New Corridor	$ 2,300,000
212	New Road	south of Fairmont Blvd	east of US 16	New Corridor	$ 3,050,000
213	Creek Dr	Minnesota St	Elk Vale Rd	New Corridor	$ 2,500,000
214	Creek Dr extension	US 16	Old Folsom Rd	New Corridor	$ 3,550,000
215	Creek Dr extension	US 16	Old Folsom Rd	New Corridor	$ 2,050,000
216	SD 79	north of SD 79 / US 16 interchange	E Minnesota St	New Corridor	$ 900,000
217	Minnesota Ave	west of Creek Dr		New Corridor	$ 700,000
218	Minnesota Ave	East of Cambell St		New Corridor	$ 2,350,000
219	Minnesota Ave	Creek Dr	Elk Vale Rd	New Corridor	$ 2,600,000
220	Elm Ave			New Corridor	$ 1,850,000
221	Elm Ave			New Corridor	$ 1,150,000
226	Les Hollers Rd			New Corridor	$ 2,600,000
227	Les Hollers Rd			New Corridor	$ 2,750,000
228	New Road	224th St	225th St	New Corridor	$ 2,400,000
229	New Road	224th St	225th St	New Corridor	$ 2,400,000
230	New Road	225th St	Country Rd	New Corridor	$ 1,650,000
231	New Road	225th St	Country Rd	New Corridor	$ 1,650,000
232	New Road	Country Rd	Seger Dr	New Corridor	$ 2,200,000
233	New Road	Country Rd	Seger Dr	New Corridor	$ 3,150,000
234	New Road	Seger Dr	Tish Blvd	New Corridor	$ 1,300,000
235	South Growth Area Road			New Corridor	$ 3,700,000
236	South Growth Area Road			New Corridor	$ 2,450,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
237	South Growth Area Road	south of Elk Vale Rd		New Corridor	$ 2,600,000
238	5th Street Extension			New Corridor	$ 2,500,000
239	5th Street Extension	south growth area roads		New Corridor	$ 3,650,000
240	5th Street Extension			New Corridor	$ 3,500,000
241	South Growth Area Road			New Corridor	$ 3,600,000
242	South Growth Area Road			New Corridor	$ 100,000
243	South Growth Area Road			New Corridor	$ 100,000
244	South Growth Area Road	US 16	SD 44	New Corridor	$ 10,350,000
247	Neel St	Sweetbriar St	north of Berniece St	New Corridor	$ 1,850,000
248	Neel St	Sweetbriar St	north of Berniece St	New Corridor	$ 500,000
249	Neel St	Sweetbriar St	north of Berniece St	New Corridor	$ 800,000
250	South Growth Area Road	Spring Creek Rd	east of Sammis Trl	New Corridor	$ 12,197,920
251	Freude Lane	Morgen Rd	Coyote Trl	New Corridor	$ 2,057,592
253	225th St extension	143rd Ave	W Nike Rd	New Corridor	$ 2,600,000
254	New Road	south of W Nike Rd	Seger Dr	New Corridor	$ 5,250,000
255	New Road	south of W Nike Rd	Seger Dr	New Corridor	$ 1,750,000
256	New Road	south of W Nike Rd	Seger Dr	New Corridor	$ 850,000
257	New Road	south of W Nike Rd	Seger Dr	New Corridor	$ 850,000
258	New Road	Neva Way	N Elk Vale Rd	New Corridor	$ 2,600,000
259	New Road	Neva Way	N Elk Vale Rd	New Corridor	$ 2,550,000
260	New Road	Neva Way	N Elk Vale Rd	New Corridor	$ 2,500,000
261	New Road	Neva Way	N Elk Vale Rd	New Corridor	$ 2,300,000
262	New Road	Country Rd	west of N Elk Vale Rd	New Corridor	$ 2,100,000
263	New Road	Neva Way	N Elk Vale Rd	New Corridor	$ 2,100,000
264	New Road	Neva Way	N Elk Vale Rd	New Corridor	$ 3,000,000
265	New Road	N Elk Vale Rd	Dyess Ave	New Corridor	$ 3,000,000

Project ID	Corridor	From	To	Project Type	Project Cost (2020$)
266	New Road	N Elk Vale Rd	Dyess Ave	New Corridor	$ 2,100,000
267	E Mall Dr	N Elk Vale Rd	west of N Elk Vale Rd	New Corridor	$ 326,345

