

# EXECUTIVE SUMMARY

The city of Eagle Mountain, along with Utah County, has experienced significant growth and development and is expected to continue in the future. Eagle Mountain's population growth from 2010 to 2021 was 21,415 people (105.75%). Current census data (2022) shows a population of just over 49,738. Mountainland Association of Governments (MAG) projections show the population growing to 152,500 in 2060.

The population growth is the 7<sup>th</sup> fastest in the state and the 3<sup>Rd</sup> fastest in the county. Eagle Mountain's population growth is high compared to other cities in Utah County. Due to city growth and the growth throughout the county, a comprehensive transportation plan must be developed and regularly maintained to combat the potential congestion caused by projected growth. This plan must incorporate the goals of the city of Eagle Mountain regarding the transportation systems within our jurisdiction and those regional facilities maintained by UDOT, UTA, Utah County, and neighboring communities.

### **Public Involvement**

Eagle Mountain City hosted a public comment period from July 14, 2021, to August 13, 2021, for the City's Transportation Master Plan update. Eagle Mountain City used an interactive GIS comment map as the primary method for public comment. The map allowed the public to identify a specific location to comment on proposed improvements to Eagle Mountain City. Eagle Mountain City received 29 total comments on the GIS comment map.

The city promoted the information regarding the public meeting and how to comment on the TMP through the City's communication channels, including the website, e-newsletter, Facebook page, and virtual signage near City Hall. The <u>Daily Herald</u> and <u>i84005.com</u> helped with news coverage on the overall Transportation Master Plan comment period and the official public open house.

A public open house was held on Wednesday, July 14, from 6-8 p.m. at Eagle Mountain City Hall. Those invited to the meeting were representatives from Eagle Mountain City, Saratoga Springs, Lehi City, UDOT, Utah County, and the Mountainland Association of Governments (MAG).

Information Boards were created and displayed at the public open house to provide details and context. Approximately 24 attendees participated in the meeting. The city received a total of three written comments from attendees at the meeting.

Following the public meeting, Eagle Mountain City produced videos with Mayor Westmoreland to post on Facebook to promote the comment period. Additionally, the public involvement team prepared informational Boards to display at the Pony Express Days at the beginning of the summer to help spread awareness of the upcoming public comment period.



January 2023



# **Roadway Network Conditions**

Transportation planning is a cooperative effort of state and local agencies. All urbanized areas throughout the country are separated into Metropolitan Planning Organizations (MPO). The MPO for Utah, Summit, and Wasatch Counties is called the Mountainland Association of Governments (MAG). The responsibility of MAG is to coordinate the transportation planning for these counties.

### Functional Classification and Level of Service

All vehicle trips include two distinct functions: mobility and land access; mobility and land access should share an inverse relationship; as mobility increases, land access decreases. The relative amounts of through and land-access services they provide classify street facilities. There are four primary classifications: Freeway/Expressway, Arterial, Collector, and Local Streets. As part of this TMP, the updated functional classification in Eagle Mountain includes the following roadway classifications:

- Pkwy (4 Lanes)
- Major Arterial Street (7 lanes)
- Major Arterial Street (5 lanes)
- Minor Arterial Street (4 Lanes)
- Major Collector Street (2 Lanes)
- Minor Collector Street (2 Lanes)
- Local (2 Lanes)

The LOS quantifies the performance of an existing street system (roadways and intersections). LOS serves as the traditional form of measurement of a roadway's functionality. The following elements determine the LOS, the number of lanes assigned to a section of road, the amount of traffic using the section of road, and the time of delay per vehicle traveling on the roadway and at intersections. Levels of service range from A (free flow where users are virtually unimpeded by other traffic on the road) to F (traffic exceeds the operating capacity of the road). In Eagle Mountain, LOS D is the minimum standard for roadways and intersections (80% of the roadway capacity).

### **Existing and Future Traffic Projections**

For the region, future traffic is modeled using a travel demand model. Results from the model will dictate future transportation improvements along the regionally significant streets (i.e., Pony Express Pkwy, Cedar Fort Road, etc.). The travel demand model uses land use and zoning for every city to estimate future traffic demand on the transportation system. MAG produces a Regional Transportation Plan (RTP) that indicates future projects within the MPO from this model.

The MAG RTP projects alone will not alleviate all future congestion in Eagle Mountain. The travel demand model needed updating to include specific data in Eagle Mountain to estimate the future demand on Eagle Mountain's roadway network. This model focuses on all streets in Eagle Mountain to find other roadway improvements outside the MAG RTP projects necessary in Eagle Mountain to alleviate congestion. The model was run for the 10-year conditions (2030) and the 30-year conditions (2050). A No-Build Scenario was run for both conditions. A No-Build scenario looks at what would happen to the roadway network if no improvements were completed (including the MAG RTP projects).

### **Roadway Improvements**

The output for each model is measured at a Level of Service for each roadway segment throughout the city. All roadway segments at LOS E or worse need capacity improvements. The timing of when each road segment transitions from LOS D to LOS E or worse (including local knowledge) determines the project



January 2023



priority. Using the outputs from the 10-year and 2050 conditions, all roadway segments that perform at LOS E or worse indicate roadways where improvements are necessary.

Eagle Mountain is not alone financially to improve its roadway system. Other financial assistance may come from MAG, UDOT, UTA, and private sources based on the project jurisdiction. This funding is not guaranteed, but judgment has been made for which projects will be eligible for funding.

The adoption of this TMP does not indicate Eagle Mountain's fiscal responsibility to complete all projects included in this TMP. The benefit of completing a TMP is to demonstrate to organizations such as UDOT and MAG that improvements are necessary and eligible to receive financial assistance on projects in the future. As projected growth is an estimated value, Eagle Mountain is not bound to complete projects included in this TMP if there is no need in the future. Projects were separated into a 10-year and 30-year window.

There are projects that conflict with the designated wildlife corridor area. For each project that conflicts with this area, coordination with the city will be required to ensure a proper mitigation is provided as identified on the Wildlife Corridor Conflict Map located in the <u>Appendix</u>. As these recommendations are updated based on development and growth, it is recommended to continually update this map to ensure everyone is up to date with current planning in the city.

### 10 Year Roadway Improvements (2021-2030)

Of the \$192,865,000 required from Eagle Mountain to build the expected roadway projects from 2019-2030, \$56,935,000 is eligible to be paid using impact fees. All projects included in the 10-year Capital Facilities Plan were assigned a project year based on expected development. Only the projects from 2021-2030 are impact fee eligible. For all impact fee eligible projects, reductions were calculated based on existing deficiencies, excess capacity, and pass-through traffic.

### 2050 Roadway Improvements

Also included in the TMP are all projects necessary for the roadway network to perform at LOS D or better for the horizon year of 2050. Although this TMP should be regularly updated, all roadway improvements must accommodate projected 2050 traffic volumes. The total cost estimate for Eagle Mountain to improve the transportation system by 2050 is \$1,235,455,000 with Eagle Mountain financially responsible for \$586,190,000.

# **Alternative Transportation Modes**

Alternative transportation intends to complement a complete road network, not replace it. Planning for alternative transportation will not decrease recommended roadway improvements. While not necessarily conducive to commuter traffic, these systems provide an alternative for residents who may not have access to a car, may not be inclined to drive, or are seeking healthier lifestyles. Included are the plans for transit, bicycle, and pedestrian improvements.

### **Transit**

The Utah Transit Authority (UTA) is the public transportation provider in Eagle Mountain. UTA operates fixed-route buses, express buses, bus rapid transit (BRT), ski buses, light rail, and commuter rail. In this capacity, UTA currently operates one bus route in Eagle Mountain (806), which has two existing stops and runs to the Lehi Frontrunner station. The current bus stops within Eagle Mountain are at Sparrow Hawk Way and along Pony Express Parkway near Smith Ranch Rd.



January 2023



As part of MAG's Trans Plan 50, there is a planned Cedar Valley Core Bus Route scheduled and funded for phase 1, which travels between American Fork and Eagle Mountain, extending coverage down to Eagle Mountain Blvd. As well, there is an unscheduled and unfunded BRT route that may be considered as demand increases. Eagle Mountain and UTA will continue to coordinate and plan for future transit needs.

#### **Bicycle and Pedestrians**

Pedestrian and bicycle safety is an important feature of any transportation master plan. People will be more inclined to walk or ride their bicycle when the experience is pleasant, they feel safe, and distances are reasonable. Eagle Mountain has an extensive paved trail system along major roadways and is home to some of the best-recognized bike trails in the state. Moore detailed plans to accommodate bicycles and pedestrians can be found in the City's Bicycle and Pedestrian Master Plan, which will be updated from time to time.

### Other Policies and Guidelines

Policies and guidelines govern development throughout Eagle Mountain. For the roadway network, there are policies provided to maintain a safe, efficient, and familiar environment for all transportation types. There are national, regional, and local specifications which are used in Eagle Mountain. All these specifications can be accessed by contacting the city or searching the city's website <a href="https://eaglemountaincity.com">https://eaglemountaincity.com</a>. Eagle Mountain municipal codes and policies can be found at the following link <a href="mailto:Eagle Mountain Municipal Code">Eagle Mountain Municipal Code (codepublishing.com)</a>



# TABLE OF CONTENTS

E	xecutive Summary	••••
	Public Involvement	
	Roadway Network Conditions	i
	Functional Classification and Level of Service	i
	Existing and Future Traffic Projections	i
	Roadway Improvements	i
	10 Year Roadway Improvements (2021-2030)	ii
	2050 Roadway Improvements	ii
	Alternative Transportation Modes	ii
	Transit iii	
	Bicycle and Pedestrians	i\
	Other Policies and Guidelines	i\
T	able of Contents	…۱
	List of Figures	vi
	List of Tables	vi
l	ntroduction	1
	Eagle Mountain as a City	2
	Public Involvement	4
R	Roadway Network Conditions	5
	Travel Demand Modeling	
	Land Use and Zoning	5
	Socioeconomic Conditions	
	Trip Generation	
	Travel Demand Model Precautions	7
	Functional Classification	8
	Typical Roadway Cross-Sections	12
	Level of Service	14
	Roadway Level of Service	14







Intersection Level of Service	15
Site Development Transportation Impacts (Traffic Impact Studies)	16
Existing Roadway Network Conditions	17
Travel Demand Model Calibration	17
Existing Roadway and Intersection Level of Service	17
Mitigations to Existing Capacity Deficiencies	17
Future Roadway Network Conditions	20
Wildlife Corridor	20
2030 Capital Facilities Plan	20
No Build Level of Service	20
2030 Roadway Improvements	21
2050 Roadway Improvements	24
No Build Level of Service	24
2050 Roadway Improvements	26
Funding for Roadway Network Improvements	29
Federal Funding	29
State/County Funding	29
City Funding	30
Impact Fees	31
Cost to Implement 2030 and 2050 Projects	31
Alternative Transportation Modes	37
Bicycle and Pedestrians	37
Transit	37
Appendix A: Traffic Impact Study Guidelines	42
Appendix B: Cost Estimates	
Annendix C: Wildlife Corridor Conflict Man	50





# List of Figures

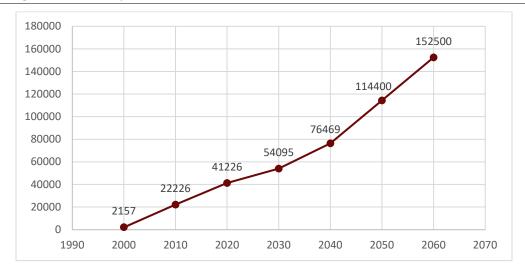
Figure 1: Eagle Mountain Population	1
Figure 2: Eagle Mountain Area Map	3
Figure 3: Eagle Mountain General Plan	6
Figure 4: Mobility vs. Land Access Representation	8
Figure 5: Existing Functional Classification	
Figure 6: Typical Cross-Sections	
Figure 7: Level of Service Representation	
Figure 8: Traffic Count Locations	
Figure 9: Existing Roadway Level of Service	
Figure 10: 2030 No Build Level of Service	
Figure 11: 2030 Roadway and Intersection Improvements	
Figure 12: 2050 No Build Level of Service	
Figure 13: 2030 and 2050 CFP Roadway Projects & Intersection Improvements	
Figure 14: 2050 Proposed Roadway Network Functional Classification	
Figure 15: UTA Existing and Planned Transit Routes	39
List of Tables	
Table 1: Street Functional Classification	9
Table 2: Functional Classifications	9
Table 3: Estimated LOS based on ADT on Arterial Streets	
Table 4: Estimated LOS based on ADT on Collector Streets	15
Table 5: Intersection Level of Service	16



# INTRODUCTION

The city of Eagle Mountain, along with Utah County, has experienced significant growth and development, which is expected to continue in the future. Eagle Mountain's population growth from 2010 to 2021 was 22,646 people (105.75%). The current population (2021) is slightly above 44,000 according to the U.S. Census Bureau. The Mountainland Association of Governments (MAG) estimates the population to be 152,500 by the year 2060. To keep pace with projected growth, a comprehensive transportation plan must be developed and regularly maintained. This plan must incorporate the goals of Eagle Mountain regarding the transportation systems within their jurisdiction as well as those regional facilities maintained by UDOT, UTA, Utah County, and neighboring communities.





Eagle Mountain is in northwestern Utah County and is bordered to the north by Camp Williams, to the east by Saratoga Springs, and to the west by Cedar Fort and Fairfield. Within the city there is a mix of residential, commercial, and light industrial development as well undeveloped land, particularly in the southwestern portion of the city. The city is largely residential and is set to develop several commercial and recreational spaces. A map of Eagle Mountain and the surrounding area is shown in <u>Figure 2</u>.

This Transportation Master Plan (TMP) contains an analysis of the existing transportation network and conditions. Any major deficiencies are itemized, and potential improvement or mitigation alternatives are discussed. An analysis of the future transportation network is also included for the horizon years of 2030 and 2050. Any major UDOT projects and improvements within Eagle Mountain, such as the Cory Wride Freeway, are reflected in the future network. Any deficiencies in the future transportation network that are expected to exist and would not be accommodated by projects that are currently planned will be discussed. A list of recommended improvements and projects will then be given to aid Eagle Mountain in planning for future transportation projects as well as in working with other agencies such as UDOT or neighboring cities. This Transportation Master Plan is intended to be a useful tool to aid Eagle Mountain in taking a proactive effort in planning and maintaining the overall transportation network within their city.



January 2023



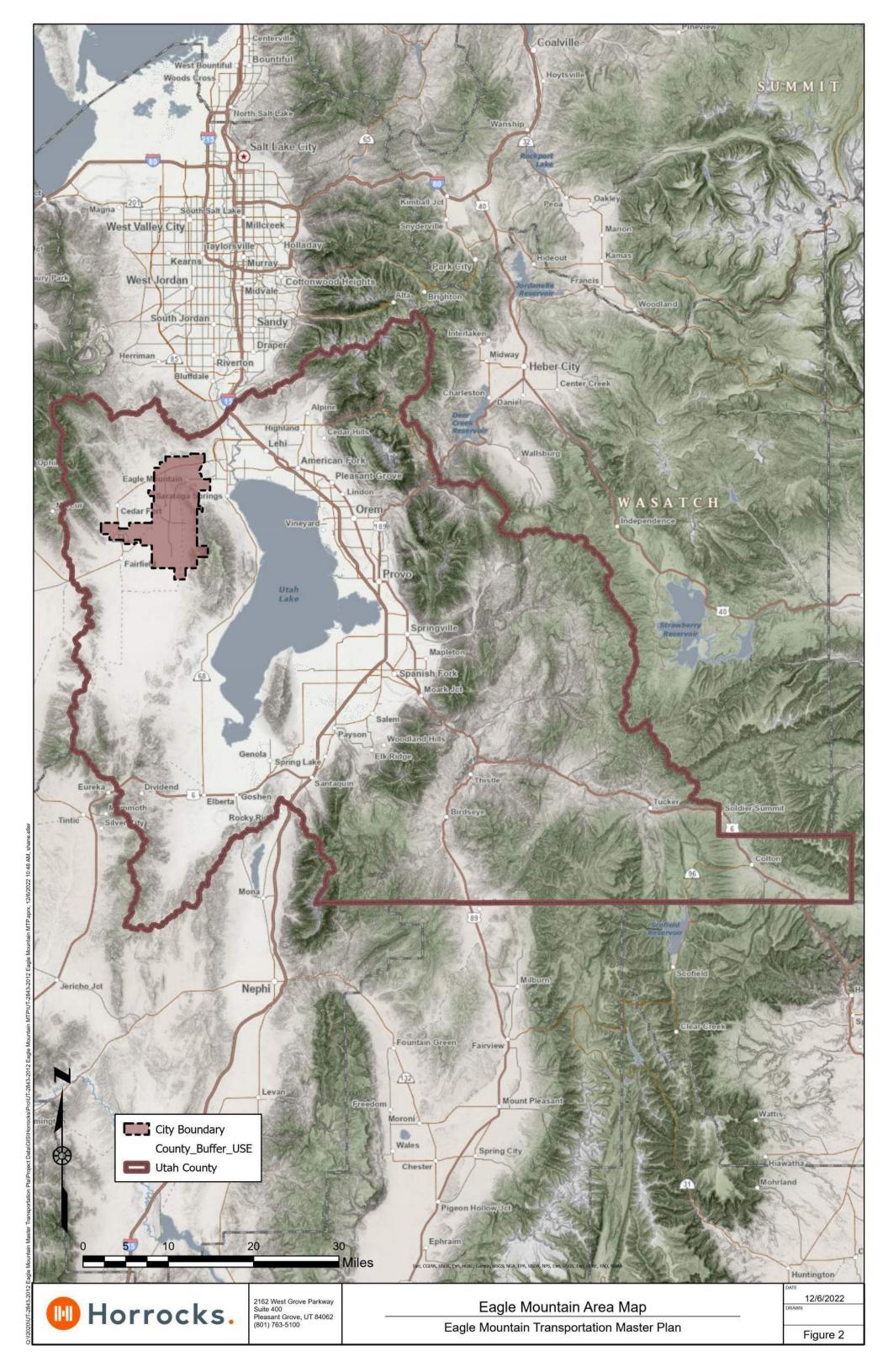
# Eagle Mountain as a City

Since its incorporation in 1996, Eagle Mountain has grown in population from 250 people to over 44,000 people. The Mountainland Association of Governments anticipates a population of 152,500 by 2060. Located 30 miles northwest of Provo at the base of the Lake Mountains, the city is geographically the third largest city in the state.

From a historical perspective, Eagle Mountain residents enjoy ties to their history of the Pony Express which passed through the area where the city now exists. Every summer the community celebrates Pony Express days with a fun run, carnival, parade, rodeo, and fireworks show.

The rural feeling, open space, and expansive views of undeveloped land are commonly named as reasons for moving to Eagle Mountain. Many current residents say they moved to Eagle Mountain to "get away from it all". Most of the City is undeveloped so the majority of Eagle Mountain's story is yet to be written. However, many also feel the values and qualities that draw people to Eagle Mountain may disappear as more people move to the city for those very same reasons. It is possible these qualities of the city will be 'loved to death.' Situated 40 miles southwest of Salt Lake City and 30 miles northwest of Provo on the western side of Utah Lake, Eagle Mountain was for many years removed from the growth occurring in nearby Utah and Salt Lake Counties but is now one of the fastest growing cities in the state.

With Eagle Mountain's growth occurring as part of a larger metropolitan area, it is important for the city to be aware of its regional context. Regional issues such as growth, transportation, the economy, natural resources, air quality, and open space all impact the quality of life of residents of Eagle Mountain. Therefore, coordination with the Mountainland Association of Governments will be integral to the development of a Transportation Master Plan.



January 2023



### **Public Involvement**

It is important for this TMP to be transparent and accessible to the public. Eagle Mountain residents and business owners benefit when they know future transportation plans. Eagle Mountain desired public input to help shape the Transportation Master Plan. To fulfill that need, a public involvement team created and implemented the following:

- Project Branding Package
- Social Media Outreach
  - Facebook
  - City website
  - City e-newsletter
  - Virtual Signage near City Hall
  - Press Release to the Daily Herald and i84005.com about the study and the project website for commenting
- Generated a contact database (included current city mailing lists)
- **Project Website:** 
  - Master plan description and purpose
  - Frequently asked questions
  - Project timeline
  - An interactive map where citizens could place their comments. This map gathered detailoriented feedback and included a description of the (MAG) Regional Long-Range Plan.

The project website and interactive/commenting map were advertised to the public through social media. The public comment period ran from July 14, 2021, to Aug. 13, 2021. A total of 29 comments were received on the GIS comment map.

A public open house was held on Wednesday, July 14, from 6-8 p.m. at Eagle Mountain City Hall. Representatives from Eagle Mountain City, Saratoga Springs, Lehi City, UDOT, Utah County, and the Mountainland Association of Governments (MAG) were invited to the public meeting.

Information Boards were created and displayed at the public open house to provide details and context. Approximately 24 attendees participated in the public meeting. A total of three written comments were received at the public meeting.

Following the public meeting, Eagle Mountain City produced videos with Mayor Westmoreland to post on Facebook to promote the comment period. Additionally, the public involvement team prepared informational Boards to display at the Pony Express Days at the beginning of the summer to help spread awareness of the upcoming public comment period.

This information was compiled, analyzed, and categorized as either feasible or not feasible by the project team. Each viable suggestion was forwarded to the appropriate group (e.g., incorporated into the master plan, implemented by Eagle Mountain traffic department or Public Works, etc.)



# ROADWAY NETWORK CONDITIONS

Transportation planning in the region is a cooperative effort of state and local agencies. All urbanized areas throughout the country are separated into areas called Metropolitan Planning Organizations (MPO) where the designated agency is responsible for coordinating the transportation planning for the area. The MPO for Utah, Summit and Wasatch Counties is called the Mountainland Association of Governments (MAG). MAG became the MPO for these counties in 1972. Included in this section is a general discussion on the methodologies used for the travel demand modeling process, functional classification of streets, and level of service for streets and intersections. Also included are the existing and future conditions for 2030 and 2050.

# Travel Demand Modeling

Traffic Demand Modeling is used to project existing traffic conditions into the future. Eagle Mountain's land use plan, socioeconomic data as well as additional data obtained from Eagle Mountain and MAG serve as valuable input into the travel demand model. MAG uses a regional travel demand model which was also used for this TMP. This section discusses the socioeconomic data, land use, vehicle trip generation as well as the precautions of using the Travel Demand modeling.

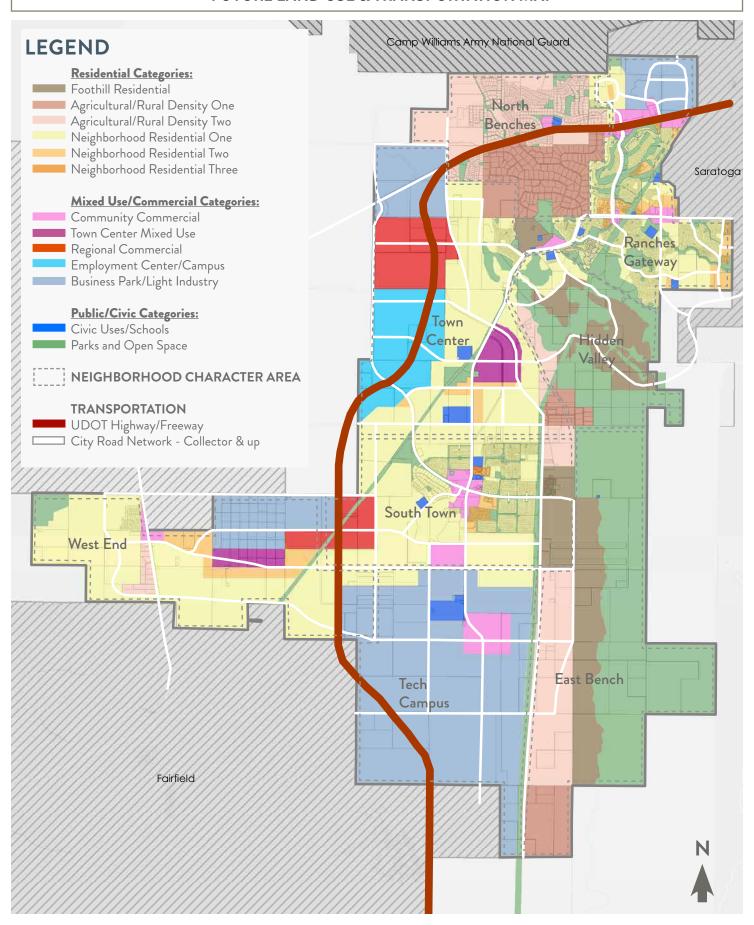
### Land Use and Zoning

Much of the socioeconomic data used in this study is based on the best available statewide data provided by the Governor's Office of Planning and Budget (GOPB). This data was supplemented and verified using the data provided by Eagle Mountain in the form of the current adopted general plan as of 2018, as shown in <u>Figure 3</u> (the most recent version can be found on Eagle Mountain's website at <a href="https://eaglemountaincity.com">https://eaglemountaincity.com</a>).