Appendix I.
Performance Report

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APPENDIX I: SYSTEM PERFORMANCE REPORT

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Tables

Introduction

The Moving Ahead for Progress in the 21st Century Act (MAP-21), adopted in 2012, established new requirements for the transportation federal aid program. These requirements implemented performance management and performance-based planning and programming to ensure federal transportation funds are invested in the most efficient manner possible. The Fixing America's Surface Transportation (FAST Act) of 2015 continued the use of performance management and performance-based planning and programming set forth in MAP-21 while introducing some minor changes. The changes set forth in the FAST Act require state Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to apply transportation performance management techniques to their federally required transportation planning and programming activities. The purpose of these performance management techniques is to develop a systematic and objectives-driven approach to transportation planning and programming that supports national goals for the federal-aid highway system and public transportation programs.

The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) issued the Final Rule on Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning (The Planning Rule) in May 2016.[1] The Planning Rule mandates states, and MPOs adhere to the planning and performance management provisions of MAP-21 and the FAST Act.

The Planning Rule stipulates that MPOs and state DOTs must coordinate and agree upon the selection of performance measures and targets, and MPOs must publish a System Performance Report as part of their metropolitan transportation planning process. Within the state of South Dakota, MPOs are able to establish their own performance measures or targets, or adopt the statewide measures and targets established by the South Dakota Department of Transportation (SDDOT).

The Rapid City Area MPO (RCAMPO) has elected to support the performance measures and targets established by SDDOT. In choosing to support SDDOT performance measures and targets, RCAMPO coordinates with SDDOT on defining the performance measures and targets for:

1. Safety Performance Management (PM 1)
2. Pavement and Bridge Performance Measures (PM 2)
3. System Performance (PM 3)

The System Performance Report

The role of the System Performance Report is to establish a baseline for performance management that RCAMPO will update with each successive Metropolitan Transportation Plan. Future updates to the System Management Report will evaluate condition and performance of

[1] Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning, https://www.federalregister.gov/documents/2016/05/27/2016-11964/statewide-and-nonmetropolitan-transportation-planning-metropolitan-transportation-planning

the transportation system as related to Safety, Pavement and Bridge Performance, and System Performance. The System Performance Report also includes transit asset performance and targets reported to the FTA on an ongoing basis.

PM 1: Highway Safety

Highway safety is the first national performance goal area for which states and MPOs were required to set performance targets. The Safety Performance Measures Final Rule supports the Highway Safety Improvement Program (HSIP). The highway safety performance measures carries out the HSIP by assessing the number of motor vehicle crash-related serious injuries and fatalities, number of serious injuries and fatalities of non-motorized users, and serious injuries and fatalities per vehicle miles traveled (VMT).

The Safety Performance Management Final Rule established five performance measures for states and MPOs to monitor and report on for all public roadways:

1. Number of fatalities
2. Rate of fatalities per 100 million VMT
3. Number of serious injuries
4. Rate of serious injuries per 100 million VMT
5. Combined number of non-motorized fatalities and serious injuries

States annually report safety performance to the FHWA as 5-year rolling averages for each of the five safety performance measures.

RCAMPO Safety Performance

RCAMPO elected to support the safety performance targets established by SDDOT. The current targets set are for calendar year 2020 and shown in Table 1. Targets for calendar years 2018 and 2019 were included in Table 1 for reference (note that the targets represent 5-year rolling averages based on statewide crash data).

Table 1: Highway Safety (PM1) Targets and Performance for the RCAMPO

Performance Measure	2018 Statewide Performance Target	2019 Statewide Performance Target	2020 Statewide Performance Target	MPO Performance (5-Year Average) 2014-2018
Number of Fatalities	≤130.0	≤127.4	≤126.4	9.8
Rate of Fatalities per 100 Million Vehicle Miles Traveled	≤1.34	≤1.31	≤1.28	1.09
Number of Serious Injuries	≤759.0	≤703.4	≤667.4	71.2
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled	≤7.9	≤6.74	≤6.74	7.92
Combined Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	≤43.0	≤43.0	≤43.0	11.6

Source: South Dakota Department of Transportation, South Dakota Department of Public Safety

Strategies to Maintain and Improve Highway Safety Performance

Strategies that support PM 1 include review of crash frequency and crash rate intersections to identify potential safety countermeasures for intersections demonstrating safety issues. Appendix D provided some specific countermeasures to consider. Some of the common safety strategies that were identified were to:

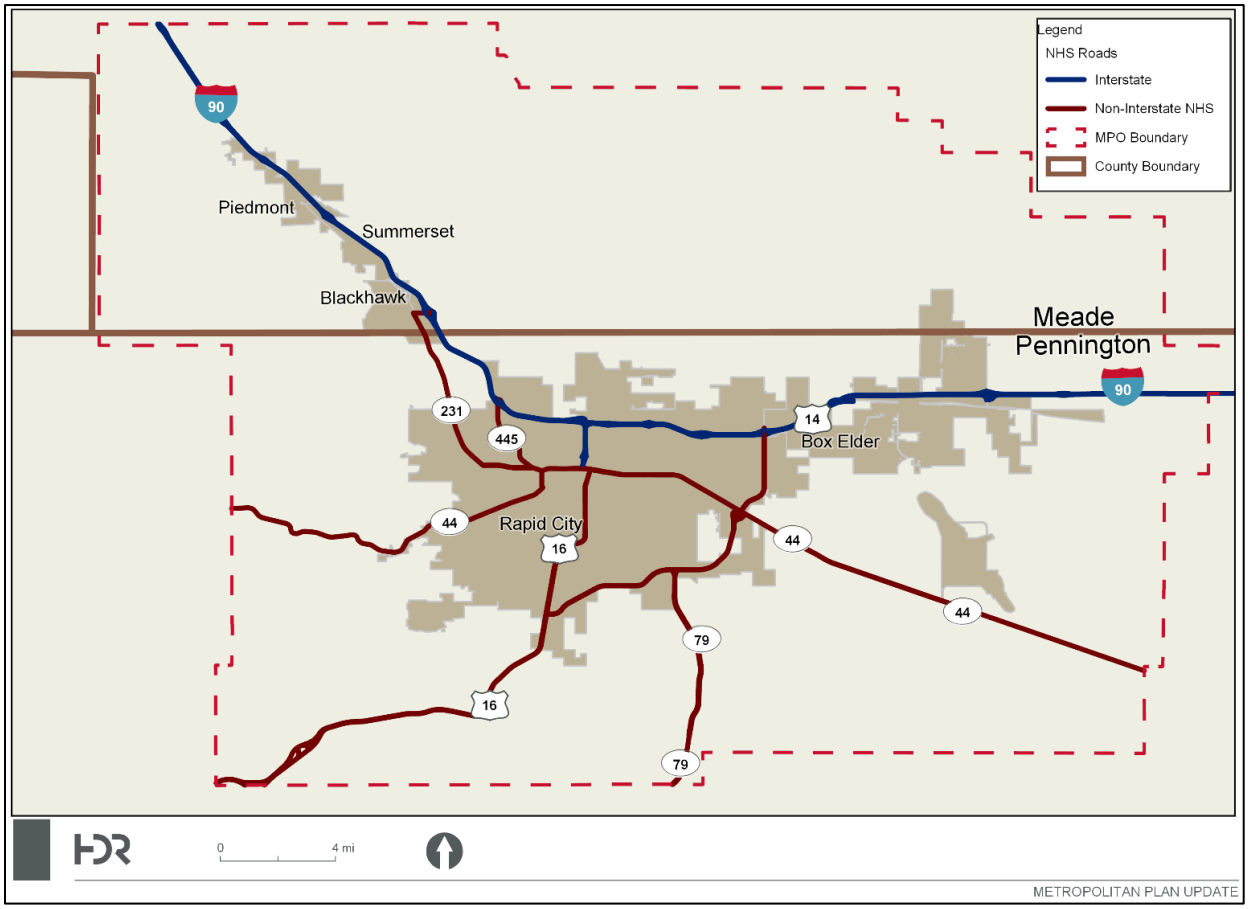
- Improve signal head visibility
- Add 3-inch yellow retroreflective sheeting to signal backplates
- Implement systemic signing and visibility improvements at signalized intersections

It is also important to prioritize and construct transportation improvements that support the statewide Highway Safety performance measures and SDDOT's Strategic Highway Safety Plan (SHSP). State safety projects are programmed for locations that record high frequencies of fatal and serious injury crashes and demonstrate potential for the highest rate of return on investment through reduced crashes. Through continually improving performance for PM 1, the MPO can thus demonstrate commitment to improving regional highway safety performance and remain competitive receiving funding for safety projects.