The information is the best available data for predicting future travel demands. However, land use planning is a dynamic process and the assumptions made in this report should be used as a guide and should not supersede other planning efforts especially when it comes to localized intersections and roadways.



### **FUTURE LAND USE & TRANSPORTATION MAP**



January 2023



#### Socioeconomic Conditions

Eagle Mountain's population growth from 2010 to 2021 was 21,415 people (a 105.75% increase). The current population (2021) is slightly above 44,000 according to the U.S. Census Bureau. The population is estimated to be 65,534 and 141,239 by the year 2030 and 2050, respectively. The city has an unemployment rate of 3.0% and an average household size of 4.34. The average household income in Eagle Mountain is \$91,519 with a poverty rate of 7.41%. The median age is 20 years. The median house value is \$280,700, while the median rental cost is \$1,577 per month.

Based on the current land use, zoning, demographics, and growth patterns, Eagle Mountain is projected to grow to 141,239 residents by the year 2050, a 321% increase from 2022. The forecasted growth will place increased pressure on the City's infrastructure, including the street network. Eagle Mountain is also committed to increasing residential, commercial, office, and retail within Eagle Mountain so citizens can fulfill all needs within the city boundaries. This growth will therefore have considerable impact on traffic volumes in the city. Future development and plans along major corridors have been implemented into the modeling effort.

### **Trip Generation**

To generate vehicle trips, sections of the city are split into geographical sections called Traffic Analysis Zones (TAZ). Each TAZ contains socioeconomic data including the number of households, employment opportunities, and average income levels. This data is used to generate vehicle trips that originate in the TAZ. All trips generated in the TAZ are assigned to other TAZs based on the data within other zones. Since the MAG travel demand model predicts regional travel patterns, the TAZ structure was updated to obtain more detailed travel demand data for Eagle Mountain. This was completed by splitting larger TAZ's.

#### **Travel Demand Model Precautions**

Eagle Mountain aims to plan for and encourage responsible and sustainable growth in the city. Today's transportation system should not only accommodate existing travel demands but should also have built-in capacity to account for the demand that will be placed on the system in the future. While considering the socioeconomic data used in this report and the anticipated growth in the city, some precautions should be considered. First, the TAZ specific socioeconomic data only approximates the boundary conditions of the City and is based on data provided by MAG and the City's planning documents. Second, actual values may vary because of the large study area of the regional travel demand model, which includes the unincorporated areas around Eagle Mountain. Therefore, the recommendations in this report represent a planning level analysis and should not be used for construction of any project without review and further analysis. This document should also be considered a living document and should be updated regularly as development plans, zoning plans, and traffic patterns and trends change.

January 2023

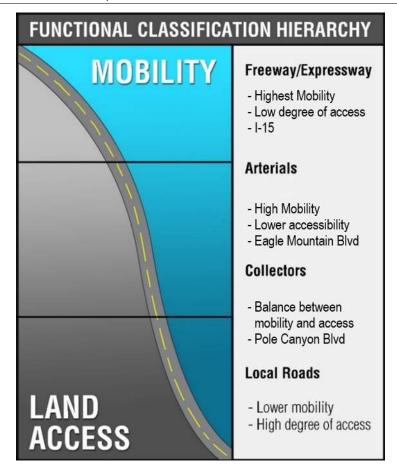


### **Functional Classification**

All trips include two distinct functions: mobility and land access. Mobility and land access should share an inverse relationship, meaning as mobility increases land access decreases. Street facilities are classified by the relative amounts of through and land-access service they provide. There are four primary classifications: Freeway/Expressway, Arterial, Collector and Local Streets. Each classification is explained in further detail in the following paragraphs and is also represented in Figure 4. A more detailed description of the characteristics of the four primary functional classifications of streets are found in Table 1.

- **Freeways and Expressways** Freeway and expressway facilities provide service for long distance trips between cities and states. No land access is provided by these facilities. For example, I-15.
- Arterials Arterial facilities should provide service primarily for through-traffic movements. All
  traffic controls and the facility design are intended to provide an efficient through movement. For
  example, Pony Express Pkwy.
- **Collectors** Collector facilities are intended to serve both through and land-access functions in relatively equal proportions. They are frequently used for shorter through movements associated with the distribution and collection portion of trips. For example, Ranches Pkwy.
- Local Streets Local Street facilities primarily serve land-access functions. The design and control
  facilitate the movement of vehicles on and off the roadway network from land parcels. For
  example, 200 N.

Figure 4: Mobility vs. Land Access Representation



January 2023



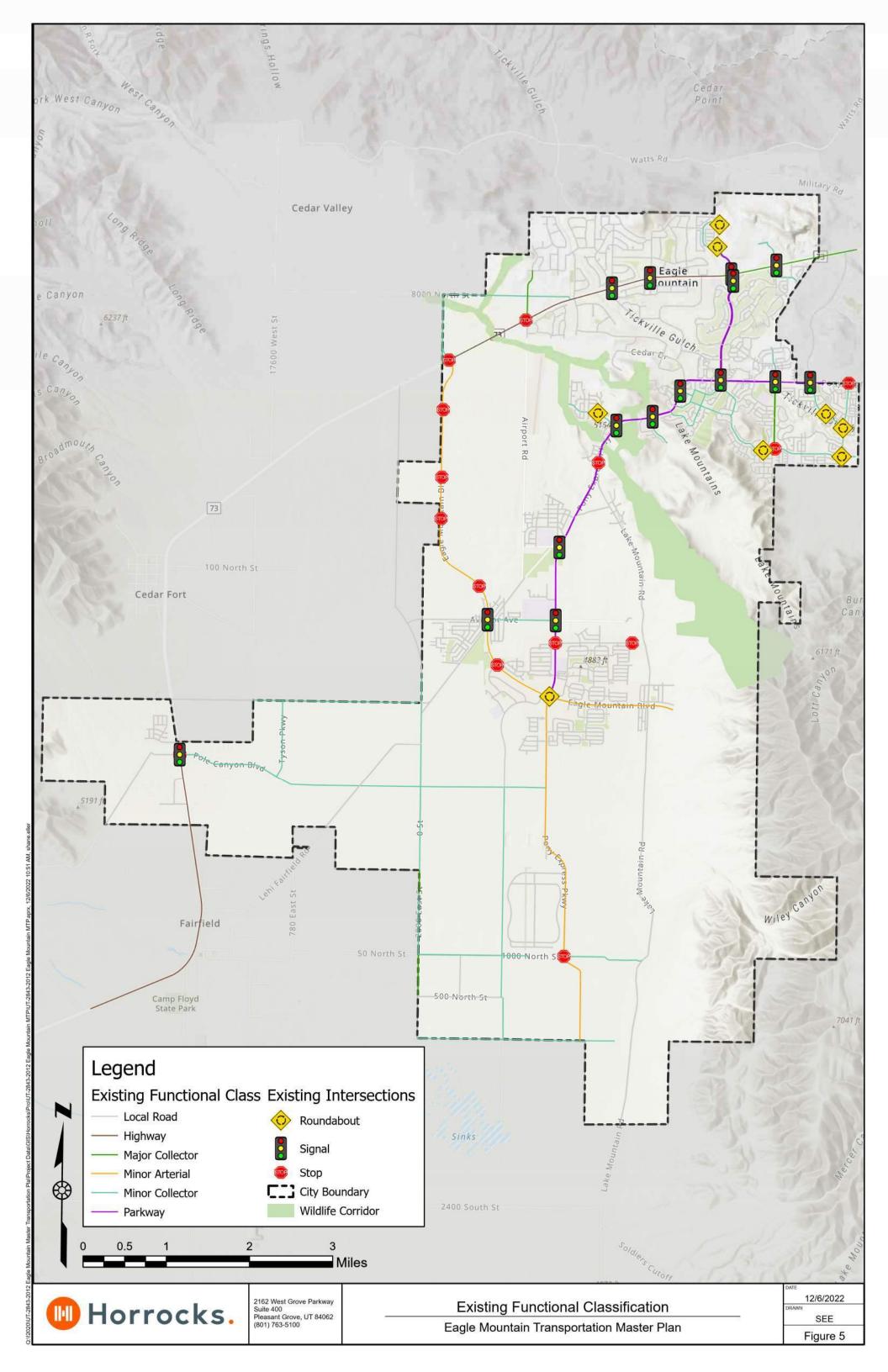
Table 1: Street Functional Classification

	Functional Classification			
Characteristic	Freeway and Expressway	Arterial	Collector	Local Street
Function	Traffic movement	Traffic movement, land access	Collect and distribute traffic between streets and arterials, land access	Land access
Typical % of Surface Street System Mileage	Not applicable	5-10%	10-20%	60-80 %
Continuity	Continuous	Continuous	Continuous	None
Spacing	4 miles	1/4-2 miles	¼-1 mile	As needed
Typical % of Surface Street System Vehicle- Miles Carried	Not applicable	40-65%	10-20%	10-25 %
Direct Land Access	None	Limited: major generators only	Restricted: some movements prohibited; number and spacing of driveways controlled	Safety controls access
Minimum Roadway Intersection Spacing	1 mile	½ mile	300 feet-¼ mile	300 feet
Speed Limit	55-80 mph	40-55 mph in fully developed areas	30-40 mph	25 mph
Parking	Prohibited	Discouraged	Limited	Permitted
Comments	Supplements capacity of arterial street system & provides high-speed mobility	Backbone of street system		Through traffic should be discouraged, subject to traffic calming

In Eagle Mountain, the roadways are split into six functional classifications: Pkwy, Major Arterial, Minor Arterial, Major Collector, and Minor Collector and Local. Currently, Parkways have 4 travel lanes, Major Arterials range from 5 to 7 lanes, Minor Arterials have 4 lanes, and Major Collectors, Minor Collectors, and Local roadways have 2 lanes. A map showing the Average Daily Traffic (ADT) in Eagle Mountain is shown in Figure 9.

**Table 2: Functional Classifications** 

Functional Classification	Number of Lanes
Local	2 Lanes
Minor Collector	2 Lanes
Major Collector	2 Lanes
Minor Arterial	4 Lanes
Major Arterial	5-7 Lanes
Pkwy	4 Lanes



January 2023



### **Typical Roadway Cross-Sections**

The typical cross-sections for each functional classification in Eagle Mountain were updated. In Table 16.35.130(b) of the Eagle Mountain city standards, ranges for Right of Way (ROW) width as well as pavement width for each functional classification are described. It is important for Eagle Mountain to use specific values for each cross-section. **Figure 6** shows a representation for each cross-section.

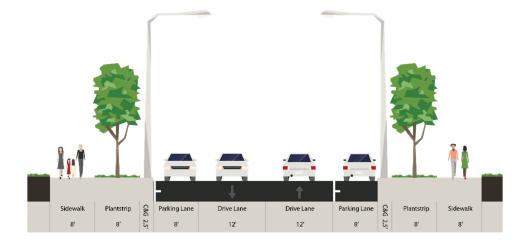
The city has emphasized connectivity and has provided sidewalks and pedestrian paths in all cross-sections. Local streets are designed to offer access from residences to the roadway network. Local streets serve many driveways and provide a collection point for a collector or arterial roadways. Local streets should be designed to minimize speed and cut-through traffic while meeting the requirements of emergency vehicles. Local streets are typically placed with driveways on both sides and have posted speed limits of 25 miles per hour. Generally, no striping is proposed on local streets. However, the city engineer may provide roadway striping as needed as a traffic calming measure. Parking may be restricted on local streets near intersections, in high-density or commercial areas, where snow removal or storage issues arise, or at other locations deemed necessary by the city.

The city has delineated two types of urban collectors. Each type has two travel lanes; however, one has a 13-foot planted median. Arterial streets are defined by larger ROW's. The city has two types of arterials, the minor has 4 travel lanes, while the major has 5 to 7 travel lanes. Parkways have four travel lanes and are defined by landscaped paths on either side. The typical cross-sections per the current City code can be found online at <a href="https://www.codepublishing.com/">https://www.codepublishing.com/</a>.

Figure 6: Typical Cross-Sections

MINOR COLLECTOR STREET (77' RIGHT OF WAY)

# Minor Collector - 77' ROW

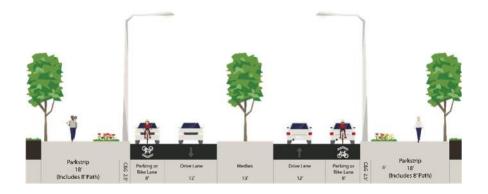


January 2023



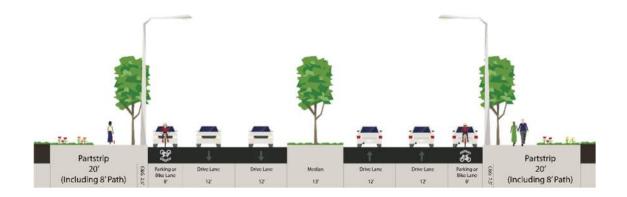
**MAJOR COLLECTOR STREET (94' RIGHT OF WAY)** 

# Major Collector - 94' ROW



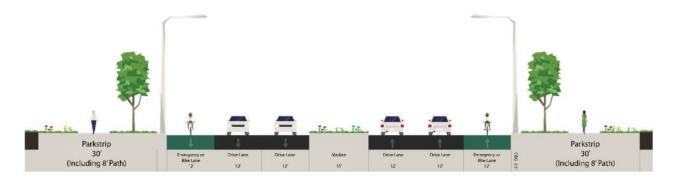
**MINOR ARTERIAL STREET (122' RIGHT OF WAY)** 

# Minor Arterial - 122' ROW



MAJOR ARTERIAL STREET (152' RIGHT OF WAY) - FIVE LANES

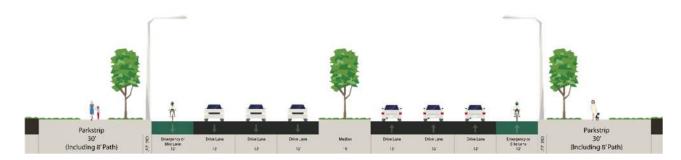
# Major Arterial (5 Lane) - 152' ROW





MAJOR ARTERIAL STREET (176' RIGHT OF WAY) – SEVEN LANES

# Major Arterial (7 Lanes) - 176' ROW



### PKWY (206' RIGHT OF WAY)

# Parkway - 206' ROW

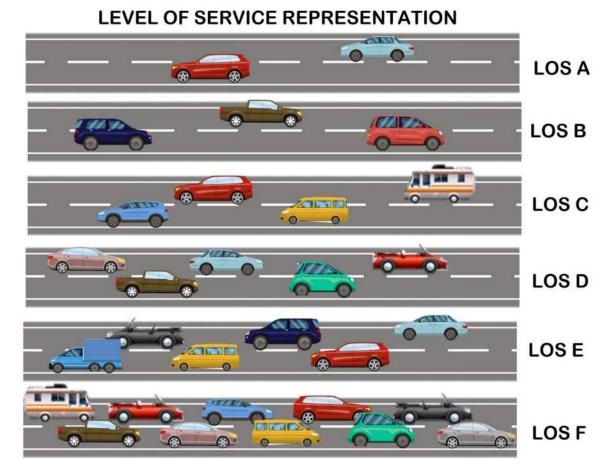




### Level of Service

The adequacy of an existing street system can be quantified by assigning Levels of Service (LOS) to major roadways and intersections. As defined in the Highway Capacity Manual (HCM), a document published by the Transportation Research Board (TRB), LOS serves as the traditional form of measurement of a roadway's functionality. The TRB identifies LOS by reviewing elements, such as the number of lanes assigned to a roadway, the amount of traffic using the roadway and the time of delay per vehicle traveling on the roadway and at intersections. Levels of service range from A (free flow where users are virtually unimpeded by other traffic on the roadway) to F (traffic exceeds the operating capacity of the roadway) as shown in Figure 7.

Figure 7: Level of Service Representation



### Roadway Level of Service

Roadway LOS is used as a planning tool to quantitatively represent the ability of a particular roadway to accommodate the travel demand during the peak hours of the day. Typically, the peak hour falls within the 4:00 PM and 6:00 PM hours. The LOS is assigned during the peak hour based on the number of lanes and the lane capacity. Lane capacity is different based on the functional classification of the roadway. Roadway segment LOS can be mitigated with geometry improvements, additional lanes, two-way-left turn lanes, and access management. Intersections are not included when analyzing roadway LOS and therefore the LOS indicates if the existing number of lanes, lane widths and functional classification are adequate for the traffic volumes.

January 2023



LOS D is approximately 80 percent of a roadway's capacity and is a common goal for urban streets during peak hours. A standard of LOS D for system streets (collectors and arterials) is acceptable for future planning. Attaining LOS C or better on these streets would be potentially cost prohibitive and may present societal impacts, such as the need for additional lanes and wider street cross-sections. LOS D suggests that for most times of the day, the roadways will be operating well below capacity. The peak times of the day will likely experience moderate congestion characterized by a higher vehicle density and slower than free flow speeds. Although the model uses traffic volumes during the peak hour of the day, <u>Table 3</u> and <u>Table 4</u> show estimated ADT values for LOS C, LOS D, and LOS E on Arterial and Collector Streets for reference.

Table 3: Estimated LOS based on ADT on Arterial Streets

Lanes	LOS C	LOS D	LOS E
2-3	12,400	15,100	17,700
4-5	28,500	32,800	40,300
6-7	43,000	50,500	63,400

Table 4: Estimated LOS based on ADT on Collector Streets

Lanes	LOS C	LOS D	LOS E
2	9,700	12,100	14,500
3	10,800	13,400	16,100

### Intersection Level of Service

Whereas roadway LOS considers an overall picture of a roadways capacity to estimate operating conditions, intersection LOS looks at each individual vehicle movement at an intersection and provides a more precise method for quantifying operations. Since intersections are typically a source of bottlenecks in the transportation network, a detailed look into vehicle delay at each intersection should be performed on a regular basis. The methodology for calculating delay at an intersection is outlined in the *Highway Capacity Manual* (HCM) and the resulting criteria for assigning LOS to signalized and un-signalized intersections are outlined in <u>Table 5</u>. LOS D is considered the industry standard for intersections in an urbanized area. LOS D at an intersection corresponds to an average control delay of 35-55 seconds per vehicle for a signalized intersection and 25-35 seconds per vehicle for an un-signalized intersection.

At a signalized intersection under LOS D conditions, the average vehicle will be stopped for less than 55 seconds. This is considered an acceptable amount of delay during the times of the day when roadways are most congested. Generally, traffic signal cycle lengths (the length of time it takes for a traffic signal to cycle through each movement) should be below 90 seconds. An average delay of less than 55 seconds suggests that in most cases, no vehicles will have to wait more than one cycle before proceeding through an intersection.

Un-signalized intersections are generally stop-controlled. These intersections allow major streets to flow freely, and minor intersecting streets to stop prior to entering the intersection. In cases where traffic volumes are more evenly distributed or where sight distances may be limited, four-way stop-controlled intersections are common. LOS for an un-signalized intersection is assigned based on the average control of the worst approach (always a stop approach) at the intersection. An un-signalized intersection operating at LOS D means the average vehicle waiting at one of the stop-controlled approaches will wait no longer than 35 seconds before proceeding through the intersection. This delay may be caused by large volumes of traffic on the major street resulting in fewer gaps in traffic for a vehicle to turn, or for queued

January 2023



vehicles waiting at the stop sign. Roundabout LOS is also measured using the stopped controlled LOS parameters.

Table 5: Intersection Level of Service

LOS*	Signalized Intersection (sec)	Stop-Controlled/ Roundabout (sec)
Α	≤10	≤10
В	>10-20	>10-15
С	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	≥80	≥50

<sup>\*</sup>LOS F when traffic volumes exceed capacity

Intersection and roadway segment LOS problems must be solved independently of each other, as the treatment required to mitigate the congestion is different in each case. Intersection problems may be mitigated by adding turn lanes, improving signal timing, and improving corridor signal coordination.

### Site Development Transportation Impacts (Traffic Impact Studies)

As growth occurs throughout the City, the impacts of proposed developments on the surrounding transportation networks will need to be evaluated prior to giving approval to build. This is accomplished by requiring that a Traffic Impact Study (TIS) be performed for any proposed development in the city based on City staff recommendations. A TIS will allow the City to determine the site-specific impacts of a development including internal site circulation, access issues, and adjacent roadway and intersection impacts. In addition, a TIS assists in defining impacts to the overall transportation system in the vicinity of the development. The area and items to be evaluated in a TIS include key intersections and roads as determined by the City Engineer on a case-by-case basis.

Each TIS will be conducted by an engineer chosen by the developer with the following qualifications:

- Have a current Utah PE License
- Firm Specializing in Traffic Engineering
- Use of Software utilizing most recent Highway Capacity Manual (HCM) Methodologies

A scoping meeting will be required by the developer/Traffic Engineer with the City Engineer to determine the scope of each TIS. Included in this meeting are the following discussion items:

- Scope (Submitted to Eagle Mountain and Developer)
- Establish Study Area
- Establish Trip Generation
- Establish Trip Distribution
- Study Intersections
- AM/PM Peak Hours and/or Weekend Peak Hours

TIS requirements are separated into four permit levels based on proposed Annual Daily Traffic (ADT). The basic requirements for all TIS's are included in Level I with additional requirements necessary for each level (additional ADT). For all TIS's that require Level III or IV requirements (Greater than 3000 trips generated), access to the MAG travel demand model is required.



January 2023



Eagle Mountain Traffic Impact Study Requirements are included in <u>Appendix A: Traffic Impact Study</u> <u>Guidelines</u> of this report. The City Engineer will review the TIS or assign someone to do so and will respond in writing to the TIS report within 30 days.

Included in <u>Appendix A: Traffic Impact Study Guidelines</u>, are guidelines for developers to completing a TIS and submitting it to the city. The requirements include when a TIS will be required and what level of effort must be established in the study, who may or may not perform a TIS, and when certain elements must be included. The TIS guidelines presented follow closely the guidelines outlined by UDOT. It is important that these guidelines be fluid and that each development be treated individually, as special cases may require information than the standard requires. The City reserves the right to waive all TIS requirements as well as requiring extra information at the discretion of the City Engineer.

# **Existing Roadway Network Conditions**

Using existing socioeconomic data as well as traffic data, the MAG Travel Demand Model can be calibrated and prepared to project traffic volumes into the future. It is also important to investigate any existing roadway or intersection deficiencies to determine if any mitigation is necessary on the existing roadway network. This section discusses the methodology used to prepare the model to project future volumes as well as existing deficiencies on the roadway network in Eagle Mountain.

### **Travel Demand Model Calibration**

As with the TAZ structure, the MAG Travel Demand Model was calibrated to fit existing traffic conditions in Eagle Mountain. The method used to calibrate the model was to use traffic counts throughout the city. Traffic counts were collected from UDOT and include annual average daily traffic (AADT) volumes as defined in *Traffic on Utah Highways*. On city owned roadways, traffic counts were either provided by Eagle Mountain or were manually counted as part of this TMP. <u>Figure 8</u> shows the count locations throughout the city used for model calibration.

### Existing Roadway and Intersection Level of Service

Using the calibrated MAG Travel Demand Model and data provided by Eagle Mountain, the LOS for each roadway segment is shown in **Figure 9**. The following roadway is currently performing at LOS E or worse.