PM 2: Pavement and Bridge Condition

The FHWA published the Final Rule regarding state and MPO performance measures for pavement and bridge management in May 2017. This rule is concerned with pavement and bridge assets located on the National Highway System (NHS) routes. The aim of the rule is to ensure state DOT performance targets are based on asset management analysis and align investment strategies with the goal of achieving a state of good repair over their capital assets. State DOTs are granted the authority to establish additional measures and targets amenable to their own asset management objectives. Figure 1 shows NHS routes in the RCAMPO planning area.

Figure 1: RCAMPO Interstate and non-Interstate NHS Routes



The Pavement Performance Measures established in the Final Rule are:

1. Percent of Interstate pavements in Good condition
2. Percent of Interstate pavements in Poor condition
3. Percent of non-Interstate NHS pavements in Good condition
4. Percent of non-Interstate NHS pavements in Poor condition

Bridge Performance Measures established in the Final Rule are:

1. Percent of NHS bridges by deck area in Good condition
2. Percent of NHS bridges by deck area in Poor condition

State DOTs are required to report pavement and bridge conditions over a 4-year performance period, while establishing 2- and 4-year performance targets for each PM2 measure. The current 2-year targets pertain to expected asset conditions at the end of 2019, while the 4-year targets are for expected asset condition at the end of 2021.

Specific timing for state DOTs pavement and bridge condition targets are:

- Percent of Interstate pavements in Good and Poor condition: 4-year target

- Percent of non-Interstate NHS pavements in Good and Poor condition: 2-year and 4-year targets
- Percent of NHS bridges by deck area in Good and Poor condition: 2-year and 4-year targets

RCAMPO Pavement and Bridge Performance

RCAMPO elected to support SDDOT's pavement and bridge performance targets and coordinated with the DOT during the development of these targets.

Pavement. SDDOT's statewide performance targets for Interstate and non-Interstate NHS pavements are listed in Table 2. Included in Table 2 are pavement conditions for the RCAMPO region, based on data recorded for Fiscal Year 2019.

Table 2: Pavement Conditions for the RCAMPO Interstate and non-Interstate NHS

Pavement Condition	2018 Performance Target	Observed for RCAMPO (FY2019)
Good or Excellent (Interstate)	≥62.6%	97.3%
Poor (Interstate)	≤2.4%	0.1%
Good or Excellent (Non-Interstate NHS)	≥41.5%	92.9%
Poor (Non-Interstate NHS)	≤1.5%	1.5%

Source: South Dakota Department of Transportation

Bridges. Bridge condition performance measure targets established by SDDOT are presented in Table 3. Table 3 also includes bridge condition performance for RCAMPO, based on 2019 data from the National Bridge Inventory.