#### **Roadway Segments**

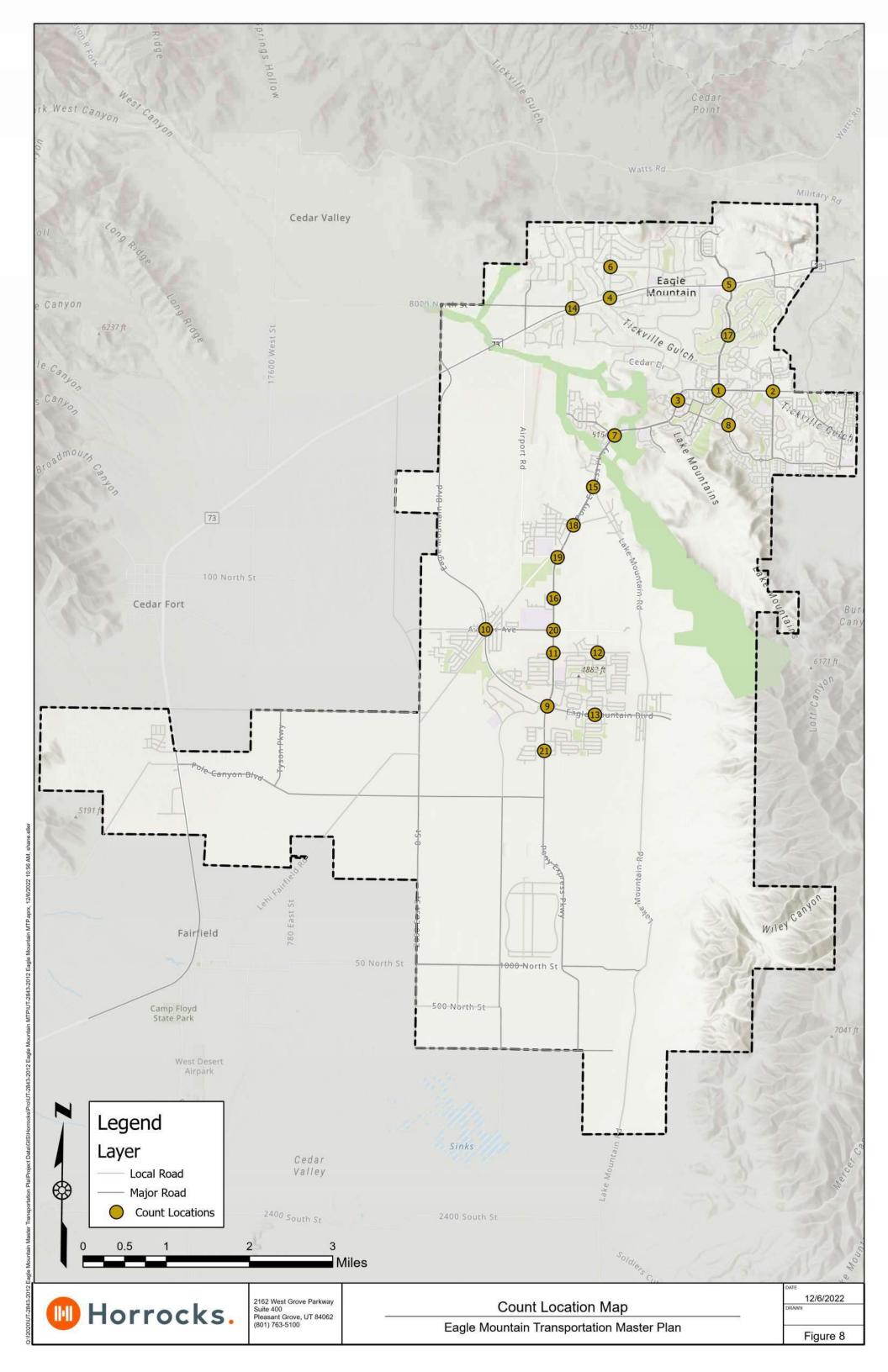
Cory B Wride Highway (east of Ranches Pkwy)

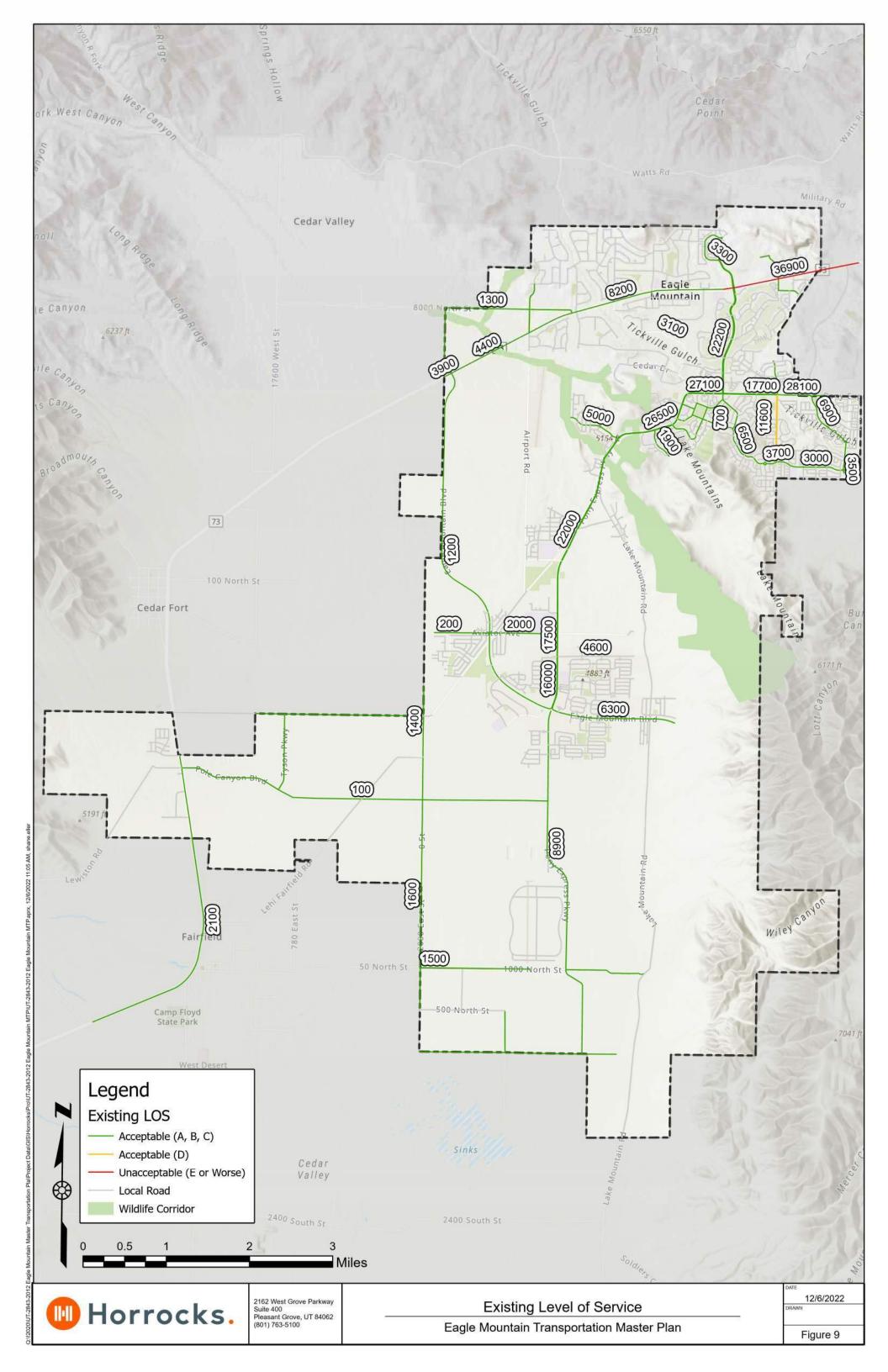
#### Mitigations to Existing Capacity Deficiencies

In most cases, roadway capacity improvements are achieved by adding travel lanes. Eagle Mountain can gain additional capacity by striping more roadway lanes where the existing pavement width will accommodate it. This can be accomplished by eliminating on-street parking, creating narrower travel lanes, and adding two-way left turn lanes where they do not currently exist. Eagle Mountain is recommended to investigate other mitigation methods for all roadway capacity improvements before widening the roadway to save the city money.

At signalized intersections, methods to improve intersection LOS include additional left and right turning lanes and signal timing improvements. It is recommended to investigate signal timing improvements before adding additional turning lanes.







January 2023



# **Future Roadway Network Conditions**

Two future conditions are included in this TMP. The 2030 Capital Facilities Plan (CFP) includes all roadway improvements necessary for a horizon year of 2030. The Transportation Improvement Fund (TIF) is included to indicate the funding source for all projects included in the 2030 CFP. The other condition investigates the roadway network and improvements necessary for a horizon year of 2050. Both the 2030 CFP and 2050 conditions are outlined in this section and the methodology used to incorporate the TIF to fund all the projects in the CFP. All projects will be selected based on input from city staff, elected officials as well as the public.

### Wildlife Corridor

Eagle Mountain has identified a wildlife corridor that contains conflict points with existing and planned roads. Any road impacted by the wildlife corridor shall incorporate other animal-human conflict mitigation measures in addition to wildlife crossings: For example, impregnable wildlife fencing, speed reduction, wildlife warning signs, roadway lighting, road narrowing, vegetation management, solar roadways, and other mitigation measures that can influence animal or human behaviors. For each project that conflicts with this corridor, there will be a coordination with the city requirement on proper mitigation. These mitigation measures will include grade crossings, bridges, or tunnel crossings. As it is unknown, the exact required mitigation measures for every project; the proposed mitigation shall be updated on a projectby-project basis during engineering design. Future wildlife crossings will, at minimum, be designed in compliance with FHWA - Center for Local Aid Support - Publications (dot.gov). The anticipated mitigations are identified on the Wildlife Corridor Conflict Map, located in the Appendix. Roads are heavily discouraged in the wildlife corridor and shall not be allowed except for the minimal required roads annotated on the TMP. Any road deemed necessary to cross the wildlife corridor shall have impact studies completed and include animal-human mitigation measures. As these recommendations are updated based on development and growth, it is the recommendation to continually update this map to ensure everyone is up to date with current planning in the city. The city will be proactive in securing funding for future wildlife crossing and mitigations and will work with local, state, federal, and outside organizations to achieve that goal.

# 2030 Capital Facilities Plan

The 2030 CFP includes all projects that will be completed by the horizon year of 2030. A "No Build" scenario is modeled to determine the roadways which will perform at LOS E or worse by 2030. Included in the list of projects are projects on the MAG Regional Transportation Plan (RTP). This section describes the details of the process used to produce a list of projects as well as a description of the Transportation Improvement Fund (TIF) for the 2030 CFP.

### No Build Level of Service

A no-build scenario is intended to show what the roadway network would be like in the future if no action is taken to improve the city roadway network (including existing deficiencies). The travel demand model was used to predict this condition by applying the future growth and travel demand to the existing roadway network, as shown in Figure 10. The following roadways would perform at LOS E or worse if no action were taken to improve the roadway network:

- Cory B Wride Highway (Airport Road to eastern border)
- Pony Express Pkwy (Aviator Avenue to Ranches Pkwy)



January 2023



- **Pony Express Pkwy** (Porters Crossing Pkwy to eastern border)
- Mount Airey Drive (north of Cory Wride Highway)

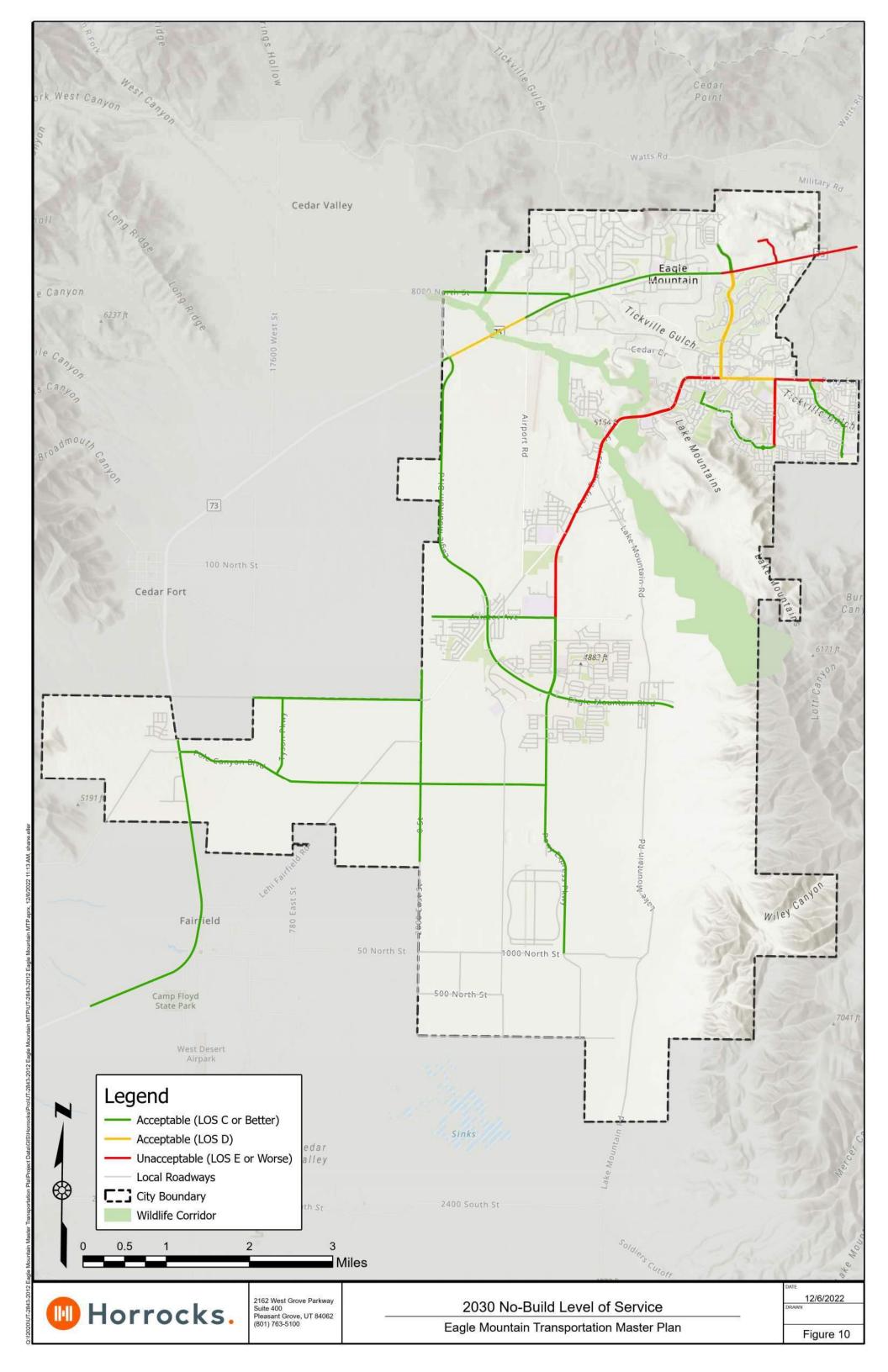
### 2030 Roadway Improvements

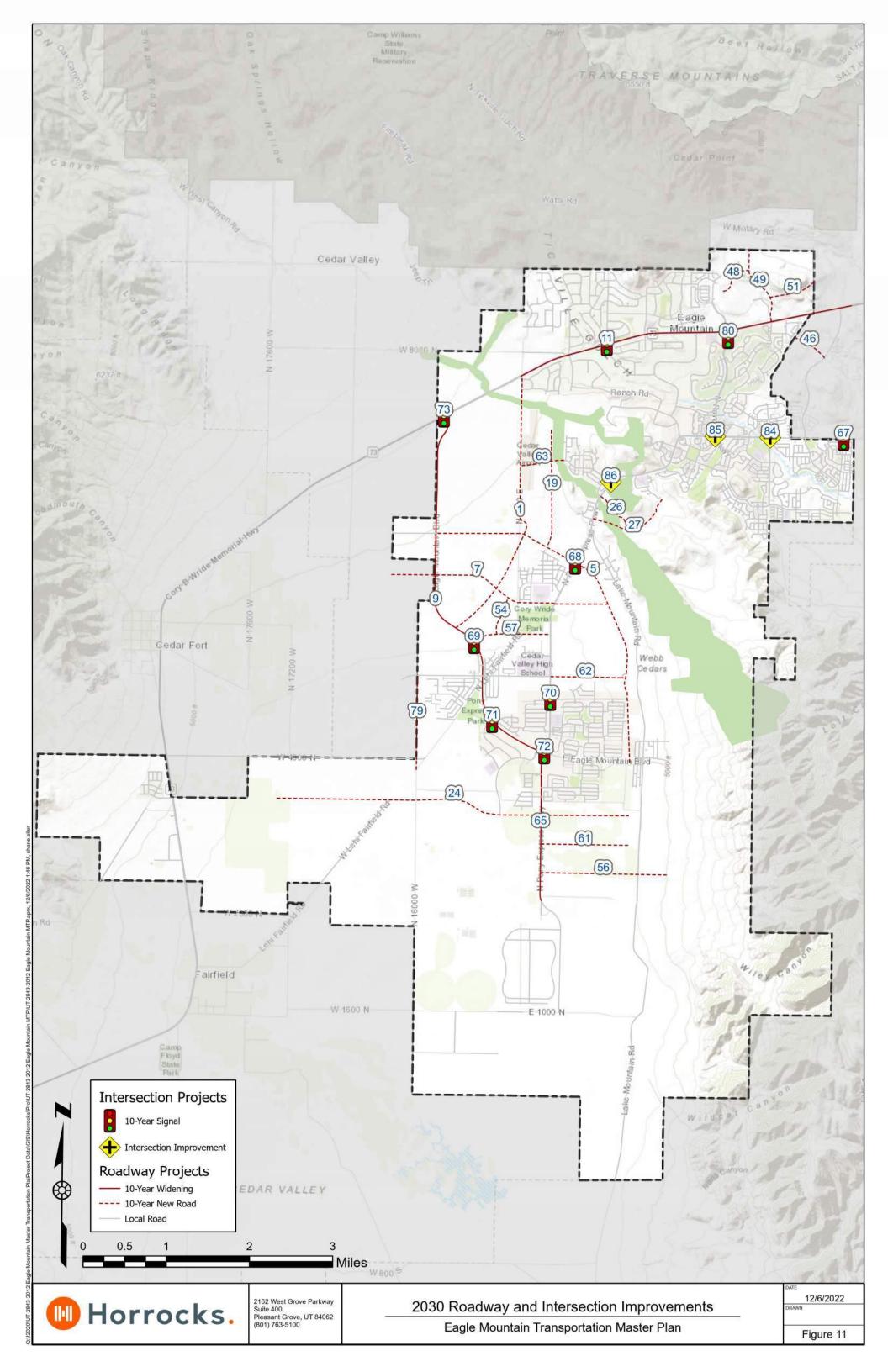
Eagle Mountain is not alone in improving the roadway network. MAG, in cooperation with UDOT, provides financial assistance for eligible projects on roadways with regional significance. Some of these projects are already included in the Regional Transportation Plan (RTP). Projects not included on the RTP of regional significance may receive financial assistance through an application process. On roadways owned and operated by UDOT, the fiscal responsibility typically falls to UDOT. It is important for Eagle Mountain to include these projects in this TMP as well as coordinate with UDOT to ensure these projects are implemented and that the projects follow access management principles. The projects in Eagle Mountain included on the RTP are shown in the following list of the RTP Phase 1 projects to be completed by 2030.

### Phase 1: 2019-2030

- Airport Rd (Cory B Wride HWY to East Expressway) <u>New 5 lane road</u>
- Cory Wride FWY (Mountain View Corridor to Ranches Pkwy) New freeway, frontage roads
- Cory Wride HWY (Ranches Pkwy to Airport Rd) Widen to 5 lanes
- East Expressway (Eagle Mountain Blvd to Eagle Mountain Blvd) New 3 lane road
- Mid Valley Rd (Eagle Mountain Blvd to East Expressway) New 3 lane road
- **Pony Express Pkwy** (Sandpiper Rd to Eagle Mountain Blvd) Widen to 5 lanes (Complete)

Although the improvements on the RTP will improve congestion in the specific project areas, there are other areas of the city where the roadways will perform at a LOS E or worse in the coming years if not improved upon. The indicated roadway segments in the above section form the basis of the improvements included on the project map shown in Figure 11. Beyond the MAG RTP, Eagle Mountain has identified new roads, capacity improvements and intersection improvements to be completed by 2030, also shown in Figure 11. A description of all projects can be found in Appendix B: Cost Estimates. The costs to implement these projects is found in **Cost to Implement 2030 and 2050 Projects**.





January 2023



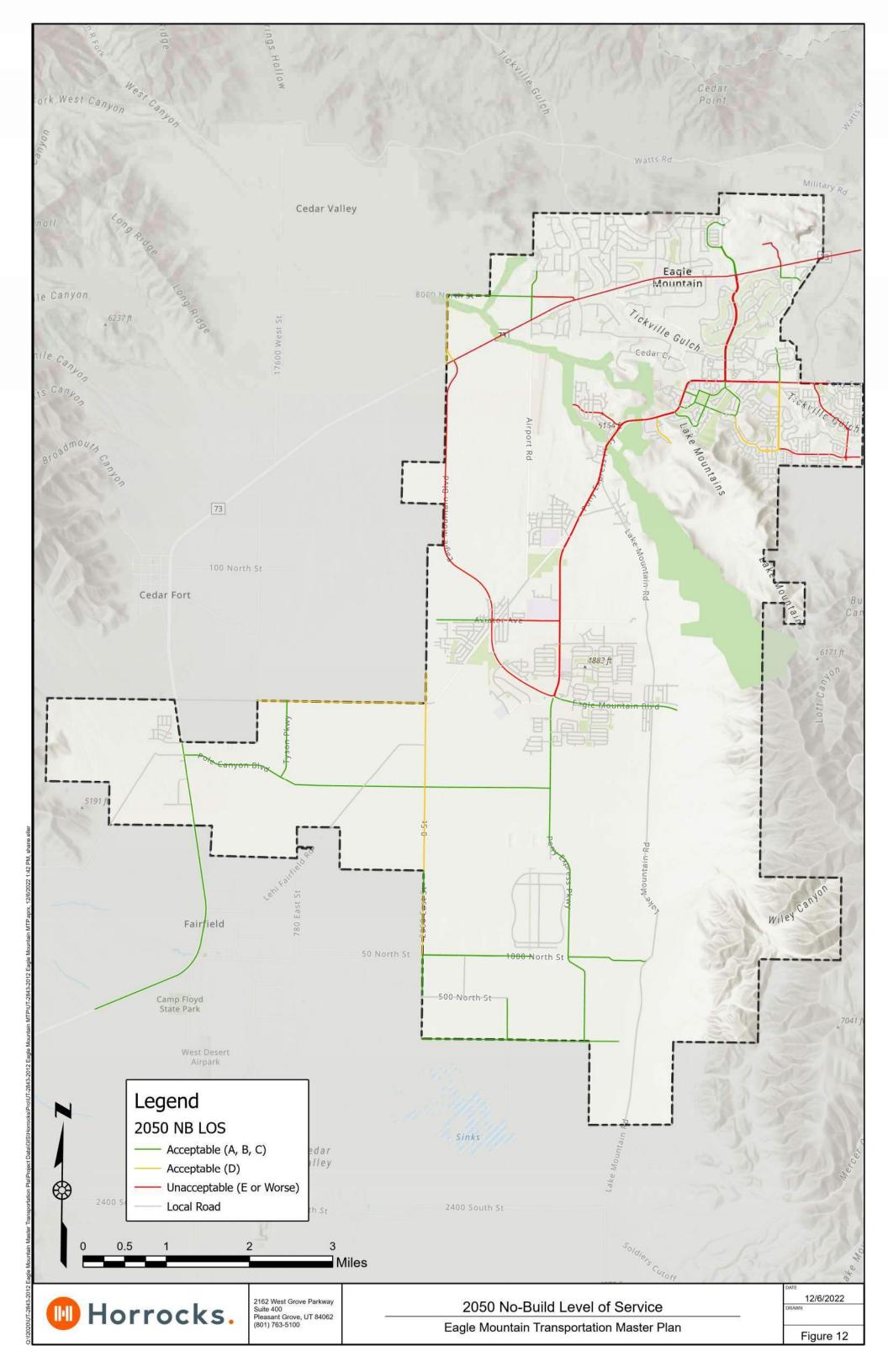
# 2050 Roadway Improvements

The same process was completed with a horizon year of 2050. Planning for projects necessary to improve the roadway network is important for Eagle Mountain so roadways that are not included on MAG's RTP can be added. Roadways eligible for MAG funding can be found on UDOT's Functional Classification Map on their website www.udot.utah.gov. All roadways with a four-digit route number are eligible for federal funding (All roadways with 1-3 digits are UDOT owned roadways). To indicate the projects necessary for 2050, a no build scenario was analyzed.