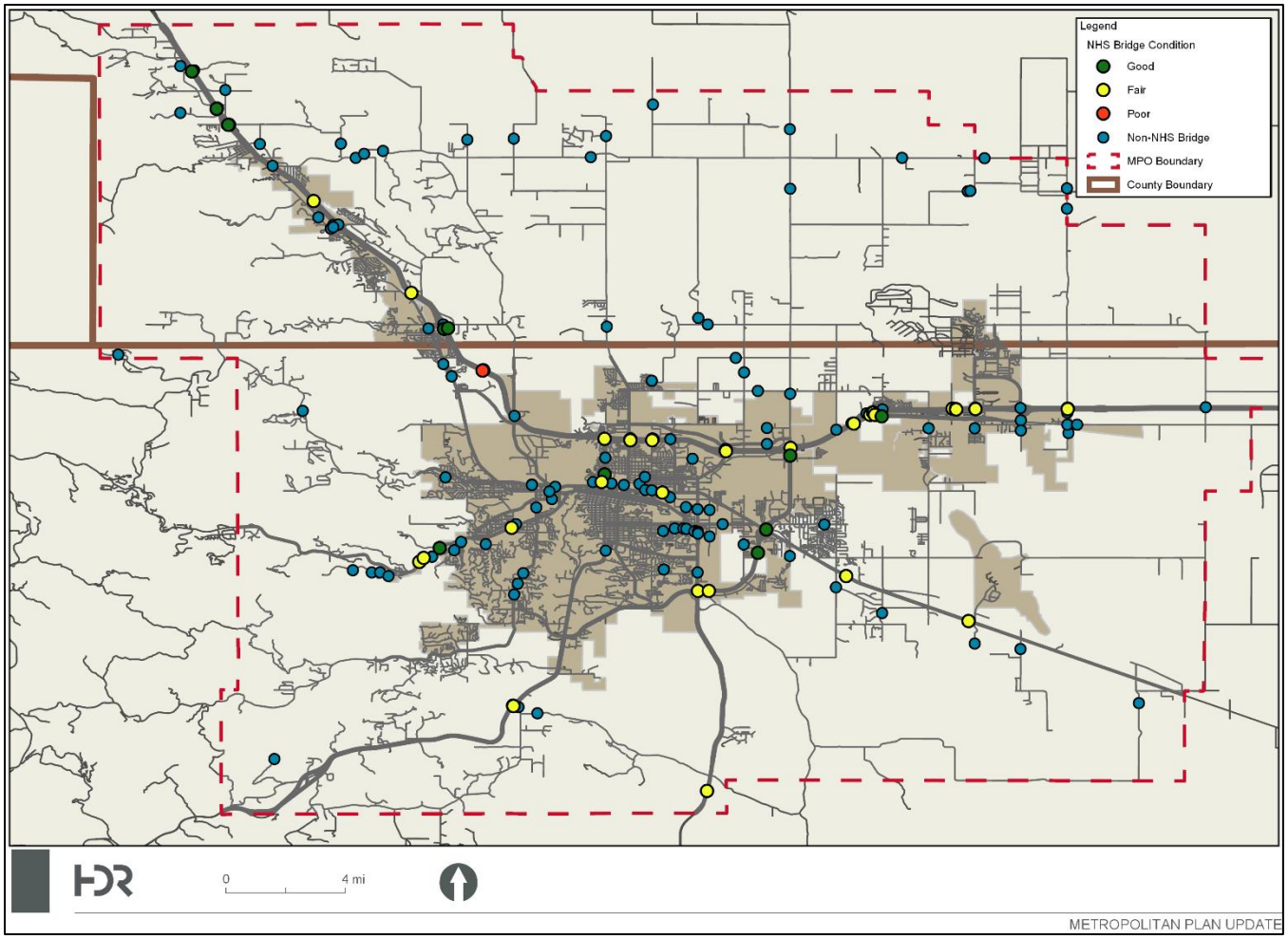
Table 3: Bridge Condition (PM2) Targets and Performance for the RCAMPO

Bridge Condition	2018 Performance Target	RCAMPO Observed (2019)
Good	≥20%	28%
Poor	≤5%	2%

Source: National Bridge Inventory

Figure 2 shows the locations of all bridges and the conditions of all NHS bridges within the RCAMPO boundary.

Figure 2: Bridge Locations and Conditions for the RCAMPO Region



Strategies to Maintain and Improve Pavement and Bridge Performance

Strategies that support PM 2 include:

- Planning for and identification of sufficient resources for managing assets to maintain pavement and bridges within performance targets. Interagency coordination between member agencies to identify highest priority pavement and bridge needs so that repair and/or replacement of deficient assets is prioritized.
- Pavement management systems provide detailed information on pavement conditions and investment priorities, and can compare the life-cycle costs of a major mid-cycle rehabilitation compared to routine surface maintenance.
- For state routes, SDDOT has a Transportation Asset Management Plan (TAMP) plan in place and Pavement Condition Monitoring system. All public bridges are included in the National Bridge Inventory (NBI) to gain an understanding of bridge conditions and priorities.

PM 3: System Operations Performance

The FHWA published the Final Rule regarding state and MPO performance measures for the performance of the Interstate and non-Interstate NHS in May 2017. This rule is concerned with the performance of Interstate and non-Interstate NHS facilities as it relates to carrying out the National Highway Performance Program , as well as the movement of freight on the Interstate system in accordance with the National Highway Freight Program .

The Interstate and non-Interstate NHS Performance Measures established in the Final Rule are:

1. Percent of reliable person-miles traveled on the Interstate
2. Percent of reliable person-miles traveled on the non-Interstate NHS
3. Percentage of Interstate system mileage providing for reliable truck travel time, or Truck Travel Time Reliability Index

State DOTs are required to report Interstate and non-Interstate NHS performance over a 4-year period. The Final Rule for PM3 requires state DOTs to establish 2-year and 4-year performance targets for each measure; the current 2-year targets relate to expected performance at the end of 2019, while the current 4-year targets represent expected performance at the end of 2021.