### No Build Level of Service

As used for the 2030 roadway conditions, the no-build scenario is intended to show what the roadway network would be like in the future if no action were taken to improve the City roadway network. Using the travel demand model, Figure 12 shows the 2050 No Build LOS. The following roadways would perform at LOS E or worse if no action were taken to improve the roadway network:

- Cory B Wride Highway (western border to eastern border)
- **8000 North** (Six-Mile Cutoff Road to Cory B Wride Highway)
- **Valley Drive** (Cory B Wride Highway to North Crest Road)
- North Crest Road (Valley Drive to North Cedar Drive)
- North Cedar Drive (North Crest Road to Pony Express Pkwy)
- Ranches Pkwy (Cory B Wride Highway to Pony Express Pkwy)
- Mount Airey Drive (north of Cory B Wride Highway)
- **Eagle Mountain Blvd** (Cory B Wride Highway to Pony Express Pkwy)
- Lone Tree Pkwy (east of Pony Express Pkwy)
- North Silver Lake Pkwy (Pony Express Pkwy to Golden Eagle Road
- **Golden Eagle Road** (Porters Crossing Pkwy to eastern border)
- Aviator Avenue (Eagle Mountain Blvd to Pony Express Pkwy)
- **Pole Canyon Blvd** (2000 East Street to Pony Express Pkwy)
- **Pony Express Pkwy** (Eagle Mountain Blvd to eastern border)



January 2023



#### 2050 Roadway Improvements

There are many roadways in Eagle Mountain that are included on MAG's RTP. The projects included on the RTP are shown in Figure 13. Included is a list of the roadway improvements included on the RTP for all three phases (2019-2050).

#### Phase 1: 2019-2030

- Airport Rd (Cory B Wride HWY to East Expressway) New 5 Lane Road
- Cory Wride FWY (Mountain View Corridor to Ranches Pkwy) New freeway, frontage roads
- Cory Wride HWY (Ranches Pkwy to Airport Rd) Widen to 5 Lanes
- East Expressway (Eagle Mountain Blvd to Eagle Mountain Blvd) <u>New 3 lane road</u>
- Mid Valley Rd (Eagle Mountain Blvd to East Expressway) New 3 lane road
- Pony Express Pkwy (Sandpiper Rd to Eagle Mountain Blvd) Widen to 5 lanes

### Phase 2: 2031-2040

- Cory Wride FWY (Ranches Pkwy to East Expressway) New Freeway
- **Eagle Mountain Blvd** (SR-73 to East Expressway) Widen to 5 lanes
- East Expressway (Cedar Valley FWY to Eagle Mountain Blvd) Widen to 5 lanes
- Mt. Saratoga Blvd (Cory Wride FWY to Harvest Hills Blvd) New 3 lane road

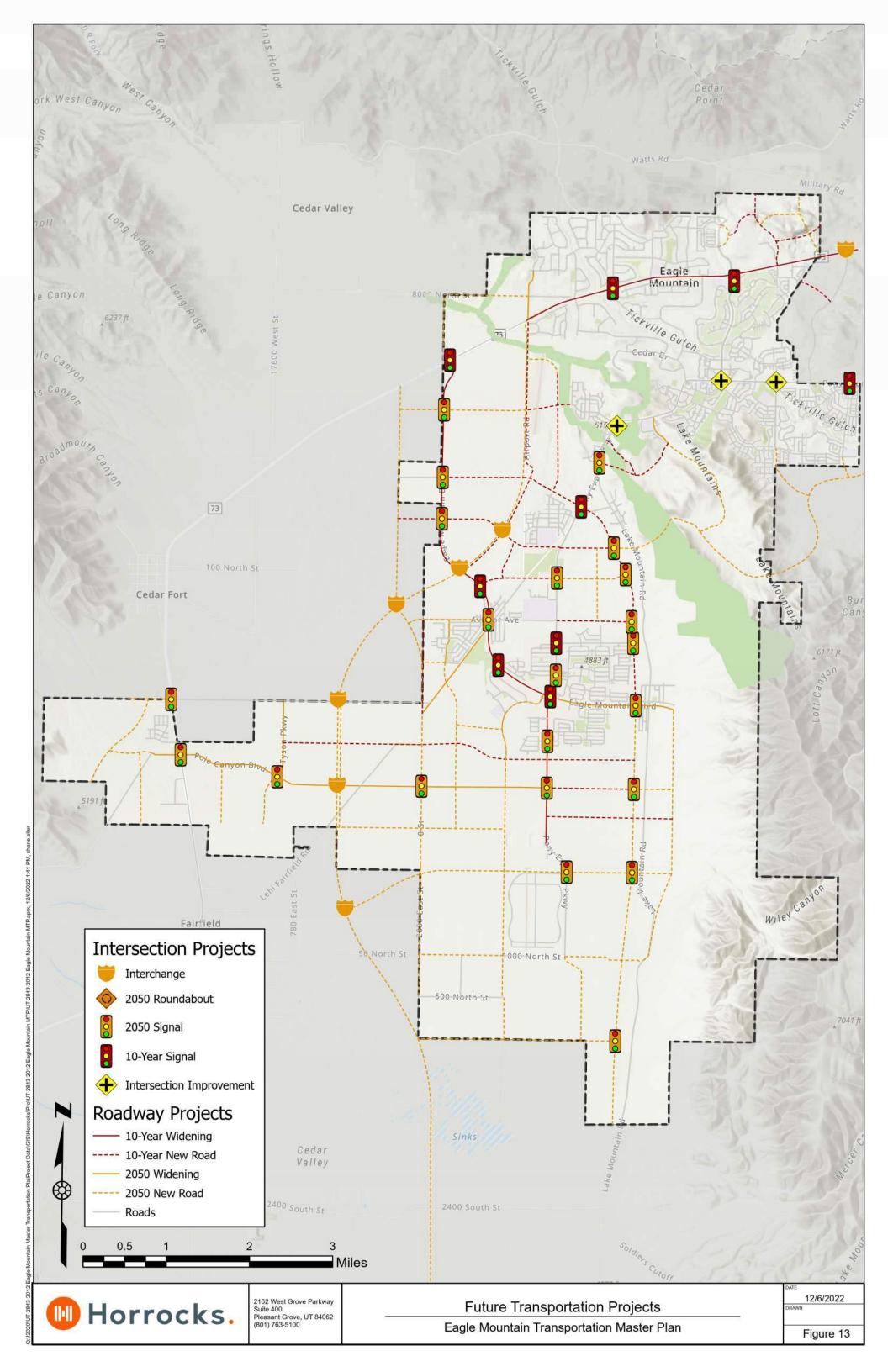
#### Phase 3: 2040-2050

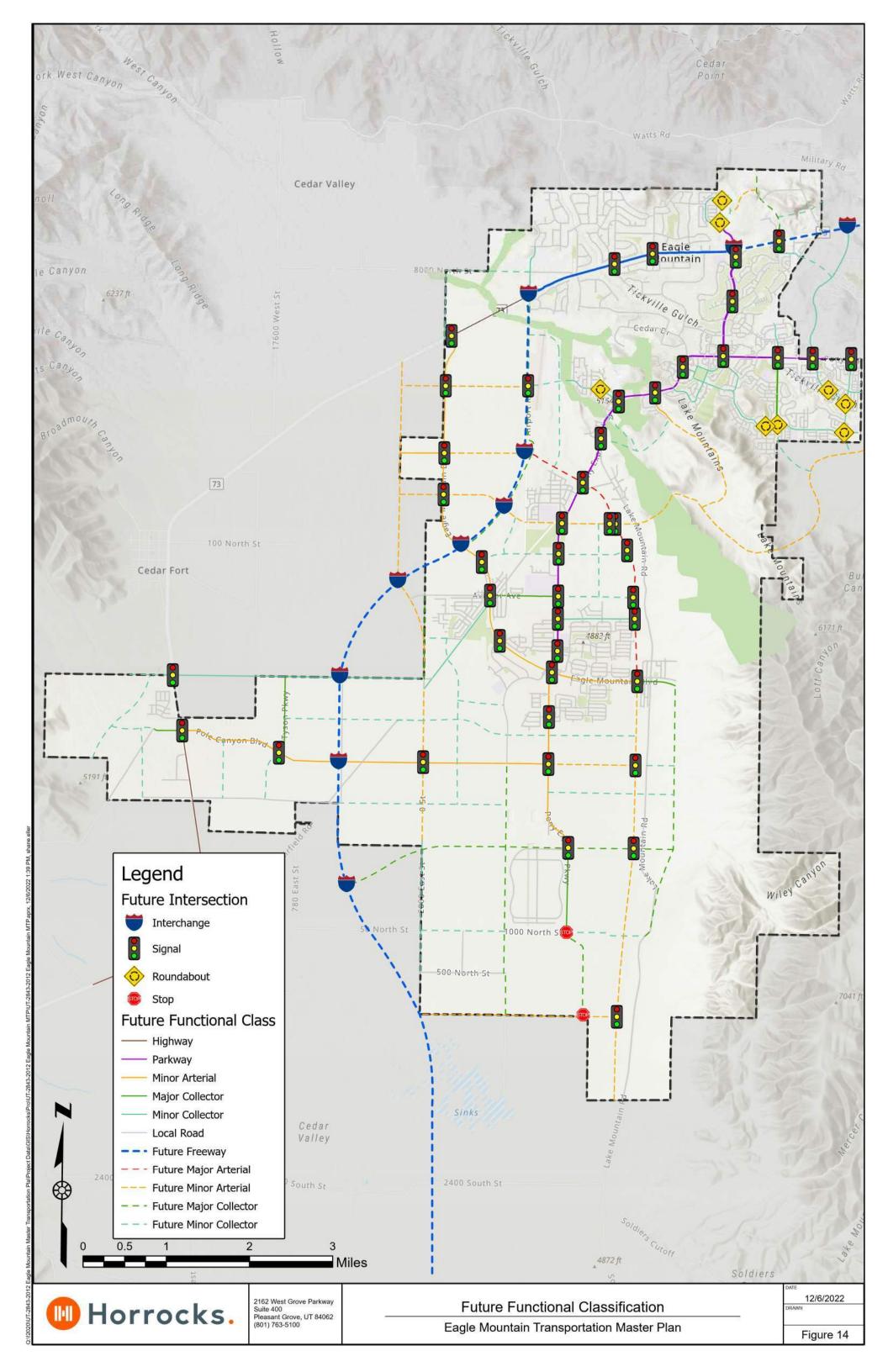
- Aviator Ave (Eagle Mountain BLVD to Cedar Fort RD) <u>New 3 lane road</u>
- Cedar Valley FWY (East Expressway to UC 4000 N) New Freeway
- Central Valley Rd (UC 2400 N to Mid Valley Rd) <u>New 3 lane road</u>
- Hidden Valley Rd (East Expressway to Redwood Rd) <u>New 5 lane road</u>
- Mid Valley Rd (Eagle Mountain Blvd to Cedar Fort Rd) New 3 lane road
- UC 8000 N (Cedar Fort Rd to UC 17200 W) New 3 lane road

Although the improvements on the RTP will improve congestion in the specific project areas, there are many other areas of the city where the roadways will perform at a LOS E or worse in the coming years if not improved upon. The indicated roadway segments in the above section form the basis of the improvements included on the project map shown in Figure 13. Beyond the MAG RTP, Eagle Mountain has identified new roads, capacity improvements and intersection improvements to be completed by 2030 and 2050, also shown in Figure 13. A description of all projects can be found in Appendix B: Cost Estimates.

Applying all improvements from Figure 13 will improve the roadway network to function at LOS D or better. Assuming all proposed projects are completed by 2050, Figure 14 represents the proposed 2050 Eagle Mountain roadway network functional classification. The costs to implement these projects is found in the section Cost to Implement 2030 and 2050 Projects.







January 2023



# **Funding for Roadway Network Improvements**

All possible revenue sources have been considered as a means of financing transportation capital improvements needed because of new growth. This section discusses the potential revenue sources that could be used to fund transportation needs as growth happens.

Transportation routes often span multiple jurisdictions and provide regional significance to the transportation network. As a result, other government jurisdictions often help pay for such regional benefits. Those jurisdictions could include the Federal Government, the State Government or the Utah Department of Transportation, or the Mountainland Association of Governments. The City will need to continue to partner and work with these other jurisdictions to ensure adequate funds are available for specific improvements necessary to maintain an acceptable LOS. The city will also need to partner with adjacent communities to ensure corridor continuity across jurisdictional boundaries (i.e., arterials connect with arterials; collectors connect with collectors, etc.).

Funding sources for transportation are essential if Eagle Mountain recommended improvements are to be built. The following paragraphs further describe the various transportation funding sources available to the city.

### **Federal Funding**

Federal money is available to cities and counties through the federal-aid program. UDOT administers these funds. To be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) funds projects for any roadway with a functional classification of a collector street or higher as established on the Functional Classification Map. STP funds can be used for both rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the state in urban areas. Another portion of the STP funds can be used for projects in any area of the state at the discretion of the State Transportation Commission. Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Committee reviews the applications and then a portion of those is passed to the State Transportation Commission. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities and water runoff mitigation. Other federal and state trails funds are available from the Utah State Parks and Recreation Program.

MAG accepts applications for federal funds through local and regional government jurisdictions. MAG's Technical Advisory and Regional Planning committees select projects for funding every two years. The selected projects form the Transportation Improvement Program (TIP). To receive funding, projects should include one or more of the following aspects:

- Congestion Relief spot improvement projects intended to improve Levels of Service and/or reduce average delay along those corridors identified in the Regional Transportation Plan as high congestion areas.
- **Mode Choice** projects improving the diversity and/or usefulness of travel modes other than single occupant vehicles.
- Air Quality Improvements projects showing demonstrable air quality benefits.
- **Safety** improvements to vehicular, pedestrian, and bicyclist safety.

#### State/County Funding

The distribution of State Class B and C Program money is established by State Legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Seventy-



January 2023



five percent of these funds are kept by UDOT for their construction and maintenance programs. The rest is made available to counties and cities. As many of the roads in Eagle Mountain fall under UDOT jurisdiction, it is in the interests of the City that staff is aware of the procedures used by UDOT to allocate those funds and to be active in requesting the funds for UDOT owned roadways in the City.

Class B and C funds are allocated to each city and county by a formula based on population, lane miles, and land area. Class B funds are given to counties, and Class C funds are given to cities and towns. Class B and C funds can be used for maintenance and construction projects; however, thirty percent of those funds must be used for construction or maintenance projects that exceed \$40,000. The remainder of these funds can be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

In 2005, the state senate passed a bill providing for the advance acquisition of right-of-way for highways of regional significance. This bill would enable cities in the county to better plan for future transportation needs by acquiring property to be used as future right-of-way before it is fully developed and becomes extremely difficult to acquire. UDOT holds on account the revenue generated by the local corridor preservation fund, but the county is responsible to program and control the monies. To qualify for preservation funds, the city must comply with the Corridor Preservation Process found at the flowing link https://www.udot.utah.gov.

A new source of funding for Eagle Mountain is a new statewide gas tax. As of January 1, 2016, the state will begin collecting \$0.05 per gallon of gas purchased to directly use towards transportation improvements. The inclusion of this gas tax will provide Eagle Mountain with approximately \$440,000 annually to use towards transportation projects.

# City Funding

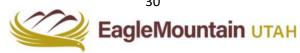
Most cities utilize general fund revenues for their transportation programs. Another option for transportation funding is the creation of special improvement districts. These districts are organized for the purpose of funding a single specific project that benefits an identifiable group of properties. Another source of funding used by cities includes revenue bonding for projects felt to benefit the entire community.

Private interests often provide resources for transportation improvements. Developers construct the local streets within subdivisions and often dedicate right-of-way and participate in the construction of collector/arterial streets adjacent to their developments. Developers can also be considered a source of funds for projects using impact fees. These fees are assessed because of the impacts a particular development will have on the surrounding roadway system, such as the need for traffic signals or street widening.

General fund revenues are typically reserved for operation and maintenance purposes as they relate to transportation. However, general funds could be used if available to fund the expansion or introduction of specific services. As of the publishing of this Transportation Master Plan, Eagle Mountain City will have a general fund budgeted line item for transportation improvements.

General obligation bonds are debt paid for or backed by the city's taxing power. In general, facilities paid for through this revenue stream are in high demand amongst the community. Typically, general obligation bonds are not used to fund facilities that are needed because of new growth because existing residents would be paying for the impacts of new growth. As a result, general obligation bonds are not considered a fair means of financing future facilities needed because of new growth.

Certain areas might require different needs or methods of funding other than traditional revenue sources. A Special Assessment Area (SAA) can be created for infrastructure needs that benefit or encompass specific areas of the city. Creation of the SAA may be initiated by the municipality by a resolution declaring



January 2023



the public health, convenience, and necessity requiring the creation of a SAA. The boundaries and services provided by the district must be specified and a public hearing held prior to creation of the SAA. Once the SAA is created, funding can be obtained from tax levies, bonds, and fees when approved by most of the qualified electors of the SAA. These funding mechanisms allow the costs to be spread out over time. Through the SAA, tax levies and bonding can apply to specific areas in the city needing and benefiting from the improvements.

Grant monies are ideal for funding projects within the city since they do not need to be paid back. Grants are not easy to come by and therefore obtaining such funding is not likely for the city and should not be considered a viable revenue source.

#### Impact Fees

Impact fees are a way for a community to obtain funds to assist in the construction of infrastructure improvements resulting from and needed to serve new growth. The premise behind impact fees is that if no new development occurred, the existing infrastructure would be adequate. Therefore, new developments should pay for the portion of required improvements that result from new growth. Impact fees are assessed for many types of infrastructure and facilities that are provided by a community, such as roadway facilities. According to state law, impact fees can only be used to fund growth related system improvements.

To help fund roadway improvements, impact fees should be established. These fees are collected from new developments in the city to help pay for improvements that are needed to the roadway system due to growth. At the culmination of the Transportation Master Planning process, a citywide IFFP will be developed according to state law to determine the appropriate impact fee values for the city.

## Cost to Implement 2030 and 2050 Projects

The specific roadway network needs resulting from future growth throughout Eagle Mountain were identified in Figure 14. Updating this figure is necessary since project scopes change and development occurs throughout the Eagle Mountain. All projects for the 2030 CFP and for 2050 are in a database in **Appendix B: Cost Estimates.** 

The total cost for the 2030 CFP projects is \$193,208,000. Eagle Mountain is financially responsible for \$192,865,000, with \$56,935,000 being eligible to paid by impact fees. A detailed description of each project is included in <u>Table 6</u> and are ordered based on the project priority for each year.

Many of the identified projects are for UDOT roads or roads which would be eligible for MAG funding assistance, such as the Cory Wride Freeway. Where a planned project occurs on a UDOT road, it is assumed that the city would not participate in funding that project. In the case of MAG eligible roadways, the City would be responsible for a 6.77% match of the total project cost. This 6.77% would need to be funded by the City with the funding mechanisms described earlier.

Also included are all projects necessary for the roadway network for 2050. Although this TMP should be regularly updated, it is necessary for all roadway improvements to accommodate projected 2050 traffic volumes. All projects included for the horizon year 2050 are listed in Appendix B: Cost Estimates. The total cost estimate for Eagle Mountain to improve the transportation system by 2050 is \$1.235 Billion dollars with Eagle Mountain financially responsible for \$570.9 Million dollars.

January 2023



Table 6: 2050 TMP Projects

	2030 Capital Facilities Plan – The City of Eagle Mountain Responsibility						
Ref. No.	Location	Total Price	Funding Source	Year	Eagle Mountain %	Eagle Mountain Total	
1	New Road (Old Airport Rd): Cory B Wride HWY to East Expressway - New 5 lane road	\$16,142,000	MAG/Other Funds	2030	100%	\$16,142,000	
1b	New Road (Old Airport Rd): East Expressway to Mid Valley Road - New 3 lane road	\$2,670,000	Eagle Mountain	2030	100%	\$2,670,000	
1c	New Road (Old Airport Rd): Mid Valley Road to Project 57 - New 3 lane road	\$3,965,000	Eagle Mountain	2030	100%	\$3,965,000	
2	New Road (Cory Wride Freeway): Mountain View Corridor to Ranches Pkwy - New freeway, frontage roads	\$459,608,000	MAG/Other Funds	2050	7%	\$32,173,000	
3	Cory Wride Highway Widening: Mountain View Corridor to Ranches Parkway - Widen to 5 lanes	\$7,565,000	UDOT	2050	0%	\$0	
4	Cory Wride Highway Widening: Ranches Parkway to Old Airport Rd - Widen to 5 lanes	\$8,716,000	UDOT	2050	0%	\$0	
5	New road (East Expressway): Eagle Mountain Blvd to Eagle Mountain Blvd - New 3 Iane road	\$32,397,000	MAG/Other Funds	2030	100%	\$32,397,000	
6	New Road (Lehi Fairfield): Eagle Mountain Blvd to 1600 West - New 3 lane road	\$6,820,000	Eagle Mountain	2050	100%	\$6,820,000	
7	New Road (Mid Valley Road): Eagle Mountain Blvd to East Expressway - New 3 lane road	\$4,642,000	Eagle Mountain	2030	100%	\$4,642,000	
8	Pony Express Parkway Widening: Sandpiper Rd to Eagle Mountain Blvd - Widen to 5 lanes	Completed	Eagle Mountain	2030	100%	Completed	
9	Eagle Mountain Blvd Widening: SR-73 to East Expressway - Widen to 5 lanes	\$12,238,000	Eagle Mountain	2030	100%	\$12,238,000	
10	Eagle Mountain Blvd: Pony Express Pkwy to Project 31	\$927,000	MAG/Other Funds	2050	7%	\$65,000	
11	Mustang Way & SR-73 - New Signal	\$300,000	UDOT	2050	0%	\$0	
12	Eagle Mountain Boulevard & Aviator Ave	\$300,000	Eagle Mountain	2050	100%	\$300,000	
13	New Road (Aviator Avenue): Eagle Mountain Blvd to Cedar Fort Road - New 3 lane road	\$5,100,000	MAG/Other Funds	2050	7%	\$357,000	
14	New Road (Cedar Valley Freeway): East Expressway to UC 4000 N - New freeway	\$103,200,000	MAG/Other Funds	2050	7%	\$7,224,000	
15	New Road (Central Valley Road): UC 2400 N to Mid Valley road - New 3 lane road	\$465,000	MAG/Other Funds	2050	7%	\$33,000	
16	New Road (Hidden Valley Road): East Expressway to Redwood Road - New 5 lane road	\$34,800,000	MAG/Other Funds	2050	7%	\$2,436,000	
17	New Road (Cedar Valley Road): Mid Valley Road to SR-73 - New 3 lane road	\$11,500,000	MAG/Other Funds	2050	7%	\$805,000	





	2030 Capital Facilities Plar	– The City of Eagl	e Mountain Re	esponsik	oility	
Ref. No.	Location	Total Price	Funding Source	Year	Eagle Mountain %	Eagle Mountain Total
18	New Road (UC 8000 N): Cedar Fort Road to UC 17200 W - New 3 lane road	\$5,877,000	MAG/Other Funds	2050	7%	\$412,000
19	New Road (unknown N/S road): East of Old Airport Rd to East Expressway	\$10,306,000	Eagle Mountain	2030	100%	\$10,306,000
20	Brandon Park Drive Widening: Aviator Ave to Willard Park Drive - Widen to 2 lanes	\$2,244,000	Eagle Mountain	2050	100%	\$2,244,000
21	New Road (Brandon Park Drive): Willard Park Drive to south of Pole Canyon Blvd) - New 2 lane road	\$11,045,000	Eagle Mountain	2050	100%	\$11,045,000
22	New Road (Willard Peak Drive): Brandon Park Rd to 0 St - New 2 lane road	\$1,895,000	Eagle Mountain	2050	100%	\$1,895,000
23	New Road (unknown, west of N Wood Rd): Brandon Park Drive to N Wood Rd - New 2 lane road	\$2,560,000	Eagle Mountain	2050	100%	\$2,560,000
24	New Road (W 3500 N St?): Tyson Pkwy to East Expressway - New 2 lane road	\$30,302,000	Eagle Mountain	2030	100%	\$30,302,000
25	New Road (N Wood Rd): N WOOD Road to 500 N St – New 3 lane road	\$16,017,000	Eagle Mountain	2050	100%	\$16,017,000
26	New Road (Bald Eagle Way): Pony Express Pkwy to possible E Oquirrh Ranch Pkwy - New 2 lane	\$3,637,000	Eagle Mountain	2030	100%	\$3,637,000
27	New Road (E Oquirrh Ranch Pkwy): Pony Express Pkwy to Hidden Valley Road -	\$7,271,000	Eagle Mountain	2030	100%	\$7,271,000
28	New Road (north of East Expressway): Eagle Mtn Blvd to Airport Rd	\$7,611,000	Eagle Mountain	2050	100%	\$7,611,000
29	East Expressway & Project 81 - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000
30	New Road (south of Cory Wride Mem Park): Project 29 to 5000 North St	\$8,464,000	Eagle Mountain	2050	100%	\$8,464,000
31	New Road (unknown N/S Rd): Eagle Mtn Blvd to 1000 North St	\$16,046,000	Eagle Mountain	2050	100%	\$16,046,000
32	New Road (1000 North St): 2000 East St to N Wood Rd	\$5,285,000	Eagle Mountain	2050	100%	\$5,285,000
33	New Road (unknown): Wood Road to Project 40	\$34,554,000	Eagle Mountain	2050	100%	\$34,554,000
34	New Road (west of SR-73): northern border to southern border	\$6,448,000	Eagle Mountain	2050	100%	\$6,448,000
35	New Road (4000 N): along northern border to SR-73	\$2,769,000	Eagle Mountain	2050	100%	\$2,769,000
36	New Road (Pole Canyon Blvd): Project 34 to W Lewiston Rd	\$2,673,000	Eagle Mountain	2050	100%	\$2,673,000
37	New Road (unknown N/S Rd, west of SR-73): Pole Canyon Blvd to Project 33 above	\$4,371,000	Eagle Mountain	2050	100%	\$4,371,000
38	New Road (unknown, N/S Rd, east of SR-73): Pole Canyon Blvd to Project 33 above	\$3,659,000	Eagle Mountain	2050	100%	\$3,659,000
39	New Road (Tyson Pkwy): Pole Canyon Blvd to Project 33 above	\$3,240,000	Eagle Mountain	2050	100%	\$3,240,000





	2030 Capital Facilities Plan	– The City of Eagl	e Mountain Re	esponsik	oility	
Ref. No.	Location	Total Price	Funding Source	Year	Eagle Mountain %	Eagle Mountain Total
40	New Road (unknown N/S Rd, east of Tyson Pkwy): northern border to southern border	\$9,206,000	Eagle Mountain	2050	100%	\$9,206,000
41	New Road (unknown W/E Rd): Project 33 above to N Wood Rd	\$10,532,000	Eagle Mountain	2050	100%	\$10,532,000
42	New Road (0 St): Cory Wride Hwy to Project 33 above	\$18,043,000	Eagle Mountain	2050	100%	\$18,043,000
43	New Road (2000 East St): Project 33 above to 500 North St	\$6,762,000	Eagle Mountain	2050	100%	\$6,762,000
44	New Road (Porters Crossing Pkwy): Golden Eagle Rd to Mid Valley Rd	\$3,958,000	Eagle Mountain	2050	100%	\$3,958,000
45	New Road (Silver Lake Pkwy): Golden Eagle Rd to Mid Valley Rd	\$1,168,000	Eagle Mountain	2050	100%	\$1,168,000
46	New Road (Talus Ridge Drive): Scenic Mountain Dr to Mt Saratoga Rd	\$2,452,000	Eagle Mountain	2030	100%	\$2,452,000
47	New Road (Spring Mountain Drive): Spring Run Drive to Spring Mountain Drive	\$1,886,000	Eagle Mountain	2050	100%	\$1,886,000
48	New Road (Wagstaff Way): N Spring Run Drive to Spring Run Pkwy	\$1,904,000	Eagle Mountain	2030	100%	\$1,904,000
49	New Road (Spring Run Pkwy): SR-73 to northern border	\$6,001,000	Eagle Mountain	2030	100%	\$6,001,000
50	New Road (unknown W/E Rd): Spring Run Pkwy to Project 52	\$2,140,000	Eagle Mountain	2050	100%	\$2,140,000
51	New Road (Wagstaff Way): Spring Run Pkwy to eastern border	\$5,682,000	Eagle Mountain	2030	100%	\$5,682,000
52	New Road (unknown N/S road just west of eastern border): SR-73 to northern border	\$3,079,000	Eagle Mountain	2050	100%	\$3,079,000
53	New Road (Pony Express Pkwy): 1000 N to southern border	\$8,540,000	Eagle Mountain	2050	100%	\$8,540,000
54	New Road (unknown N/S road): Mid Valley Road to Project 57	\$2,413,000	Eagle Mountain	2050	100%	\$2,413,000
55	New Road (Pole Canyon Blvd): East Expressway to Project 31 above	\$3,813,000	Eagle Mountain	2050	100%	\$3,813,000
56	New Road (unknown W/E road): Pony Express Pkwy to Project 31 above	\$10,036,000	Eagle Mountain	2030	100%	\$10,036,000
57	New Road (unknown W/E road): Eagle Mountain Blvd to Pony Express Pkwy	\$6,667,000	Eagle Mountain	2030	100%	\$6,667,000
58	Pole Canyon Blvd widening: W Lewiston Rd to Pony Express Pkwy	\$37,233,000	Eagle Mountain	2050	100%	\$37,233,000
59	New Road (Eagle Mountain Blvd): Cory Wride Hwy to 8000 North	\$4,543,000	Eagle Mountain	2050	100%	\$4,543,000
60	Six Mile Cutoff Rd Widening: Cory Wride Hwy to Abigail Ln	\$3,440,000	Eagle Mountain	2050	100%	\$3,440,000
61	New Road (Pole Canyon Blvd): Pony Express Pkwy to East Expressway	\$11,061,000	Eagle Mountain	2030	100%	\$11,061,000
62	New Road (Aviator Avenue): Pony Express Pkwy to East Expressway - New 3 lane road	\$6,078,000	Eagle Mountain	2030	100%	\$6,078,000





	2030 Capital Facilities Plar	n – The City of Eagl	e Mountain Ro	esponsik	oility	
Ref. No.	Location	Total Price	Funding Source	Year	Eagle Mountain %	Eagle Mountain Total
63	New Road (Lone Tree Pkwy): Old Airport Road to Seabiscuit Road	\$3,482,000	Eagle Mountain	2030	100%	\$3,482,000
64	New Road (Lone Tree Pkwy): Eagle Mountain Blvd to Old Airport Road	\$2,909,000	Eagle Mountain	2050	100%	\$2,909,000
65	Pony Express Pkwy Widening: Eagle Mountain Blvd to Eagle Mountain Public Works	\$7,985,000	Eagle Mountain	2030	100%	\$7,985,000
66	New Road (unknown W/E road): Pony Express Pkwy to East Expressway	\$3,226,000	Eagle Mountain	2050	100%	\$3,226,000
67	Wood Haven Blvd & Pony Express Pkwy - new signal	\$316,000	Eagle Mountain	2030	100%	\$316,000
68	Pony Express Pkwy & East Expressway - new signal	\$300,000	Eagle Mountain	2030	100%	\$300,000
69	Eagle Mountain Blvd & Project 57 - new signal	\$368,000	Eagle Mountain	2030	100%	\$368,000
70	Bobby Wren Blvd & Pony Express Pkwy - new signal	\$300,000	Eagle Mountain	2030	100%	\$300,000
71	Eagle Mountain Blvd & Major Street - new signal	\$330,000	Eagle Mountain	2030	7%	\$23,000
72	Pony Express Pkwy & Eagle Mountain Blvd - new signal	\$316,000	Eagle Mountain	2030	100%	\$316,000
73	Eagle Mountain Blvd and SR-73 - new signal	\$300,000	Eagle Mountain	2030	100%	\$300,000
74	Old Airport Road & East Expressway - new signal	\$300,000	Eagle Mountain	2050	100%	\$300,000
75	Pony Express Pkwy & Project 57 - new signal	\$300,000	Eagle Mountain	2050	100%	\$300,000
76	Pole Canyon Blvd & SR-73 - new signal	\$300,000	Eagle Mountain	2050	100%	\$300,000
77	Pole Canyon Blvd & Pony Express Pkwy	\$300,000	Eagle Mountain	2050	100%	\$300,000
78	New Road (Cory Wride Freeway): Ranches Pkwy to East Expressway – New Freeway, Frontage Roads	\$86,400,000	UDOT	2050	0%	\$0
79	New Road (1600 West): Aviator Avenue to 4000 North	\$4,071,000	Eagle Mountain	2030	100%	\$4,071,000
80	New High-T Signal: Ranches Pkwy & Campus Drive	\$1,719,000	Eagle Mountain	2030	100%	\$1,719,000
81	New Road (unknown W/E road): Cedar Valley Freeway to East Expressway	\$5,571,000	Eagle Mountain	2050	100%	\$5,571,000
82	Hidden Valley Pkwy widening: Pony Express Pkwy to Project 83	\$811,000	Eagle Mountain	2050	100%	\$811,000
83	New Road (Hidden Valley Pkwy): Locust Ave to Hidden Valley Road	\$4,897,000	Eagle Mountain	2050	100%	\$4,897,000
84	Intersection Improvement: Porter's Crossing Pkwy/Pony Express Pkwy	\$300,000	Eagle Mountain	2030	100%	\$300,000

January 2023



	2030 Capital Facilities Plan – The City of Eagle Mountain Responsibility						
Ref. No.	Location	Total Price	Funding Source	Year	Eagle Mountain %	Eagle Mountain Total	
85	Intersection Improvement: Ranches Pkwy/Pony Express Pkwy	\$121,000	Eagle Mountain	2030	100%	\$121,000	
86	Intersection Improvement: Lone Tree Pkwy/Pony Express Pkwy	\$149,000	Eagle Mountain	2030	100%	\$149,000	
87	New Road (unknown W/E road): Cedar Valley Freeway to Project 31	\$48,839,000	Eagle Mountain	2050	100%	\$48,839,000	
88	East Expressway & Eagle Mountain Blvd - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
89	New Road (East Expressway): Eagle Mountain Blvd to Southern Border	\$24,173,000	Eagle Mountain	2050	100%	\$24,173,000	
90	East Expressway & Bobby Wren Blvd - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
91	Oquirrh Ranch Pkwy & Pony Express Pkwy - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
92	Eagle Mountain Blvd & Mid Valley Road - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
93	Mid Valley Road & East Expressway - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
94	East Expressway & Project 66 - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
95	East Expressway & 5000 North - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
96	Pony Express Pkwy & Eagle Park Entry Road	\$300,000	Eagle Mountain	2050	100%	\$300,000	
97	Eagle Mountain Blvd & East Expressway - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
98	Pony Express Pkwy & Rachel Way	\$300,000	Eagle Mountain	2050	100%	\$300,000	
99	4000 North & SR-73 - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
100	Pole Canyon Rd & Tyson Pkwy - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
101	Pole Canyon Rd & 0 St - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
102	Pole Canyon Rd & East Expressway - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
103	Pony Express Pkwy & Project 87 - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
104	East Expressway & Project 87 - New Signal	\$300,000	Eagle Mountain	2050	100%	\$300,000	
	Total	\$1,269,390,000				\$586,190,000	



# NATIVE TRANSPORTATION MODES

Accommodating alternative modes of transportation, including trails, sidewalks, and future transit options, help provide opportunities to those who may not have access to a vehicle, may not be inclined to drive, or are seeking healthier lifestyles. An active transportation plan allows all Eagle Mountain residents to travel within and out of Eagle Mountain. These facilities will improve the overall quality of life of the residents while aiding in congestion relief and increasing the lifespan of the City's roadway network.

Eagle Mountain is committed to providing transportation options for all modes, including bicyclists, pedestrians, motorists, commercial vehicles, and emergency vehicles. A thorough TMP will accommodate all these modes for all ages and all abilities where possible. Through proper policy, Eagle Mountain can achieve a wide range of benefits like; improving safety, enhancing city vitality, improving the visual and economic appeal of a streetscape, and improving public welfare by addressing a wide array of health and environmental problems. Eagle Mountain will look holistically at the transportation network to identify the best streets for walking and riding a bicycle while ensuring that main arterials and thoroughfares remain accessible and viable for regional travel. These policies need to reflect the local lifestyles and needs unique to the Eagle Mountain community.

# Bicycle and Pedestrians

Pedestrian and bicycle safety is one of the main features of any transportation master plan. People will be more inclined to walk or ride their bicycle when the experience is pleasant, they feel safe, and distances are reasonable. Eagle Mountain is home to some of the most recognized bike trails in the state. Bike lanes on selected roadways provide safer access for recreational users, as stated in the Eagle Mountain Bicycle and Pedestrian Master Plan, which the public can access online at https://eaglemountaincity.com.

# **Transit**

The Utah Transit Authority (UTA) is the public transportation provider throughout the Wasatch Front. UTA operates fixed-route buses, express buses, bus rapid transit (BRT), ski buses, light rail, and commuter rail. UTA has also started a new On Demand service, which is not available in Eagle Mountain, but Eagle Mountain should explore this service as another viable alternative mode of transportation. In this capacity, UTA is responsible for the operation of the transit network in Eagle Mountain. Eagle Mountain and UTA are responsible for cooperating and providing transit planning to accommodate alternative transportation options to residents as demand increases.

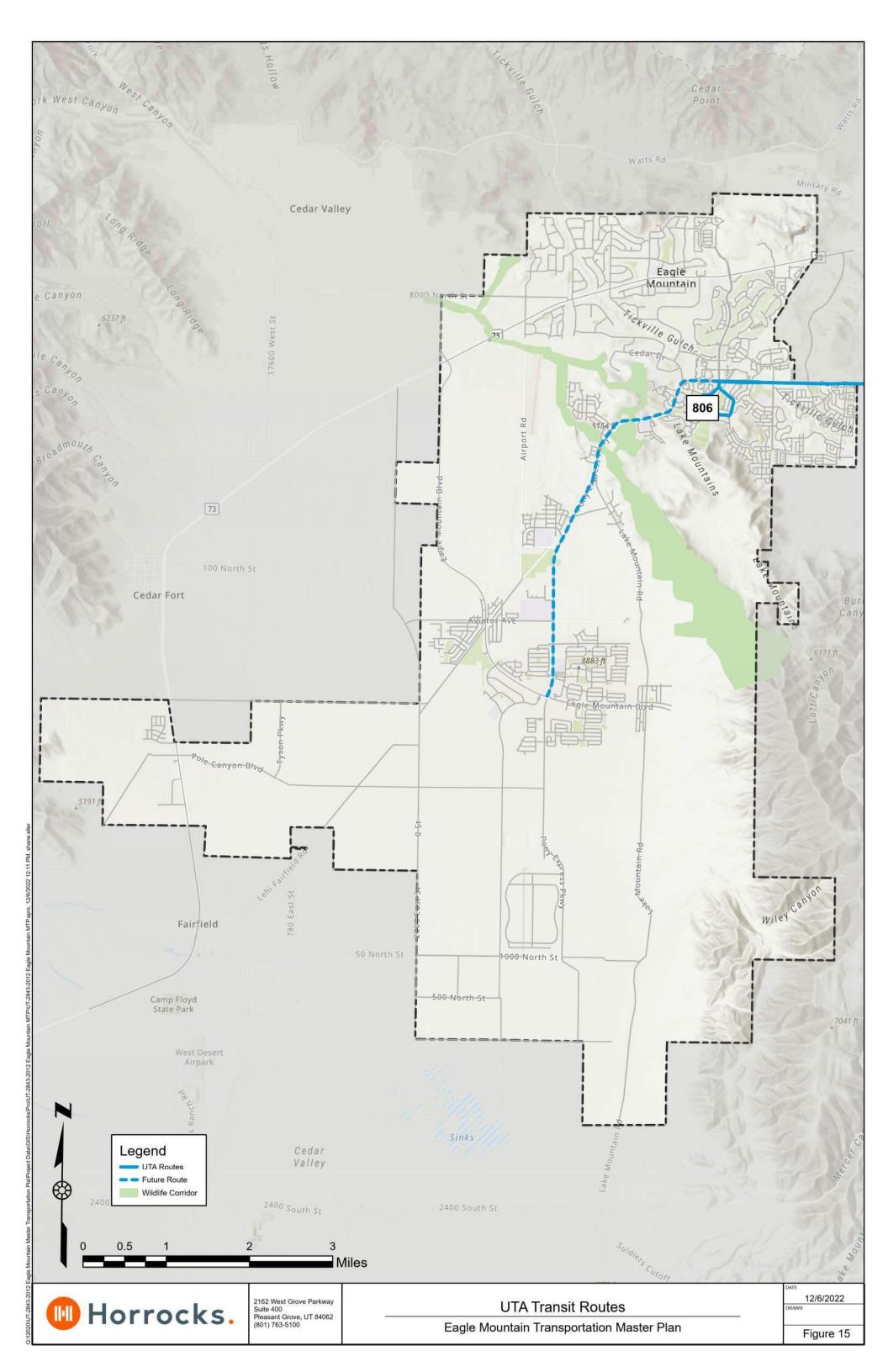
In 2008, the Utah Transit Authority (UTA) began Route 806, the first bus route to serve Eagle Mountain, which currently runs between Nolen Park in Eagle Mountain (western terminus) and the Lehi FrontRunner station (eastern terminus). Existing transit routes and planned future routes in Eagle Mountain are included in Figure 15 (UTA maintains up-to-date route information at www.rideuta.com). The combined efforts of the Utah Transit Authority (UTA), UDOT, MAG, and Eagle Mountain will dictate the nature of a future expanded transit system.







As part of MAG's Trans Plan 50 there is a planned Cedar Valley Core Bus Route scheduled and funded for phase 1 which travels between American Fork and Eagle Mountain, extending coverage down to Eagle Mountain Blvd. As well, there is an unscheduled and unfunded BRT route that may be considered as demand increases. Eagle Mountain and UTA will continue to coordinate and plan for future transit needs.





# APPENDIX A: TRAFFIC IMPACT STUDY GUIDELINES

# **Traffic Impact Study Requirements**

When a Traffic Impact Study is required prepare the study according to the appropriate TIS level as shown below. The traffic study shall, at a minimum, incorporate Eagle Mountain principles and standards and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

# PERMIT LEVEL / TRAFFIC STUDY LEVEL I

#### **Project ADT < 100 trips**

No proposed modifications to traffic signals or roadway elements or geometry.

#### 1. Study Area

- The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.
- The study area may be limited to or include property frontage and include neighboring and adjacent parcels. Identify site, cross, and next adjacent up and down stream access points within access category distance of property boundaries.

### 2. Design Year

Opening Day of Project

#### 3. Analysis Conditions and Period

- Identify site traffic volumes and characteristics.
- Identify adjacent street(s) traffic volume and characteristics.

#### 4. Identify right-of-way, geometric boundaries and physical conflicts

Investigate existence of federal or state, no access or limited access control line.

## 5. Generate access point capacity analysis as necessary

Analyze site and adjacent road traffic for the following time periods: weekday A.M. and P.M.
peak hours including Saturday peak hours if required by the City Engineer. Identify special event
peak hour as necessary (per roadway peak and site peak).

### 6. Design and Mitigation

• Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

# PERMIT LEVEL / TRAFFIC STUDY LEVEL II

### Project ADT 100 to 500 trips

## 1. Study Area

- The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.
- Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections

#### 2. Design Year

Opening Day of Project

## 3. Analysis Period

• Identify site and adjacent road traffic for weekday A.M. and P.M. peak hours (Saturdays if required by the City Engineer).

#### 4. Data Collection

- Identify site and adjacent street roadway and intersection geometries.
- Identify adjacent street(s) traffic volume and characteristics.

#### 5. Conflict / Capacity Analysis

- Diagram flow of traffic at access point(s) for site and adjacent development.
- Perform capacity analysis as determined by the City Engineer.

#### 6. Right-of-Way Access

- Identify right-of-way, geometric boundaries and physical conflicts.
- Investigate existence of federal or state, no access or limited access control line.

### 7. Design and Mitigation

 Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

# Project ADT 500 to 3,000 trips or peak hour < 500 trips.

## 1. Study Area

- The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary is 1/4-1/2 mile on each side of the project site per the City Engineer.
- Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections.

### 2. Design Year

- Opening Day of Project
- Five (5) Years after Project Completion
- Document and include all phases of development (includes out pad parcels)

### 3. Analysis Period

 Analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours if identified as a high Saturday use.. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

#### 4. Data Collection

- Daily and Turning Movement counts.
- Identify site and adjacent street roadway and intersection geometries.
- Traffic control devices including traffic signals and regulatory signs.
- Traffic accident data

#### 5. Trip Generation

Use equations or rates available in latest edition of ITE Trip Generation. Where developed
equations are unavailable for intended land use, perform trip rate study and estimation
following ITE procedures or develop justified trip rate agreed to by the Department.

### 6. Trip Distribution and Assignment

 Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

#### 7. Conflict/Capacity Analysis

- Diagram flow of traffic at access point(s) for site and adjacent development.
- Perform capacity analysis for daily and peak hour volumes

# 8. Traffic Signal Impacts

- For modified and proposed traffic signals:
  - Traffic Signal Warrants as identified.
  - Traffic Signal drawings as identified.
  - Queuing Analysis

# 9. Design and Mitigation.

 Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

# PERMIT LEVEL / TRAFFIC STUDY LEVEL III

Project ADT 3,000 to 10,000 trips or peak hour traffic 500 to 1,200 trips.

## 1. Study Area

- The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.
- An acceptable traffic study boundary should be based on travel time or by market area influence. Intersection of site access drives with state highways and any intersection within 1/2 mile of property line on each side of project site.

#### 2. Design Year

- Opening Day of Project
- Five (5) Years After Opening
- Twenty (20) Years After Opening
- Document and include all phases of development (includes out pad parcels).

## 3. Analysis period

For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak
hours including Saturday peak hours if identified as needed per the City Engineer. Identify
special event peak hour as necessary (adjacent roadway peak and site peak).

#### 4. Data Collection

- Daily and Turning movement counts.
- Identify site and adjacent street roadway and intersection geometries.
- Traffic control devices including traffic signals and regulatory signs.
- Automatic continuous traffic counts for at least 48 hours.
- Traffic accident data.

#### 5. Trip Generation

Use equations or rates available in latest edition of ITE Trip Generation. Where developed
equations are unavailable for intended land use, perform trip rate study and estimation
following ITE procedures or develop justified trip rate agreed to by the Department.

### 6. Trip Distributions and Assignment

 Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

### 7. Capacity Analysis

- Level of Service (LOS) for all intersections.
- LOS for existing conditions, design year without project, design year with project.

# 8. Traffic Signal Impacts.

- For proposed Traffic Signals:
  - Traffic Signal Warrants as identified.
  - Traffic Signal drawings as identified.
  - Queuing Analysis.
  - Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
  - Traffic Coordination Analysis

# 10. Accident and Traffic Safety Analysis

• Existing vs. as proposed development.