Specific timing for state DOTs Interstate and non-Interstate NHS performance targets are:

- Percent of person-miles on the Interstate system that are reliable: 2-year and 4-year targets
- Percent of person-miles on the non-Interstate NHS that are reliable: 4-year targets
- Truck Travel Time Reliability: 2-year and 4-year targets

RCAMPO Interstate and non-Interstate NHS Performance

RCAMPO has elected to support SDDOT's Interstate and non-Interstate performance targets and will coordinate with the DOT during the development of these targets. Table 4 shows the SDDOT and RCAMPO targets for the PM3.

Table 4: Highway Operations (PM3) Targets and Performance for the RCAMPO

Performance Measure	2018 Performance Target	MPO Observed (2018)
Percent of reliable person-miles traveled on the Interstate	≥90%	99%
Percent of reliable person-miles traveled on the non-Interstate NHS	≥85%	98%
Truck Travel Time Reliability Index	≤1.5	1.24

Source: National Performance Management Research Data Set

The metric used for determining operational performance for passenger vehicles on the Interstate and non-Interstate is Level of Travel Time Reliability (LOTTR). A roadway segment is deemed reliable if the LOTTR is below 1.5 for each of the time periods require for reporting. Figure 3 shows the LOTTR for the Interstate and non-Interstate NHS in the MPO region for 2018 while Figure 4 shows the Truck Travel Time Reliability (TTTR) on the RCAMPO Interstate system for 2018.

Strategies to Maintain and Improve System Performance

Strategies that support PM 3 include:

- Identify transportation system management strategies in corridors with known reliability issues while utilizing the National Performance Management Research Dataset (NPMRDS) measures of LOTTR and TTTR to monitor annual reliability for the Interstate and NHS system.
- Use of the MPO's travel demand model to forecast emerging areas of congestion, and plan for projects that improve traffic operations and reliability.
- Plan for traffic incident management in the Rapid City area so that better management of system operations in the case of unforeseen and non-recurring congestion events can take place.