# 11. Design and Mitigation

 Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

# PERMIT LEVEL / TRAFFIC STUDY LEVEL IV

Project ADT greater than 10,000 trips or peak hour traffic > 1,200 vehicles per hour.

## 1. Study Area

• The study area, depending on the size and intensity of the development, will include the surrounding roadways ½ mile from the parcel boundary or reasonable travel time boundary.

## 2. Design Year

- Opening Day of Project
- Five (5) Years After Opening
- Twenty (20) Years After Opening
- Document and include all phases of development (includes out pad parcels).

#### 3. Analysis Period

• For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours as needed per the City Engineer. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

#### 4. Data Collection

- Daily and Turning movement counts.
- Identify site and adjacent street roadway and intersection geometries.
- Traffic control devices including traffic signals and regulatory signs.
- Automatic continuous traffic counts for at least 24 hours or obtain ADT from local or state agencies
- Traffic accident data.

#### 5. Trip Generation

Use equations or rates available in latest edition of ITE Trip Generation. Where developed
equations are unavailable for intended land use, perform trip rate study and estimation
following ITE procedures or develop justified trip rate agreed to by the Department.

#### 6. Trip Distributions and Assignment

 Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

### 7. Capacity Analysis

- Level of Service (LOS) for all intersections.
- LOS for existing conditions, design year without project, design year with project.

#### 8. Traffic Signal Impacts.

- For proposed Traffic Signals:
  - Traffic Signal Warrants as identified.

- Traffic Signal drawings as identified.
- Queuing Analysis.
- Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
- Traffic Coordination Analysis

# 9. Accident and Traffic Safety Analysis. Existing vs. Proposed Development

# 10. Design and Mitigation

- Determine and document safe and efficient operational design needs based on site and study area data.
- Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.



# PPENDIX B: COST ESTIMATES

Project #	Project Name	Project Type	Funding	Range (yr)	Functional Class	Estimated Contruction Year
1	New Road (Old Airport Rd): Cory B Wride HWY to East Expressway - New 5 lane road	New Road	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
1b	New Road (Old Airport Rd): East Expressway to Mid Valley Road - New 3 Iane road	New Road	Eagle Mountain	10	Major Collector - 94'	2030
1c	New Road (Old Airport Rd): Mid Valley Road to Project 57 - New 3 lane road	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
2	New Road (Cory Wride Freeway): Mountain View Corridor to Ranches Parkway - New freeway, frontage roads	New Road	Eagle Mountain	30	Major Arterial - 126' - Five Lanes	2050
3	Cory Wride Highway Widening: Mountain View Corridor to Ranches Parkway - Widen to 5 lanes	Capacity Improvement	UDOT	10	Major Arterial - 126' - Five Lanes	2030
4	Cory Wride Highway Widening: Ranches Parkway to Old Airport Rd - Widen to 5 lanes	Capacity Improvement	UDOT	10	Major Arterial - 126' - Five Lanes	2030
5	New road (East Expressway): Pony Express Pkwy to Eagle Mountain Blvd - New 5 lane road	New Road	MAG/Other Funds	10	Major Arterial - 126' - Five Lanes	2030
6	New Road (Foothill Boulevard): Cory Wride Fwy to Stillwater Dr - New 3 lane road	New Road	MAG/Other Funds	10	Major Collector - 94'	2030
7	New Road (Mid Valley Road): Eagle Mountain Blvd to East Expressway - New 3 lane road	New Road	Eagle Mountain	10	Major Collector - 94'	2030
8	Pony Express Parkway Widening: Sandpiper Rd to Eagle Mountain Blvd - Widen to 5 lanes	Capacity Improvement	MAG/Other Funds	10	Major Arterial - 126' - Five Lanes	2050
9	Eagle Mountain Boulevard Widening: SR-73 to East Expressway - Widen to 5 lanes	Capacity Improvement	Eagle Mountain	30	Major Arterial - 126' - Five Lanes	2030
10	East Expressway Widening: Cedar Valley Freeway to Eagle Mountain Boulevard - Widen to 5 lanes	Capacity Improvement	MAG/Other Funds	30	Major Arterial - 126' - Five Lanes	2050
11	New Road (Harvest Hills Boulevard): Sunflower Way to Spring Run Dr - New 3 lane road	New Road	MAG/Other Funds	30	Major Collector - 94'	2050
12	New Road (Mt. Saratoga Boulevard): Cory Wride Freeway to Harvest Hills Boulevard - New 3 Iane road	New Road	MAG/Other Funds	30	Major Collector - 94'	2050
13	New Road (Aviator Avenue): Eagle Mountain Boulevard to Cedar Fort Road - New 3 Iane road	New Road	MAG/Other Funds	30	Major Collector - 94'	2050
14	New Road (Cedar Valley Freeway): East Expressway to UC 4000 N - New freeway	New Road	MAG/Other Funds	30	Major Arterial - 126' - Five Lanes	2050
15	New Road (Central Valley Road): UC 2400 N to Mid Valley road - New 3 lane road	New Road	MAG/Other Funds	30	Major Collector - 94'	2050
16	New Road (Hidden Valley Road): East Expressway to Redwood Road - New 5 lane road	New Road	MAG/Other Funds	30	Major Arterial - 126' - Five Lanes	2050
17	New Road (Mid Valley Road): Eagle Mountain Blvd to Cedar Fort Road - New 3 lane road	New Road	MAG/Other Funds	30	Major Collector - 94'	2050
18	New Road (UC 8000 N): Cedar Fort Road to UC 17200 W - New 3 lane road	New Road	MAG/Other Funds	30	Major Collector - 94'	2050
19	New Road (unknown N/S road): East of Old Airport Rd to East Expressway	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
20	Brandon Park Drive Widening: Aviator Ave to Willard Park Drive - Widen to 2 lanes	Capacity Improvement	Eagle Mountain	30	Minor Collector - 77'	2050
21	New Road (Brandon Park Drive): Willard Park Drive to south of Pole Canyon Blvd) - New 2 lane road	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
22	New Road (Willard Peak Drive): Brandon Park Rd to 0 St - New 2 Iane road	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
23	New Road (unknown, west of N Wood Rd): Brandon Park Drive to N Wood Rd - New 2 lane road	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
24	New Road (possibly W 3500 N St?): Tyson Parkway to East Expressway - New 2 lane road	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
25	New Road (N Wood Rd): N Wood Rd to E 500 N St - New 3 lane road	New Road	Eagle Mountain	30	Major Collector - 94'	2050
26	New Road (possibly Bald Eagle Way): Pony Express Parkway to possible E Oquirrh Ranch Pkwy - New 2 lane	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
27	New Road (possibly E Oquirrh Ranch Parkway): Pony Express Pkwy to Hidden Valley Road -	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
28 29	New Road (unknown, north of East Expressway): Eagle Mtn Blvd to Airport Rd -	New Road	Eagle Mountain	30 30	Minor Arterial - 122'	2050
	New Road (unknown, south of Cory Wride Mem Park): Eagle Mtn Blvd to Pony Express Pkwy -	New Road	Eagle Mountain	30	Minor Collector - 77' Minor Collector - 77'	2050 2050
30 31	New Road (unknown, south of Cory Wride Mem Park): Project 29 above to 5000 North St -	New Road New Road	Eagle Mountain	30	Minor Collector - 77	2050
32	New Road (unknown N/S rd): Eagle Mtn Blvd to 1000 North St New Road (1000 North St): 2000 East St to N Wood Rd	New Road	Eagle Mountain Eagle Mountain	30	Minor Collector - 77	2050
33	New Road (unknown): Wood Road to Project 40	New Road	Eagle Mountain	30	Minor Collector - 77	2050
34	New Road (unknown, west of SR-73): northern border to southern border	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
35	New Road (4000 N): along northern border to SR-73	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
36	New Road (Pole Canyon Boulevard): Project 34 to W Lewiston Rd	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
37	New Road (unknown N/S rd, west of SR-73): Pole Canyon Boulevard to Project 33 above	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
38	New Road (unknown, N/S rd, east of SR-73): Pole Canyon Boulevard to Project 33 above	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
39	New Road (Tyson Parkway): Pole Canyon Boulevard to Project 33 above	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
40	New Road (unknown N/S rd, east of Tyson Parkway): northern border to southern border	New Road	Eagle Mountain	30	Major Collector - 94'	2050
41	New Road (unknown W/E rd): Project 33 above to N Wood Rd	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
42	New Road (0 St): Cory Wride Hwy to Project 33 above	New Road	Eagle Mountain	30	Major Collector - 94'	2050
43	New Road (2000 East St): Project 33 above to 500 North St	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
44	New Road (Porters Crossing Parkway): Golden Eagle Rd to Mid Valley Rd	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
45	New Road (SilverLake Parkway): Golden Eagle Rd to Mid Valley Rd	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
46	New Road (Talus Ridge Drive): Scenic Mountain Dr to Mt Saratoga Blvd	New Road	Eagle Mountain	30	Minor Collector - 77'	2030
47	New Road (Spring Mountain Drive): Spring Run Drive to Spring Mountain Drive	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
48	New Road (possibly Wagstaff Way): N Spring Run Drive to Spring Run Parkway	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
49	New Road (Spring Run Parkway): SR-73 to northern border	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
50	New Road (unknown W/E rd just south of norther border): Spring Run Parkway to Project 52	New Road	Eagle Mountain	30	Local Street	2050
51	New Road (possibly Wagstaff Way): Spring Run Parkway to eastern border	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
52	New Road (unknown N/S road just west of eastern border): SR-73 to northern border	New Road	Eagle Mountain	30	Local Street	2050
53	New Road (Pony Express Parkway) : 1000 N to southern border	New Road	Eagle Mountain	30	Minor Arterial - 122'	2050
54	New Road (unknown W/E road): Cory Wride HWY to East Expressway	New Road	Eagle Mountain	30	Major Arterial - 126' - Five Lanes	2050
55	New Road (Pole Canyon Boulevard): East Expressway to Project 31 above	New Road	Eagle Mountain	30	Major Arterial - 126' - Five Lanes	2050
56	New Road (unknown W/E road): Pony Express Pkwy to Project 31 above	New Road	Eagle Mountain	10	Minor Collector - 77'	2030

58	Pole Canyon Blvd widening: W Lewiston Rd to Pony Express Pkwy	Capacity Improvement	Eagle Mountain	30	Minor Arterial - 122'	2050
59	New Road (Eagle Mountain Boulevard): Cory Wride Hwy to 8000 North	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
60	Six Mile Cutoff Rd Widening: Cory Wride Hwy to Abigail Ln	Capacity Improvement	Eagle Mountain	30	Minor Collector - 77'	2050
61	New Road (Pole Canyon Boulevard): Pony Express Parkway to East Expressway	New Road	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
62	New Road (Aviator Avenue): Pony Express Parkway to East Expressway - New 3 lane road	New Road	Eagle Mountain	10	Major Collector - 94'	2030
63	New Road (Lone Tree Parkway): Old Airport Road to Seabiscuit Road	New Road	Eagle Mountain	10	Minor Collector - 77'	2030
64	New Road (Lone Tree Parkway): Eagle Mountain Blvd to Old Airport Road	New Road	Eagle Mountain	30	Minor Arterial - 122'	2050
65	Pony Express Parkway Widening: Eagle Mountain Blvd to Eagle Mountain Public Works	Capacity Improvement	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
66	New Road (unknown W/E road): Pony Express Parkway to East Expressway	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
67	WoodHaven Blvd & Pony Express Pkwy - new signal	Traffic Signal	Eagle Mountain	10		2030
68	Pony Express Pkwy & East Expressway - new signal	Traffic Signal	Eagle Mountain	10		2030
69	Eagle Mountain Boulevard & Project 57 - new signal	Traffic Signal	Eagle Mountain	10		2030
70	Bobby Wren Boulevard & Pony Express Parkway - new signal	Traffic Signal	MAG/Other Funds	10		2030
71	Eagle Mountain Boulevard & Major Street - new signal	Traffic Signal	Eagle Mountain	10		2030
72	Pony Express Pkwy & Eagle Mountain Boulevard - new signal	Capacity Improvement	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
73	Eagle Mountain Boulevard and SR-73 - new signal	Traffic Signal	Eagle Mountain	30		2050
74	Old Airport Road & East Expressway - new signal	Traffic Signal	Eagle Mountain	30		2050
75	Pony Express Parkway & Project 57 - new signal	Traffic Signal	Eagle Mountain	30		2050
76	Pole Canyon Boulevard & SR-73 - new signal	Traffic Signal	Eagle Mountain	30		2050
77	Pole Canyon Boulevard & Pony Express Parkway	Traffic Signal	Eagle Mountain	30		2050
78	New Road (Cory Wride Freeway):Ranches Parkway to East Expressway- New freeway, frontage roads	New Road	UDOT	30	Major Arterial - 126' - Five Lanes	2050
79	New Road (1600 West): Aviator Avenue to 4000 North	New Road	Eagle Mountain	10	Major Collector - 94'	2030
80	New High-T Signal: Ranches Parkway & Campus Drive	Capacity Improvement	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
81	New Road ( unknown W/E road): Cedar Valley Freeway to East Expressway	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
82	Hidden Valley Pkwy widening: Pony Express Pkwy to Project 83	Capacity Improvement	Eagle Mountain	30	Minor Collector - 77'	2050
83	New Road (Hidden Valley Pkwy): Locust Ave to Hidden Valley Road	New Road	Eagle Mountain	30	Minor Collector - 77'	2050
84	Intersection Improvement: Porter's Crossing Pkwy/Pony Express Pkwy	Capacity Improvement	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
85	Intersection Improvement: Ranches Pkwy/Pony Express Pkwy	Capacity Improvement	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
86	Intersection Improvement: Lone Tree Pkwy/Pony Express Pkwy	Capacity Improvement	Eagle Mountain	10	Major Arterial - 126' - Five Lanes	2030
87	New Road (unknown W/E road): Cedar Valley Freeway to Project 31	New Road	Eagle Mountain	30	Major Collector - 94'	2050

# New Road (Old Airport Rd): Cory B Wride HWY to East Expressway - New 5 lane road

Costs							
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2023)			
Parkstrip	S.F.	\$10	99,029	\$1,044,756			
Removal of Existing Asphalt	S.Y.	\$4	0	\$0			
Clearing and Grubbing	Acre	\$2,000	29	\$60,440			
Roadway Excavation	C.Y.	\$11	72,438	\$802,431			
HMA Concrete	Ton	\$85	20,210	\$1,812,347			
Untreated Base Course	C.Y.	\$15	19,317	\$305,688			
Granular Borrow	C.Y.	\$40	33,804	\$1,426,544			
Curb and Gutter (2.5' width)	L.F.	\$23	19,806	\$470,140			
Sidewalk (5' width)	L.F.	\$25	19,806	\$522,378			
Drainage	L.F.	\$45	19,806	\$940,281			
Right of Way	S.F.	\$2.30	1,247,766	\$3,027,704			
Mirafi RS 280i fabric	S.F.	\$1	2,047	\$1,080			
Bridge/Culvert	S.F.	\$225	0	\$0			
Traffic Signal	Each	\$193,000	0	\$0			
			Construction Cost	\$10,413,790			
Mobilization (10% of Construction)	Lump	10%	1,041,379	\$1,041,379			
Contingency (25% of Construction)	Lump	25%	2,603,447	\$2,603,447			
			Subtotal	\$14,058,616			

Preconstruction Engineering	10%	\$1,041,379
Construction Engineering	10%	\$1,041,379

Total Project Costs \$16,142,000

# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

2

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14
Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 1

Improvement Type: **New Road**Completion Year: **2030** 

New Road (Old Airport Rd): East Expressway to Mid Valley Road - New 3 lane road

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2025)		
Parkstrip	S.F.	\$10	16,168	\$185,378		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	4	\$10,001		
Roadway Excavation	C.Y.	\$11	10,105	\$121,654		
HMA Concrete	Ton	\$85	2,819	\$274,765		
Untreated Base Course	C.Y.	\$15	2,695	\$46,345		
Granular Borrow	C.Y.	\$40	3,368	\$154,482		
Curb and Gutter (2.5' width)	L.F.	\$23	4,042	\$104,275		
Sidewalk (5' width)	L.F.	\$25	4,042	\$115,861		
Drainage	L.F.	\$45	4,042	\$208,550		
Right of Way	S.F.	\$2.30	189,974	\$500,984		
Mirafi RS 280i fabric	S.F.	\$1	418	\$239		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			<b>Construction Cost</b>	\$1,722,535		
Mobilization (10% of Construction)	Lump	10%	172,254	\$172,254		
Contingency (25% of Construction)	Lump	25%	430,634	\$430,634		
			Subtotal	\$2,325,423		

Preconstruction Engineering	10%	\$172,254
Construction Engineering	10%	\$172,254

<b>Total Project Costs</b>	\$2,670,000
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# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

# **Project Parameters:**

Project Number: **1b**Improvement Type: **New Road**Completion Year: **2030** 

Roadway Functional Class: Major Collector - 94'

New Road (Old Airport Rd): Mid Valley Road to Project 57 - New 3 lane road

Costs								
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2028)				
Parkstrip	S.F.	\$10	25,280	\$321,366				
Removal of Existing Asphalt	S.Y.	\$4	0	\$0				
Clearing and Grubbing	Acre	\$2,000	6	\$14,202				
Roadway Excavation	C.Y.	\$11	11,704	\$156,220				
HMA Concrete	Ton	\$85	3,265	\$352,833				
Untreated Base Course	C.Y.	\$15	3,121	\$59,512				
Granular Borrow	C.Y.	\$40	3,901	\$198,374				
Curb and Gutter (2.5' width)	L.F.	\$23	6,320	\$180,768				
Sidewalk (5' width)	L.F.	\$25	6,320	\$200,854				
Drainage	L.F.	\$45	6,320	\$361,537				
Right of Way	S.F.	\$2.30	243,320	\$711,424				
Mirafi RS 280i fabric	S.F.	\$1	653	\$415				
Bridge/Culvert	S.F.	\$225	0	\$0				
Traffic Signal	Each	\$193,000	0	\$0				
			<b>Construction Cost</b>	\$2,557,506				
Mobilization (10% of Construction)	Lump	10%	255,751	\$255,751				
Contingency (25% of Construction)	Lump	25%	639,377	\$639,377				
			Subtotal	\$3,452,634				

Preconstruction Engineering	10%	\$255,751
Construction Engineering	10%	\$255,751

75,505,000	<b>Total Pro</b>	ject Costs	\$3,965,000
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# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

# **Project Parameters:**

Project Number: 1c
Improvement Type: New Road
Completion Year: 2030

Roadway Functional Class: Minor Collector - 77'

New Road (Cory Wride Freeway): Mountain View Corridor to Ranches Parkway - New freeway, frontage roads

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	2,974,825	\$29,748,246		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	860	\$1,720,973		
Roadway Excavation	C.Y.	\$11	2,176,029	\$22,848,305		
HMA Concrete	Ton	\$85	607,112	\$51,604,529		
Untreated Base Course	C.Y.	\$15	580,274	\$8,704,116		
Granular Borrow	C.Y.	\$40	1,015,480	\$40,619,209		
Curb and Gutter (2.5' width)	L.F.	\$23	594,965	\$13,386,710		
Sidewalk (5' width)	L.F.	\$25	594,965	\$14,874,123		
Drainage	L.F.	\$45	594,965	\$26,773,421		
Right of Way	S.F.	\$2.30	37,482,789	\$86,210,416		
Mirafi RS 280i fabric	S.F.	\$1	61,480	\$30,740		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$296,520,788		
Mobilization (10% of Construction)	Lump	10%	29,652,079	\$29,652,079		
Contingency (25% of Construction)	Lump	25%	74,130,197	\$74,130,197		
			Subtotal	\$400,303,064		

Preconstruction Engineering	10%	\$29,652,079
Construction Engineering	10%	\$29,652,079

**Total Project Costs** \$459,608,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4 Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5 2

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 2

Improvement Type: New Road Completion Year: 2050

Cory Wride Highway Widening: Mountain View Corridor to Ranches Parkway - Widen to 5 lanes

Costs						
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2030)		
Parkstrip	S.F.	\$10	72,807	\$991,459		
Removal of Existing Asphalt	S.Y.	\$4	44,493	\$242,357		
Clearing and Grubbing	Acre	\$2,000	4	\$10,925		
Roadway Excavation	C.Y.	\$11	16,179	\$231,340		
HMA Concrete	Ton	\$85	4,514	\$522,499		
Untreated Base Course	C.Y.	\$15	4,314	\$88,130		
Granular Borrow	C.Y.	\$40	7,550	\$411,272		
Curb and Gutter (2.5' width)	L.F.	\$23	14,561	\$446,156		
Sidewalk (5' width)	L.F.	\$25	14,561	\$495,729		
Drainage	L.F.	\$45	14,561	\$892,313		
Right of Way	S.F.	\$2.30	174,736	\$547,285		
Mirafi RS 280i fabric	S.F.	\$1	1,505	\$1,025		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$4,880,489		
Mobilization (10% of Construction)	Lump	10%	488,049	\$488,049		
Contingency (25% of Construction)	Lump	25%	1,220,122	\$1,220,122		
			Subtotal	\$6,588,660		

Preconstruction Engineering	10%	\$488,049
Construction Engineering	10%	\$488,049

Total Project Costs \$7,565,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14
Roadway Excavation Depth (ft) = 2.5
Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: 3

Improvement Type: Capacity Improvement

Completion Year: 2050

# Cory Wride Highway Widening: Ranches Parkway to Old Airport Rd - Widen to 5 lanes

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2030)		
Parkstrip	S.F.	\$10	77,663	\$1,057,586		
Removal of Existing Asphalt	S.Y.	\$4	47,460	\$258,521		
Clearing and Grubbing	Acre	\$2,000	4	\$11,654		
Roadway Excavation	C.Y.	\$11	17,258	\$246,770		
HMA Concrete	Ton	\$85	4,815	\$557,348		
Untreated Base Course	C.Y.	\$15	4,602	\$94,008		
Granular Borrow	C.Y.	\$40	8,054	\$438,702		
Curb and Gutter (2.5' width)	L.F.	\$23	15,533	\$475,914		
Sidewalk (5' width)	L.F.	\$25	15,533	\$528,793		
Drainage	L.F.	\$45	15,533	\$951,827		
Right of Way	S.F.	\$2.30	186,390	\$583,788		
Mirafi RS 280i fabric	S.F.	\$0.50	613,534	\$417,746		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$5,622,657		
Mobilization (10% of Construction)	Lump	10%	562,266	\$562,266		
Contingency (25% of Construction)	Lump	25%	1,405,664	\$1,405,664		
			Subtotal	\$7,590,587		

Preconstruction Engineering	10%	\$562,266
Construction Engineering	10%	\$562,266

Total Project Costs \$8,716,000

# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

2

### **Project Parameters:**

Project Number: 4

Improvement Type: Capacity Improvement

Completion Year: 2050

New road (East Expressway): Pony Express Pkwy to Eagle Mountain Blvd - New 5 lane road

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2025)		
Parkstrip	S.F.	\$10	182,880	\$2,096,853		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	53	\$121,306		
Roadway Excavation	C.Y.	\$11	133,773	\$1,610,499		
HMA Concrete	Ton	\$85	37,323	\$3,637,428		
Untreated Base Course	C.Y.	\$15	35,673	\$613,524		
Granular Borrow	C.Y.	\$40	62,428	\$2,863,110		
Curb and Gutter (2.5' width)	L.F.	\$23	36,576	\$943,584		
Sidewalk (5' width)	L.F.	\$25	36,576	\$1,048,426		
Drainage	L.F.	\$45	36,576	\$1,887,167		
Right of Way	S.F.	\$2.30	2,304,286	\$6,076,679		
Mirafi RS 280i fabric	S.F.	\$1	3,780	\$2,167		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$20,900,742		
Mobilization (10% of Construction)	Lump	10%	2,090,074	\$2,090,074		
Contingency (25% of Construction)	Lump	25%	5,225,186	\$5,225,186		
			Subtotal	\$28,216,002		