Figure 3: Interstate and non-Interstate NHS LOTTR, 2018

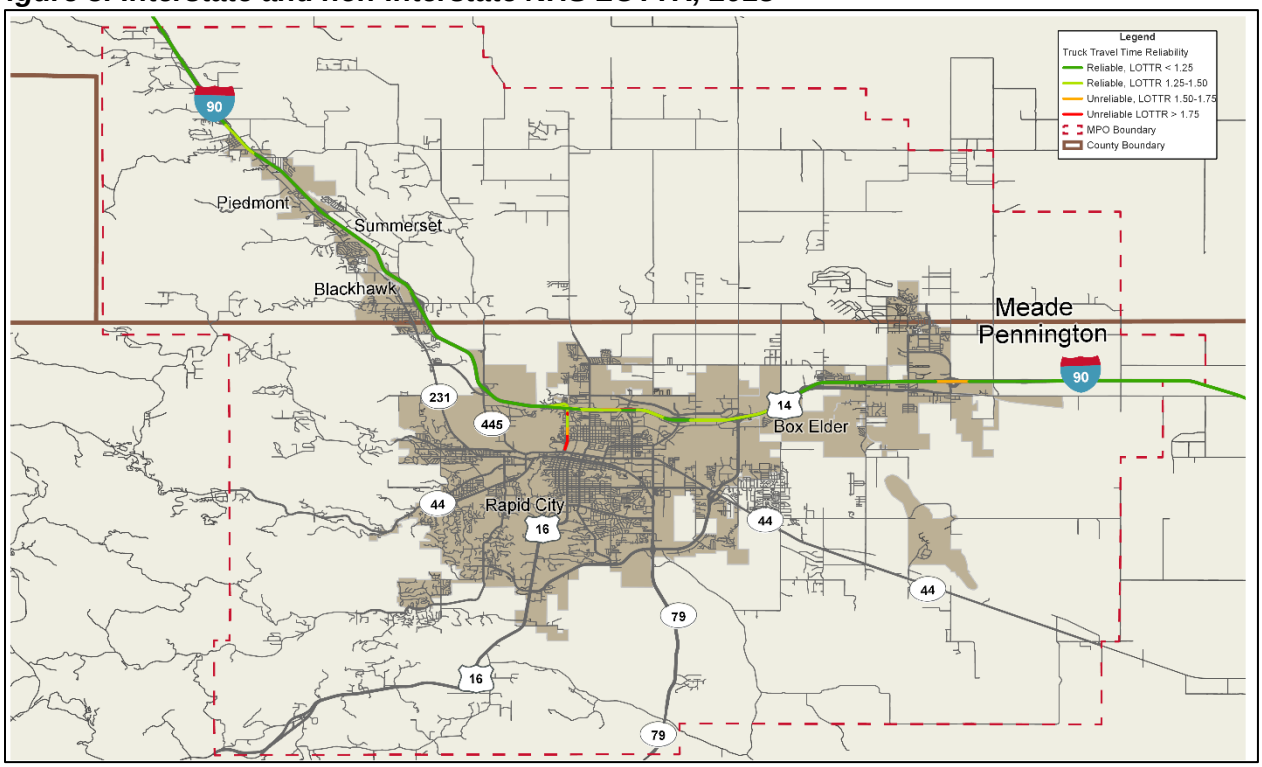
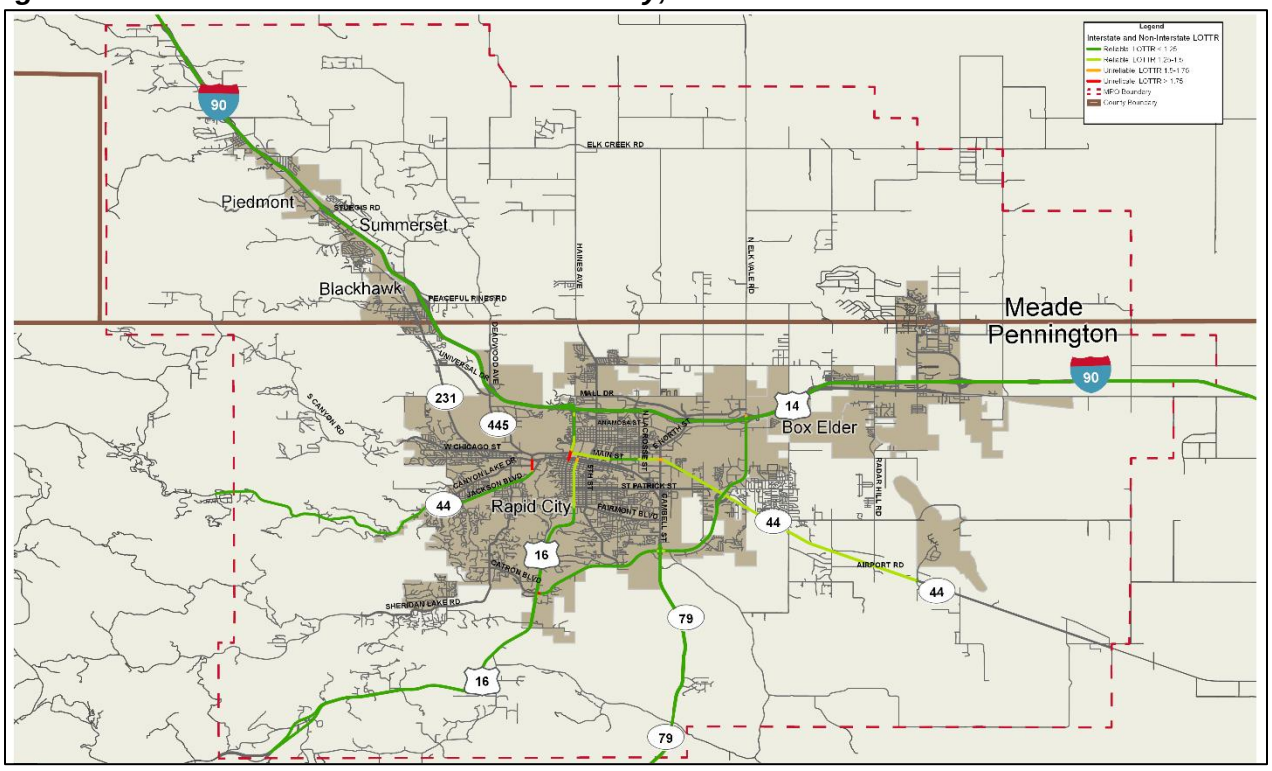


Figure 4: Interstate Truck Travel Time Reliability, 2018



Transit Asset Management

Public transit agencies receiving federal funding from FTA are required, under the Final Transit Asset Management (TAM) Rule that came into effect October 1, 2016, to develop TAM targets and report State of Good Repair (SGR) performance for their capital assets. The Final Rule defines TAM as "a strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively through the life cycle of such assets."[2]

The Final Rule on TAM requires public transit agencies receiving Chapter 53 funds to develop management plans and monitor performance for their public transportation assets, which include:

- Vehicles
- Equipment
- Facilities
- Other infrastructure

These public transit agencies are also required to set fiscal year performance targets and report SGR performance for each asset category on an annual basis. The TAM performance measures established by the FTA that approximate SGR for capital assets are listed in Table 5. These performance measures aid in quantifying the condition of assets, which in turn identifies appropriate targets that support and prioritize local funding.