Preconstruction Engineering	10%	\$2,090,074
Construction Engineering	10%	\$2,090,074

Total Project Costs \$32,397,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

2

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14 Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 5

Improvement Type: **New Road**Completion Year: **2030** 

New Road (Lehi Fairfield): Eagle Mountain Blvd to 1600 West - New 3 lane road

Costs								
Item	Unit	<b>Unit Cost</b>	Quantity	Cost				
Parkstrip	S.F.	\$10	55,286	\$552,864				
Removal of Existing Asphalt	S.Y.	\$4	0	\$0				
Clearing and Grubbing	Acre	\$2,000	12	\$24,432				
Roadway Excavation	C.Y.	\$11	25,596	\$268,753				
HMA Concrete	Ton	\$85	7,141	\$606,999				
Untreated Base Course	C.Y.	\$15	6,825	\$102,382				
Granular Borrow	C.Y.	\$40	8,532	\$341,274				
Curb and Gutter (2.5' width)	L.F.	\$23	13,822	\$310,986				
Sidewalk (5' width)	L.F.	\$25	13,822	\$345,540				
Drainage	L.F.	\$45	13,822	\$621,972				
Right of Way	S.F.	\$2.30	532,132	\$1,223,903				
Mirafi RS 280i fabric	S.F.	\$1	1,428	\$714				
Bridge/Culvert	S.F.	\$225	0	\$0				
Traffic Signal	Each	\$193,000	0	\$0				
			Construction Cost	\$4,399,819				
Mobilization (10% of Construction)	Lump	10%	439,982	\$439,982				
Contingency (25% of Construction)	Lump	25%	1,099,955	\$1,099,955				
			Subtotal	\$5,939,756				

Preconstruction Engineering	10%	\$439,982
Construction Engineering	10%	\$439,982

<b>Total Project Costs</b>	\$6,820,000
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# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

# **Project Parameters:**

Project Number: 6
Improvement Type: New Road
Completion Year: 2050

Roadway Functional Class: Minor Collector - 77'

New Road (Mid Valley Road): Eagle Mountain Blvd to East Expressway - New 3 lane road

Costs							
ltem	Unit	Unit Cost	Quantity	Cost(2023)			
Parkstrip	S.F.	\$10	30,546	\$322,258			
Removal of Existing Asphalt	S.Y.	\$4	0	\$0			
Clearing and Grubbing	Acre	\$2,000	8	\$17,385			
Roadway Excavation	C.Y.	\$11	19,091	\$211,482			
HMA Concrete	Ton	\$85	5,326	\$477,646			
Untreated Base Course	C.Y.	\$15	5,091	\$80,564			
Granular Borrow	C.Y.	\$40	6,364	\$268,548			
Curb and Gutter (2.5' width)	L.F.	\$23	7,636	\$181,270			
Sidewalk (5' width)	L.F.	\$25	7,636	\$201,411			
Drainage	L.F.	\$45	7,636	\$362,540			
Right of Way	S.F.	\$2.30	358,913	\$870,901			
Mirafi RS 280i fabric	S.F.	\$1	789	\$416			
Bridge/Culvert	S.F.	\$225	0	\$0			
Traffic Signal	Each	\$193,000	0	\$0			
			Construction Cost	\$2,994,422			
Mobilization (10% of Construction)	Lump	10%	299,442	\$299,442			
Contingency (25% of Construction)	Lump	25%	748,605	\$748,605			
			Subtotal	\$4,042,470			

Preconstruction Engineering	10%	\$299,442
Construction Engineering	10%	\$299,442

2

<b>Total Pro</b>	ject Costs	\$4,642,000
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# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: **7**Improvement Type: **New Road**Completion Year: **2030** 

Roadway Functional Class: Major Collector - 94'

Pony Express Parkway Widening: Sandpiper Rd to Eagle Mountain Blvd - Widen to 5 lanes

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	26,000	\$260,000		
Removal of Existing Asphalt	S.Y.	\$4	20,800	\$83,200		
Clearing and Grubbing	Acre	\$2,000	3	\$6,446		
Roadway Excavation	C.Y.	\$11	1,685	\$17,694		
HMA Concrete	Ton	\$85	470	\$39,964		
Untreated Base Course	C.Y.	\$15	449	\$6,741		
Granular Borrow	C.Y.	\$40	786	\$31,457		
Curb and Gutter (2.5' width)	L.F.	\$23	5,200	\$117,000		
Sidewalk (5' width)	L.F.	\$25	5,200	\$130,000		
Drainage	L.F.	\$45	5,200	\$234,000		
Right of Way	S.F.	\$2.30	140,400	\$322,920		
Mirafi RS 280i fabric	S.F.	\$1	537	\$269		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$1,249,691		
Mobilization (10% of Construction)	Lump	10%	124,969	\$124,969		
Contingency (25% of Construction)	Lump	25%	312,423	\$312,423		
			Subtotal	\$1,687,083		

Preconstruction Engineering	10%	\$124,969
Construction Engineering	10%	\$124,969

Total Project Costs \$1,938,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8
Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: 8

Improvement Type: Capacity Improvement

Completion Year: 2030

# Eagle Mountain Boulevard Widening: SR-73 to East Expressway - Widen to 5 lanes

Costs						
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2023)		
Parkstrip	S.F.	\$10	75,078	\$792,075		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	22	\$45,823		
Roadway Excavation	C.Y.	\$11	54,918	\$608,358		
HMA Concrete	Ton	\$85	15,322	\$1,374,020		
Untreated Base Course	C.Y.	\$15	14,645	\$231,755		
Granular Borrow	C.Y.	\$40	25,629	\$1,081,525		
Curb and Gutter (2.5' width)	L.F.	\$23	15,016	\$356,434		
Sidewalk (5' width)	L.F.	\$25	15,016	\$396,038		
Drainage	L.F.	\$45	15,016	\$712,868		
Right of Way	S.F.	\$2.30	945,986	\$2,295,435		
Mirafi RS 280i fabric	S.F.	\$1	1,552	\$818		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$7,895,150		
Mobilization (10% of Construction)	Lump	10%	789,515	\$789,515		
Contingency (25% of Construction)	Lump	25%	1,973,787	\$1,973,787		
			Subtotal	\$10,658,452		

Preconstruction Engineering	10%	\$789,515
Construction Engineering	10%	\$789,515

**Total Project Costs** \$12,238,000

# **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4 Untreated Base Course Thickness (in) = 8 Granual Borrow Thickness (in) = 14

> Roadway Excavation Depth (ft) = 2.5 2

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 9

Improvement Type: Capacity Improvement

Completion Year: 2030

East Expressway Widening: Cedar Valley Freeway to Eagle Mountain Boulevard - Widen to 5 lanes

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	6,000	\$60,000		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	2	\$3,471		
Roadway Excavation	C.Y.	\$11	4,389	\$46,083		
HMA Concrete	Ton	\$85	1,225	\$104,083		
Untreated Base Course	C.Y.	\$15	1,170	\$17,556		
Granular Borrow	C.Y.	\$40	2,048	\$81,926		
Curb and Gutter (2.5' width)	L.F.	\$23	1,200	\$27,000		
Sidewalk (5' width)	L.F.	\$25	1,200	\$30,000		
Drainage	L.F.	\$45	1,200	\$54,000		
Right of Way	S.F.	\$2.30	75,600	\$173,880		
Mirafi RS 280i fabric	S.F.	\$1	124	\$62		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$598,060		
Mobilization (10% of Construction)	Lump	10%	59,806	\$59,806		
Contingency (25% of Construction)	Lump	25%	149,515	\$149,515		
			Subtotal	\$807,382		

Preconstruction Engineering	10%	\$59,806
Construction Engineering	10%	\$59,806

Total Project Costs \$927,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

8

2

Untreated Base Course Thickness (in) =

Granual Borrow Thickness (in) = 14 Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 10

Improvement Type: Capacity Improvement

Completion Year: 2050

# Mustang Way & SR-73 - New Signal

Costs							
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost			
Parkstrip	S.F.	\$10	0	\$0			
Removal of Existing Asphalt	S.Y.	\$4	0	\$0			
Clearing and Grubbing	Acre	\$2,000	0	\$0			
Roadway Excavation	C.Y.	\$11	0	\$0			
HMA Concrete	Ton	\$85	0	\$0			
Untreated Base Course	C.Y.	\$15	0	\$0			
Granular Borrow	C.Y.	\$40	0	\$0			
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0			
Sidewalk (5' width)	L.F.	\$25	0	\$0			
Drainage	L.F.	\$45	0	\$0			
Right of Way	S.F.	\$2.30	0	\$0			
Mirafi RS 280i fabric	S.F.	\$1	0	\$0			
Bridge/Culvert	S.F.	\$225	0	\$0			
Traffic Signal	Each	\$193,000	1	\$193,000			
			<b>Construction Cost</b>	\$193,000			
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300			
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250			
Subtotal \$260,550							

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

# **Overall Assumptions:**

HMA Pavement Density (pcf) = 0 HMA Thickness (in) =

0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0 Roadway Excavation Depth (ft) = 0

Number of Sidewalks (No.) =

# **Project Parameters:**

Project Number: 11

Improvement Type: Traffic Signal

Completion Year: 2050

Roadway Functional Class: Traffic Signal

# **Eagle Mountain Boulevard & Aviator Ave**

Costs						
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	0	\$0		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	0	\$0		
Roadway Excavation	C.Y.	\$11	0	\$0		
HMA Concrete	Ton	\$85	0	\$0		
Untreated Base Course	C.Y.	\$15	0	\$0		
Granular Borrow	C.Y.	\$40	0	\$0		
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0		
Sidewalk (5' width)	L.F.	\$25	0	\$0		
Drainage	L.F.	\$45	0	\$0		
Right of Way	S.F.	\$2.30	0	\$0		
Mirafi RS 280i fabric	S.F.	\$1	0	\$0		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	1	\$193,000		
			<b>Construction Cost</b>	\$193,000		
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300		
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250		
Subtotal						

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

# **Overall Assumptions:**

HMA Pavement Density (pcf) = 0 HMA Thickness (in) =

0

Untreated Base Course Thickness (in) = 0

> Granual Borrow Thickness (in) = 0 0

Roadway Excavation Depth (ft) = Number of Sidewalks (No.) =

# **Project Parameters:**

Project Number: 12

Improvement Type: Traffic Signal

Completion Year: 2050

Roadway Functional Class: Traffic Signal

New Road (Aviator Avenue): Eagle Mountain Boulevard to Cedar Fort Road - New 3 lane road

Costs						
ltem	Unit	Unit Cost	Quantity	Cost		
Parkstrip	S.F.	\$10	35,408	\$354,080		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	10	\$19,102		
Roadway Excavation	C.Y.	\$11	22,130	\$232,365		
HMA Concrete	Ton	\$85	6,174	\$524,813		
Untreated Base Course	C.Y.	\$15	5,901	\$88,520		
Granular Borrow	C.Y.	\$40	7,377	\$295,067		
Curb and Gutter (2.5' width)	L.F.	\$23	8,852	\$199,170		
Sidewalk (5' width)	L.F.	\$25	8,852	\$221,300		
Drainage	L.F.	\$45	8,852	\$398,340		
Right of Way	S.F.	\$2.30	416,044	\$956,902		
Mirafi RS 280i fabric	S.F.	\$1	915	\$457		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			<b>Construction Cost</b>	\$3,290,118		
Mobilization (10% of Construction)	Lump	10%	329,012	\$329,012		
Contingency (25% of Construction)	Lump	25%	822,529	\$822,529		
			Subtotal	\$4,441,659		

Preconstruction Engineering	10%	\$329,012
Construction Engineering	10%	\$329,012

<b>Total Project Costs</b>	\$5,100,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **13**Improvement Type: **New Road**Completion Year: **2050** 

New Road (Cedar Valley Freeway): East Expressway to UC 4000 N - New freeway

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	665,957	\$6,659,573	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	193	\$385,265	
Roadway Excavation	C.Y.	\$11	487,135	\$5,114,922	
HMA Concrete	Ton	\$85	135,911	\$11,552,418	
Untreated Base Course	C.Y.	\$15	129,903	\$1,948,542	
Granular Borrow	C.Y.	\$40	227,330	\$9,093,195	
Curb and Gutter (2.5' width)	L.F.	\$23	133,191	\$2,996,808	
Sidewalk (5' width)	L.F.	\$25	133,191	\$3,329,787	
Drainage	L.F.	\$45	133,191	\$5,993,616	
Right of Way	S.F.	\$2.30	8,391,063	\$19,299,444	
Mirafi RS 280i fabric	S.F.	\$1	13,763	\$6,882	
Bridge/Culvert	S.F.	\$225	0	\$0	
Pedestrian HAWK Signal	Each	\$200,000	1	\$200,000	
			Construction Cost	\$66,580,451	
Mobilization (10% of Construction)	Lump	10%	6,658,045	\$6,658,045	
Contingency (25% of Construction)	Lump	25%	16,645,113	\$16,645,113	
			Subtotal	\$89,883,609	

Preconstruction Engineering	10%	\$6,658,045
Construction Engineering	10%	\$6,658,045

Total Project Costs \$103,200,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14 Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

2

#### **Project Parameters:**

Project Number: 14

Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (Central Valley Road): UC 2400 N to Mid Valley road - New 3 lane road

Costs							
Item	Unit	<b>Unit Cost</b>	Quantity	Cost			
Parkstrip	S.F.	\$10	0	\$0			
Removal of Existing Asphalt	S.Y.	\$4	0	\$0			
Clearing and Grubbing	Acre	\$2,000	0	\$0			
Roadway Excavation	C.Y.	\$11	0	\$0			
HMA Concrete	Ton	\$85	0	\$0			
Untreated Base Course	C.Y.	\$15	0	\$0			
Granular Borrow	C.Y.	\$40	0	\$0			
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0			
Sidewalk (5' width)	L.F.	\$25	0	\$0			
Drainage	L.F.	\$45	0	\$0			
Right of Way	S.F.	\$2.30	0	\$0			
Mirafi RS 280i fabric	S.F.	\$1	0	\$0			
Bridge/Culvert	S.F.	\$225	0	\$0			
Railroad Crossing	Each	\$300,000	1	\$300,000			
			<b>Construction Cost</b>	\$300,000			
Mobilization (10% of Construction)	Lump	10%	30,000	\$30,000			
Contingency (25% of Construction)	Lump	25%	75,000	\$75,000			
			Subtotal	\$405,000			

Preconstruction Engineering	10%	\$30,000
Construction Engineering	10%	\$30,000

<b>Total Project Costs</b>	\$465,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **15**Improvement Type: **New Road**Completion Year: **2050** 

New Road (Hidden Valley Road): East Expressway to Redwood Road - New 5 lane road

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	225,238	\$2,252,382	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	65	\$130,303	
Roadway Excavation	C.Y.	\$11	164,758	\$1,729,955	
HMA Concrete	Ton	\$85	45,967	\$3,907,226	
Untreated Base Course	C.Y.	\$15	43,935	\$659,030	
Granular Borrow	C.Y.	\$40	76,887	\$3,075,475	
Curb and Gutter (2.5' width)	L.F.	\$23	45,048	\$1,013,572	
Sidewalk (5' width)	L.F.	\$25	45,048	\$1,126,191	
Drainage	L.F.	\$45	45,048	\$2,027,144	
Right of Way	S.F.	\$2.30	2,838,002	\$6,527,404	
Mirafi RS 280i fabric	S.F.	\$1	4,655	\$2,327	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$22,451,011	
Mobilization (10% of Construction)	Lump	10%	2,245,101	\$2,245,101	
Contingency (25% of Construction)	Lump	25%	5,612,753	\$5,612,753	
			Subtotal	\$30,308,865	

Preconstruction Engineering	10%	\$2,245,101
Construction Engineering	10%	\$2,245,101

Total Project Costs \$34,800,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8
Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5 Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **16**Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (Cedar Valley Road): Mid Valley Road to SR-73 - New 3 lane road

Costs							
Item	Unit	<b>Unit Cost</b>	Quantity	Cost			
Parkstrip	S.F.	\$10	79,840	\$798,400			
Removal of Existing Asphalt	S.Y.	\$4	0	\$0			
Clearing and Grubbing	Acre	\$2,000	22	\$43,073			
Roadway Excavation	C.Y.	\$11	49,900	\$523,950			
HMA Concrete	Ton	\$85	13,922	\$1,183,379			
Untreated Base Course	C.Y.	\$15	13,307	\$199,600			
Granular Borrow	C.Y.	\$40	16,633	\$665,333			
Curb and Gutter (2.5' width)	L.F.	\$23	19,960	\$449,100			
Sidewalk (5' width)	L.F.	\$25	19,960	\$499,000			
Drainage	L.F.	\$45	19,960	\$898,200			
Right of Way	S.F.	\$2.30	938,120	\$2,157,676			
Mirafi RS 280i fabric	S.F.	\$1	2,063	\$1,031			
Bridge/Culvert	S.F.	\$225	0	\$0			
Traffic Signal	Each	\$193,000	0	\$0			
			<b>Construction Cost</b>	\$7,418,742			
Mobilization (10% of Construction)	Lump	10%	741,874	\$741,874			
Contingency (25% of Construction)	Lump	25%	1,854,685	\$1,854,685			
			Subtotal	\$10,015,301			

Preconstruction Engineering	10%	\$741,874
Construction Engineering	10%	\$741,874

<b>Total Project Costs</b>	\$11,500,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **17**Improvement Type: **New Road**Completion Year: **2050** 

New Road (UC 8000 N): Cedar Fort Road to UC 17200 W - New 3 lane road

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	40,800	\$408,000	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	11	\$22,011	
Roadway Excavation	C.Y.	\$11	25,500	\$267,750	
HMA Concrete	Ton	\$85	7,115	\$604,733	
Untreated Base Course	C.Y.	\$15	6,800	\$102,000	
Granular Borrow	C.Y.	\$40	8,500	\$340,000	
Curb and Gutter (2.5' width)	L.F.	\$23	10,200	\$229,500	
Sidewalk (5' width)	L.F.	\$25	10,200	\$255,000	
Drainage	L.F.	\$45	10,200	\$459,000	
Right of Way	S.F.	\$2.30	479,400	\$1,102,620	
Mirafi RS 280i fabric	S.F.	\$1	1,054	\$527	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$3,791,141	
Mobilization (10% of Construction)	Lump	10%	379,114	\$379,114	
Contingency (25% of Construction)	Lump	25%	947,785	\$947,785	
			Subtotal	\$5,118,040	

Preconstruction Engineering	10%	\$379,114
Construction Engineering	10%	\$379,114

Total Proj	ect Costs	\$5,877,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 18
Improvement Type: New Road
Completion Year: 2050

New Road (unknown N/S road): East of Old Airport Rd to East Expressway

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2026)	
Parkstrip	S.F.	\$10	70,400	\$835,440	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	16	\$36,920	
Roadway Excavation	C.Y.	\$11	32,593	\$406,117	
HMA Concrete	Ton	\$85	9,093	\$917,243	
Untreated Base Course	C.Y.	\$15	8,691	\$154,711	
Granular Borrow	C.Y.	\$40	10,864	\$515,704	
Curb and Gutter (2.5' width)	L.F.	\$23	17,600	\$469,935	
Sidewalk (5' width)	L.F.	\$25	17,600	\$522,150	
Drainage	L.F.	\$45	17,600	\$939,870	
Right of Way	S.F.	\$2.30	677,600	\$1,849,455	
Mirafi RS 280i fabric	S.F.	\$1	1,819	\$1,079	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$6,648,622	
Mobilization (10% of Construction)	Lump	10%	664,862	\$664,862	
Contingency (25% of Construction)	Lump	25%	1,662,155	\$1,662,155	
			Subtotal	\$8,975,639	

Preconstruction Engineering	10%	\$664,862
Construction Engineering	10%	\$664,862

2

<b>Total Pro</b>	ject Costs	\$10,306,000
		<b>y</b> = 0,000,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 19
Improvement Type: New Road
Completion Year: 2030

Brandon Park Drive Widening: Aviator Ave to Willard Park Drive - Widen to 2 lanes

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	22,400	\$224,000	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	2	\$3,343	
Roadway Excavation	C.Y.	\$11	10,370	\$108,889	
HMA Concrete	Ton	\$85	2,893	\$245,933	
Untreated Base Course	C.Y.	\$15	2,765	\$41,481	
Granular Borrow	C.Y.	\$40	3,457	\$138,272	
Curb and Gutter (2.5' width)	L.F.	\$23	5,600	\$126,000	
Sidewalk (5' width)	L.F.	\$25	5,600	\$140,000	
Drainage	L.F.	\$45	5,600	\$252,000	
Right of Way	S.F.	\$2.30	72,800	\$167,440	
Mirafi RS 280i fabric	S.F.	\$1	579	\$289	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$1,447,647	
Mobilization (10% of Construction)	Lump	10%	144,765	\$144,765	
Contingency (25% of Construction)	Lump	25%	361,912	\$361,912	
			Subtotal	\$1,954,324	

Preconstruction Engineering	10%	\$144,765
Construction Engineering	10%	\$144,765

### Total Project Costs \$2,244,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

2

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 20

Improvement Type: Capacity Improvement

Completion Year: 2050

New Road (Brandon Park Drive): Willard Park Drive to south of Pole Canyon Blvd) - New 2 lane road

Unit			
	Unit Cost	Quantity	Cost
S.F.	\$10	86,140	\$861,401
S.Y.	\$4	0	\$0
Acre	\$2,000	19	\$38,067
C.Y.	\$11	39,880	\$418,737
Ton	\$85	11,126	\$945,747
C.Y.	\$15	10,635	\$159,519
C.Y.	\$40	13,293	\$531,729
L.F.	\$23	21,535	\$484,538
L.F.	\$25	21,535	\$538,376
L.F.	\$45	21,535	\$969,076
S.F.	\$2.30	829,099	\$1,906,927
S.F.	\$1	2,225	\$1,113
S.F.	\$225	1,200	\$270,000
Each	\$193,000	0	\$0
		<b>Construction Cost</b>	\$7,125,230
Lump	10%	712,523	\$712,523
Lump	25%	1,781,308	\$1,781,308
		Subtotal	\$9,619,061
	S.Y. Acre C.Y. Ton C.Y. C.Y. L.F. L.F. S.F. S.F. S.F. LEach	S.Y. \$4  Acre \$2,000  C.Y. \$11  Ton \$85  C.Y. \$15  C.Y. \$40  L.F. \$23  L.F. \$25  L.F. \$45  S.F. \$2.30  S.F. \$1  S.F. \$225  Each \$193,000	S.Y.       \$4       0         Acre       \$2,000       19         C.Y.       \$11       39,880         Ton       \$85       11,126         C.Y.       \$15       10,635         C.Y.       \$40       13,293         L.F.       \$23       21,535         L.F.       \$25       21,535         L.F.       \$45       21,535         S.F.       \$2.30       829,099         S.F.       \$1       2,225         S.F.       \$225       1,200         Each       \$193,000       0         Construction Cost         Lump       10%       712,523         Lump       25%       1,781,308

Preconstruction Engineering	10%	\$712,523
Construction Engineering	10%	\$712,523

**Total Project Costs** \$11,045,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4 Untreated Base Course Thickness (in) = 8 Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5 Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 21 Improvement Type: New Road Completion Year: 2050

New Road (Willard Peak Drive): Brandon Park Rd to 0 St - New 2 lane road

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	11,600	\$116,000	
Removal of Existing Asphalt	S.Y.	\$4	7,200	\$28,800	
Clearing and Grubbing	Acre	\$2,000	3	\$5,126	
Roadway Excavation	C.Y.	\$11	5,370	\$56,389	
HMA Concrete	Ton	\$85	1,498	\$127,358	
Untreated Base Course	C.Y.	\$15	1,432	\$21,481	
Granular Borrow	C.Y.	\$40	1,790	\$71,605	
Curb and Gutter (2.5' width)	L.F.	\$23	2,900	\$65,250	
Sidewalk (5' width)	L.F.	\$25	2,900	\$72,500	
Drainage	L.F.	\$45	2,900	\$130,500	
Right of Way	S.F.	\$2.30	111,650	\$256,795	
Mirafi RS 280i fabric	S.F.	\$1	300	\$150	
Bridge/Culvert	S.F.	\$225	1,200	\$270,000	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$1,221,955	
Mobilization (10% of Construction)	Lump	10%	122,195	\$122,195	
Contingency (25% of Construction)	Lump	25%	305,489	\$305,489	
			Subtotal	\$1,649,639	