Table 5. Transit Asset Management State of Good Repair Performance Measures

Asset Category	SGR Performance Measure
Rolling Stock	% of revenue vehicles exceeding Useful Life Benchmark (ULB)
Equipment	% of non-revenue service vehicles exceeding ULB
Facilities	% of facilities rated under 3.0 on the TERM scale
Infrastructure	% of track segments under performance restriction

Transit Asset Management Performance and Targets

Public transit agencies in South Dakota are categorized as Tier II by the FTA. This designation is given to small public transit providers with characteristics identified by the FTA. Tier II transit providers are able to collaborate on TAM planning and develop a group TAM plan in which collective performance measures and targets are reported for all participating agencies. All public transit agencies in South Dakota have elected to participate in a group TAM plan and report collective performance measures and targets.

The public transit agencies serving the RCAMPO region are:

- Rapid Transit System
- Prairie Hills Transit

[2] https://www.govinfo.gov/content/pkg/FR-2016-07-26/pdf/2016-16883.pdf

Table 6 lists the SGR targets for the public transit providers in the RCAMPO region. SDDOT does not report equipment or infrastructure performance for these agencies, as assets within these categories either are not owned by operators serving the MPO or were not purchased with federal funds.

Table 6: SGR Targets and Performance for Regional Public Transit Agencies

Performance Measure	2019 Target	2020 Target	2020 Performance
Rolling Stock (% of revenue vehicles exceeding ULB)	70% of revenue vehicles in SGR	72% of revenue vehicles in SGR	80% of revenue vehicles in SGR
Equipment (% of non-revenue service vehicles exceeding ULB)	Not Reported	Not Reported	Not Reported
Facilities (% of facilities rated under 3.0 on the TERM scale)	95% facilities rated 3.0 or better on the TERM scale	95% facilities rated 3.0 or better on the TERM scale	100% facilities rated 3.0 or better on the TERM scale
Infrastructure (% of track segments under performance restriction)	Not Reported	Not Reported	Not Reported

Source: South Dakota Department of Transportation

Rapid City Area MPO Performance Scorecard

Category	Performance Measure	2020 Target	MPO Performance	Status
Highway Safety/PM 1	Number of Fatalities	≤126.4	9.8*	-**
	Rate of Fatalities per 100 Million Vehicle Miles Traveled	≤1.28	1.09	Achieved
	Number of Serious Injuries	≤667.4	71.2*	-**
	Rate of Serious Injuries per 100 Million Vehicle Miles Traveled	≤6.74	7.92	Not Achieved
	Combined Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	≤43.0	11.6*	-**
Pavement and Bridge Condition/PM 2	Percent of Interstate pavements in Good or better condition	≥62.6%	97.3%	Achieved
	Percent of Interstate pavements in Poor condition	≤2.4%	0.1%	Achieved
	Percent of non-Interstate NHS pavements in Good or better condition	≥41.5%	92.9%	Achieved
	Percent of non-Interstate NHS pavements in Poor condition	≤1.5%	1.5%	Achieved
	Percent of NHS bridges by deck area in Good condition	≥20%	28%	Achieved
	Percent of NHS bridges by deck area in Poor condition	≤5%	2%	Achieved
System Performance/PM 3	Percent of reliable person-miles traveled on the Interstate	≥90%	99%	Achieved
	Percent of reliable person-miles traveled on the non-Interstate NHS	≥85%	98%	Achieved
	Truck Travel Time Reliability Index	≤1.5	1.24	Achieved
Transit Asset Management	Rolling Stock (% of revenue vehicles exceeding ULB)	80%	≥72%	Achieved
	Facilities (% of facilities rated under 3.0 on the TERM scale)	100%	≥95%	Achieved

*Based on 2014-2018 5-year crash data
**These are not achievable at the MPO-level, as the number of crashes is a statewide-target.