Preconstruction Engineering	10%	\$122,195
Construction Engineering	10%	\$122,195

<b>Total Project Costs</b>	\$1,895,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 22
Improvement Type: New Road
Completion Year: 2050
Roadway Functional Class: Minor Collector - 77'

New Road (unknown, west of N Wood Rd): Brandon Park Drive to N Wood Rd - New 2 lane road

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	24,800	\$248,000
Removal of Existing Asphalt	S.Y.	\$4	8,267	\$33,067
Clearing and Grubbing	Acre	\$2,000	5	\$10,960
Roadway Excavation	C.Y.	\$11	4,593	\$48,222
HMA Concrete	Ton	\$85	1,281	\$108,913
Untreated Base Course	C.Y.	\$15	1,225	\$18,370
Granular Borrow	C.Y.	\$40	1,531	\$61,235
Curb and Gutter (2.5' width)	L.F.	\$23	6,200	\$139,500
Sidewalk (5' width)	L.F.	\$25	6,200	\$155,000
Drainage	L.F.	\$45	6,200	\$279,000
Right of Way	S.F.	\$2.30	238,700	\$549,010
Mirafi RS 280i fabric	S.F.	\$1	641	\$320
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$1,651,597
Mobilization (10% of Construction)	Lump	10%	165,160	\$165,160
Contingency (25% of Construction)	Lump	25%	412,899	\$412,899
			Subtotal	\$2,229,656

Preconstruction Engineering	10%	\$165,160
Construction Engineering	10%	\$165,160

<b>Total Project Costs</b>	\$2,560,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: 23
Improvement Type: New Road
Completion Year: 2050

New Road (possibly W 3500 N St?): Tyson Parkway to East Expressway - New 2 lane road

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2027)
Parkstrip	S.F.	\$10	200,000	\$2,456,477
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	44	\$108,556
Roadway Excavation	C.Y.	\$11	92,593	\$1,194,121
HMA Concrete	Ton	\$85	25,833	\$2,697,008
Untreated Base Course	C.Y.	\$15	24,691	\$454,903
Granular Borrow	C.Y.	\$40	30,864	\$1,516,344
Curb and Gutter (2.5' width)	L.F.	\$23	50,000	\$1,381,769
Sidewalk (5' width)	L.F.	\$25	50,000	\$1,535,298
Drainage	L.F.	\$45	50,000	\$2,763,537
Right of Way	S.F.	\$2.30	1,925,000	\$5,438,027
Mirafi RS 280i fabric	S.F.	\$1	5,167	\$3,173
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$19,549,214
Mobilization (10% of Construction)	Lump	10%	1,954,921	\$1,954,921
Contingency (25% of Construction)	Lump	25%	4,887,303	\$4,887,303
			Subtotal	\$26,391,439

Preconstruction Engineering	10%	\$1,954,921
Construction Engineering	10%	\$1,954,921

2

<b>Total Project Costs</b>	\$30,302,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 24
Improvement Type: New Road
Completion Year: 2030
Roadway Functional Class: Minor Collector - 77'

New Road (N Wood Rd): N Wood Rd to E 500 N St - New 3 lane road

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	144,968	\$1,449,678
Removal of Existing Asphalt	S.Y.	\$4	80,538	\$322,151
Clearing and Grubbing	Acre	\$2,000	39	\$78,208
Roadway Excavation	C.Y.	\$11	23,490	\$246,647
HMA Concrete	Ton	\$85	6,554	\$557,069
Untreated Base Course	C.Y.	\$15	6,264	\$93,961
Granular Borrow	C.Y.	\$40	7,830	\$313,202
Curb and Gutter (2.5' width)	L.F.	\$23	36,242	\$815,444
Sidewalk (5' width)	L.F.	\$25	36,242	\$906,048
Drainage	L.F.	\$45	36,242	\$1,630,887
Right of Way	S.F.	\$2.30	1,703,371	\$3,917,754
Mirafi RS 280i fabric	S.F.	\$1	3,745	\$1,873
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$10,332,919
Mobilization (10% of Construction)	Lump	10%	1,033,292	\$1,033,292
Contingency (25% of Construction)	Lump	25%	2,583,230	\$2,583,230
			Subtotal	\$13,949,441

Preconstruction Engineering	10%	\$1,033,292
Construction Engineering	10%	\$1,033,292

2

<b>Total Project Costs</b>	\$16,017,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 25
Improvement Type: New Road
Completion Year: 2050
Roadway Functional Class: Major Collector - 94'

New Road (possibly Bald Eagle Way): Pony Express Parkway to possible E Oquirrh Ranch Pkwy - New 2 lane

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2027)
Parkstrip	S.F.	\$10	24,000	\$294,777
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	5	\$13,027
Roadway Excavation	C.Y.	\$11	11,111	\$143,295
HMA Concrete	Ton	\$85	3,100	\$323,641
Untreated Base Course	C.Y.	\$15	2,963	\$54,588
Granular Borrow	C.Y.	\$40	3,704	\$181,961
Curb and Gutter (2.5' width)	L.F.	\$23	6,000	\$165,812
Sidewalk (5' width)	L.F.	\$25	6,000	\$184,236
Drainage	L.F.	\$45	6,000	\$331,624
Right of Way	S.F.	\$2.30	231,000	\$652,563
Mirafi RS 280i fabric	S.F.	\$1	620	\$381
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$2,345,906
Mobilization (10% of Construction)	Lump	10%	234,591	\$234,591
Contingency (25% of Construction)	Lump	25%	586,476	\$586,476
			Subtotal	\$3,166,973

Preconstruction Engineering	10%	\$234,591
Construction Engineering	10%	\$234,591

<b>Total Project Costs</b>	\$3,637,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: 26
Improvement Type: New Road
Completion Year: 2030
Roadway Functional Class: Minor Collector - 77'

New Road (possibly E Oquirrh Ranch Parkway): Pony Express Pkwy to Hidden Valley Road -

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2029)
Parkstrip	S.F.	\$10	44,800	\$589,443
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	10	\$26,049
Roadway Excavation	C.Y.	\$11	20,741	\$286,535
HMA Concrete	Ton	\$85	5,787	\$647,159
Untreated Base Course	C.Y.	\$15	5,531	\$109,156
Granular Borrow	C.Y.	\$40	6,914	\$363,853
Curb and Gutter (2.5' width)	L.F.	\$23	11,200	\$331,561
Sidewalk (5' width)	L.F.	\$25	11,200	\$368,402
Drainage	L.F.	\$45	11,200	\$663,123
Right of Way	S.F.	\$2.30	431,200	\$1,304,879
Mirafi RS 280i fabric	S.F.	\$1	1,157	\$761
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$4,690,920
Mobilization (10% of Construction)	Lump	10%	469,092	\$469,092
Contingency (25% of Construction)	Lump	25%	1,172,730	\$1,172,730
			Subtotal	\$6,332,742

Preconstruction Engineering	10%	\$469,092
Construction Engineering	10%	\$469,092

77,272,000	<b>Total Pro</b>	ject Costs	\$7,271,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **27**Improvement Type: **New Road**Completion Year: **2030** 

New Road (unknown, north of East Expressway): Eagle Mtn Blvd to Airport Rd -

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	41,862	\$418,617	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	15	\$29,311	
Roadway Excavation	C.Y.	\$11	38,276	\$401,902	
HMA Concrete	Ton	\$85	10,679	\$907,724	
Untreated Base Course	C.Y.	\$15	10,207	\$153,105	
Granular Borrow	C.Y.	\$40	12,759	\$510,352	
Curb and Gutter (2.5' width)	L.F.	\$23	10,465	\$235,472	
Sidewalk (5' width)	L.F.	\$30	10,465	\$313,963	
Drainage	L.F.	\$45	10,465	\$470,945	
Right of Way	S.F.	\$2.30	638,392	\$1,468,301	
Mirafi RS 280i fabric	S.F.	\$1	1,081	\$541	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$4,910,233	
Mobilization (10% of Construction)	Lump	10%	491,023	\$491,023	
Contingency (25% of Construction)	Lump	25%	1,227,558	\$1,227,558	
			Subtotal	\$6,628,815	

Preconstruction Engineering	10%	\$491,023
Construction Engineering	10%	\$491,023

Total Project	osts \$7,611,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: 28
Improvement Type: New Road
Completion Year: 2050

Roadway Functional Class: Minor Arterial - 122'

### East Expressway & Project 81 - New Signal

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
			Construction Cost	\$193,000	
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0** 

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 29

Improvement Type: Traffic Signal

Completion Year: 2050

Roadway Functional Class: Traffic Signal

New Road (unknown, south of Cory Wride Mem Park): Project 29 above to 5000 North St -

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	68,614	\$686,141	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	15	\$30,322	
Roadway Excavation	C.Y.	\$11	31,766	\$333,541	
HMA Concrete	Ton	\$85	8,863	\$753,325	
Untreated Base Course	C.Y.	\$15	8,471	\$127,063	
Granular Borrow	C.Y.	\$40	10,589	\$423,544	
Curb and Gutter (2.5' width)	L.F.	\$23	17,154	\$385,954	
Sidewalk (5' width)	L.F.	\$25	17,154	\$428,838	
Drainage	L.F.	\$45	17,154	\$771,908	
Right of Way	S.F.	\$2.30	660,410	\$1,518,944	
Mirafi RS 280i fabric	S.F.	\$1	1,773	\$886	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$5,460,465	
Mobilization (10% of Construction)	Lump	10%	546,047	\$546,047	
Contingency (25% of Construction)	Lump	25%	1,365,116	\$1,365,116	
			Subtotal	\$7,371,628	

Preconstruction Engineering	10%	\$546,047
Construction Engineering	10%	\$546,047

<b>Total Project Costs</b>	\$8,464,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **30**Improvement Type: **New Road**Completion Year: **2050** 

New Road (unknown N/S rd): Eagle Mtn Blvd to 1000 North St

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	130,081	\$1,300,808
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	29	\$57,485
Roadway Excavation	C.Y.	\$11	60,223	\$632,337
HMA Concrete	Ton	\$85	16,802	\$1,428,179
Untreated Base Course	C.Y.	\$15	16,059	\$240,890
Granular Borrow	C.Y.	\$40	20,074	\$802,968
Curb and Gutter (2.5' width)	L.F.	\$23	32,520	\$731,704
Sidewalk (5' width)	L.F.	\$25	32,520	\$813,005
Drainage	L.F.	\$45	32,520	\$1,463,409
Right of Way	S.F.	\$2.30	1,252,028	\$2,879,664
Mirafi RS 280i fabric	S.F.	\$1	3,360	\$1,680
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$10,352,129
Mobilization (10% of Construction)	Lump	10%	1,035,213	\$1,035,213
Contingency (25% of Construction)	Lump	25%	2,588,032	\$2,588,032
			Subtotal	\$13,975,375

Preconstruction Engineering	10%	\$1,035,213
Construction Engineering	10%	\$1,035,213

<b>Total Project Costs</b>	\$16,046,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **31**Improvement Type: **New Road**Completion Year: **2050** 

New Road (1000 North St): 2000 East St to N Wood Rd

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	42,841	\$428,408
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	9	\$18,932
Roadway Excavation	C.Y.	\$11	19,834	\$208,254
HMA Concrete	Ton	\$85	5,534	\$470,356
Untreated Base Course	C.Y.	\$15	5,289	\$79,335
Granular Borrow	C.Y.	\$40	6,611	\$264,449
Curb and Gutter (2.5' width)	L.F.	\$23	10,710	\$240,979
Sidewalk (5' width)	L.F.	\$25	10,710	\$267,755
Drainage	L.F.	\$45	10,710	\$481,959
Right of Way	S.F.	\$2.30	412,342	\$948,388
Mirafi RS 280i fabric	S.F.	\$1	1,107	\$553
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$3,409,368
Mobilization (10% of Construction)	Lump	10%	340,937	\$340,937
Contingency (25% of Construction)	Lump	25%	852,342	\$852,342
			Subtotal	\$4,602,646

Preconstruction Engineering	10%	\$340,937
Construction Engineering	10%	\$340,937

<b>Total Project Costs</b>	\$5,285,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **32**Improvement Type: **New Road**Completion Year: **2050** 

New Road (unknown): Wood Road to Project 40

Costs				
Item	Unit	Unit Cost	Quantity	Cost
Parkstrip	S.F.	\$10	280,119	\$2,801,186
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	62	\$123,790
Roadway Excavation	C.Y.	\$11	129,685	\$1,361,688
HMA Concrete	Ton	\$85	36,182	\$3,075,469
Untreated Base Course	C.Y.	\$15	34,583	\$518,738
Granular Borrow	C.Y.	\$40	43,228	\$1,729,127
Curb and Gutter (2.5' width)	L.F.	\$23	70,030	\$1,575,667
Sidewalk (5' width)	L.F.	\$25	70,030	\$1,750,741
Drainage	L.F.	\$45	70,030	\$3,151,335
Right of Way	S.F.	\$2.30	2,696,142	\$6,201,126
Mirafi RS 280i fabric	S.F.	\$1	7,236	\$3,618
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$22,292,487
Mobilization (10% of Construction)	Lump	10%	2,229,249	\$2,229,249
Contingency (25% of Construction)	Lump	25%	5,573,122	\$5,573,122
			Subtotal	\$30,094,857

Preconstruction Engineering	10%	\$2,229,249
Construction Engineering	10%	\$2,229,249

Total Project Costs \$34,554,000	0
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **33**Improvement Type: **New Road**Completion Year: **2050** 

New Road (unknown, west of SR-73): northern border to southern border

S.F. S.Y. Acre	\$10 \$4 \$2,000	<b>Quantity</b> 52,268 0	<b>Cost</b> \$522,675 \$0
S.Y. Acre	\$4	0	
Acre	•	, and the second	\$0
	\$2,000		
C.Y.		12	\$23,098
	\$11	24,198	\$254,078
Ton	\$85	6,751	\$573,854
C.Y.	\$15	6,453	\$96,792
C.Y.	\$40	8,066	\$322,639
L.F.	\$23	13,067	\$294,005
L.F.	\$25	13,067	\$326,672
L.F.	\$45	13,067	\$588,010
S.F.	\$2.30	503,075	\$1,157,073
S.F.	\$1	1,350	\$675
S.F.	\$225	0	\$0
Each	\$193,000	0	\$0
		<b>Construction Cost</b>	\$4,159,571
₋ump	10%	415,957	\$415,957
ump	25%	1,039,893	\$1,039,893
		Subtotal	\$5,615,421
	C.Y. C.Y. L.F. L.F. S.F. S.F. S.F. S.F. Lach	C.Y. \$15 C.Y. \$40 L.F. \$23 L.F. \$25 L.F. \$45 S.F. \$2.30 S.F. \$1 S.F. \$225 Each \$193,000	C.Y. \$15 6,453 C.Y. \$40 8,066 L.F. \$23 13,067 L.F. \$25 13,067 L.F. \$45 13,067 S.F. \$2.30 503,075 S.F. \$1 1,350 S.F. \$225 0 Each \$193,000 0  Construction Cost Lump 10% 415,957 Lump 25% 1,039,893

Preconstruction Engineering	10%	\$415,957
Construction Engineering	10%	\$415,957

<b>Total Project Cost</b>	\$6,448,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **34**Improvement Type: **New Road**Completion Year: **2050** 

New Road (4000 N): along northern border to SR-73

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	22,445	\$224,445
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	5	\$9,919
Roadway Excavation	C.Y.	\$11	10,391	\$109,105
HMA Concrete	Ton	\$85	2,899	\$246,422
Untreated Base Course	C.Y.	\$15	2,771	\$41,564
Granular Borrow	C.Y.	\$40	3,464	\$138,546
Curb and Gutter (2.5' width)	L.F.	\$23	5,611	\$126,250
Sidewalk (5' width)	L.F.	\$25	5,611	\$140,278
Drainage	L.F.	\$45	5,611	\$252,501
Right of Way	S.F.	\$2.30	216,028	\$496,865
Mirafi RS 280i fabric	S.F.	\$1	580	\$290
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$1,786,186
Mobilization (10% of Construction)	Lump	10%	178,619	\$178,619
Contingency (25% of Construction)	Lump	25%	446,546	\$446,546
			Subtotal	\$2,411,351

Preconstruction Engineering	10%	\$178,619
Construction Engineering	10%	\$178,619

<b>Total Project Costs</b>	\$2,769,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **35**Improvement Type: **New Road**Completion Year: **2050** 

New Road (Pole Canyon Boulevard): Project 34 to W Lewiston Rd

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	21,668	\$216,677
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	5	\$9,575
Roadway Excavation	C.Y.	\$11	10,031	\$105,329
HMA Concrete	Ton	\$85	2,799	\$237,893
Untreated Base Course	C.Y.	\$15	2,675	\$40,125
Granular Borrow	C.Y.	\$40	3,344	\$133,751
Curb and Gutter (2.5' width)	L.F.	\$23	5,417	\$121,881
Sidewalk (5' width)	L.F.	\$25	5,417	\$135,423
Drainage	L.F.	\$45	5,417	\$243,761
Right of Way	S.F.	\$2.30	208,551	\$479,668
Mirafi RS 280i fabric	S.F.	\$1	560	\$280
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$1,724,362
Mobilization (10% of Construction)	Lump	10%	172,436	\$172,436
Contingency (25% of Construction)	Lump	25%	431,090	\$431,090
			Subtotal	\$2,327,888

Preconstruction Engineering	10%	\$172,436
Construction Engineering	10%	\$172,436

Total Pro	ject Costs	\$2,673,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **36**Improvement Type: **New Road**Completion Year: **2050** 

New Road (unknown N/S rd, west of SR-73): Pole Canyon Boulevard to Project 33 above

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	35,434	\$354,341
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	8	\$15,659
Roadway Excavation	C.Y.	\$11	16,405	\$172,249
HMA Concrete	Ton	\$85	4,577	\$389,037
Untreated Base Course	C.Y.	\$15	4,375	\$65,619
Granular Borrow	C.Y.	\$40	5,468	\$218,729
Curb and Gutter (2.5' width)	L.F.	\$23	8,859	\$199,317
Sidewalk (5' width)	L.F.	\$25	8,859	\$221,463
Drainage	L.F.	\$45	8,859	\$398,634
Right of Way	S.F.	\$2.30	341,054	\$784,423
Mirafi RS 280i fabric	S.F.	\$1	915	\$458
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$2,819,930
Mobilization (10% of Construction)	Lump	10%	281,993	\$281,993
Contingency (25% of Construction)	Lump	25%	704,982	\$704,982
			Subtotal	\$3,806,905

Preconstruction Engineering	10%	\$281,993
Construction Engineering	10%	\$281,993

Total Project Costs \$4,371,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **37**Improvement Type: **New Road**Completion Year: **2050** 

New Road (unknown, N/S rd, east of SR-73): Pole Canyon Boulevard to Project 33 above

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	29,661	\$296,609
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	7	\$13,108
Roadway Excavation	C.Y.	\$11	13,732	\$144,185
HMA Concrete	Ton	\$85	3,831	\$325,651
Untreated Base Course	C.Y.	\$15	3,662	\$54,928
Granular Borrow	C.Y.	\$40	4,577	\$183,092
Curb and Gutter (2.5' width)	L.F.	\$23	7,415	\$166,842
Sidewalk (5' width)	L.F.	\$25	7,415	\$185,380
Drainage	L.F.	\$45	7,415	\$333,685
Right of Way	S.F.	\$2.30	285,486	\$656,617
Mirafi RS 280i fabric	S.F.	\$1	766	\$383
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$2,360,479
Mobilization (10% of Construction)	Lump	10%	236,048	\$236,048
Contingency (25% of Construction)	Lump	25%	590,120	\$590,120
			Subtotal	\$3,186,647

Preconstruction Engineering	10%	\$236,048
Construction Engineering	10%	\$236,048

2

<b>Total Project Costs</b>	\$3,659,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: **38**Improvement Type: **New Road**Completion Year: **2050** 

New Road (Tyson Parkway): Pole Canyon Boulevard to Project 33 above

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	26,259	\$262,586
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	6	\$11,604
Roadway Excavation	C.Y.	\$11	12,157	\$127,646
HMA Concrete	Ton	\$85	3,392	\$288,297
Untreated Base Course	C.Y.	\$15	3,242	\$48,627
Granular Borrow	C.Y.	\$40	4,052	\$162,090
Curb and Gutter (2.5' width)	L.F.	\$23	6,565	\$147,704
Sidewalk (5' width)	L.F.	\$25	6,565	\$164,116
Drainage	L.F.	\$45	6,565	\$295,409
Right of Way	S.F.	\$2.30	252,739	\$581,299
Mirafi RS 280i fabric	S.F.	\$1	678	\$339
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$2,089,716
Mobilization (10% of Construction)	Lump	10%	208,972	\$208,972
Contingency (25% of Construction)	Lump	25%	522,429	\$522,429
			Subtotal	\$2,821,117

Preconstruction Engineering	10%	\$208,972
Construction Engineering	10%	\$208,972

<b>Total Project Costs</b>	\$3,240,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **39**Improvement Type: **New Road**Completion Year: **2050** 

New Road (unknown N/S rd, east of Tyson Parkway): northern border to southern border

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	63,918	\$639,182
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	17	\$34,483
Roadway Excavation	C.Y.	\$11	39,949	\$419,463
HMA Concrete	Ton	\$85	11,146	\$947,387
Untreated Base Course	C.Y.	\$15	10,653	\$159,795
Granular Borrow	C.Y.	\$40	13,316	\$532,651
Curb and Gutter (2.5' width)	L.F.	\$23	15,980	\$359,540
Sidewalk (5' width)	L.F.	\$25	15,980	\$399,489
Drainage	L.F.	\$45	15,980	\$719,079
Right of Way	S.F.	\$2.30	751,038	\$1,727,389
Mirafi RS 280i fabric	S.F.	\$1	1,651	\$826
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$5,939,283
Mobilization (10% of Construction)	Lump	10%	593,928	\$593,928
Contingency (25% of Construction)	Lump	25%	1,484,821	\$1,484,821
			Subtotal	\$8,018,033

Preconstruction Engineering	10%	\$593,928
Construction Engineering	10%	\$593,928

<b>Total Project C</b>	osts \$9,206,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 40
Improvement Type: New Road
Completion Year: 2050

New Road (unknown W/E rd): Project 33 above to N Wood Rd

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	85,380	\$853,802
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	19	\$37,731
Roadway Excavation	C.Y.	\$11	39,528	\$415,043
HMA Concrete	Ton	\$85	11,028	\$937,403
Untreated Base Course	C.Y.	\$15	10,541	\$158,111
Granular Borrow	C.Y.	\$40	13,176	\$527,038
Curb and Gutter (2.5' width)	L.F.	\$23	21,345	\$480,264
Sidewalk (5' width)	L.F.	\$25	21,345	\$533,626
Drainage	L.F.	\$45	21,345	\$960,527
Right of Way	S.F.	\$2.30	821,784	\$1,890,104
Mirafi RS 280i fabric	S.F.	\$1	2,206	\$1,103
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$6,794,753
Mobilization (10% of Construction)	Lump	10%	679,475	\$679,475
Contingency (25% of Construction)	Lump	25%	1,698,688	\$1,698,688
			Subtotal	\$9,172,916

Preconstruction Engineering	10%	\$679,475
Construction Engineering	10%	\$679,475

Total Project Costs \$10	),532,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 41
Improvement Type: New Road
Completion Year: 2050
Roadway Functional Class: Minor Collector - 77'

New Road (0 St): Cory Wride Hwy to Project 33 above

Costs				
Item	Unit	Unit Cost	Quantity	Cost
Parkstrip	S.F.	\$10	141,786	\$1,417,857
Removal of Existing Asphalt	S.Y.	\$4	39,385	\$157,540
Clearing and Grubbing	Acre	\$2,000	38	\$76,491
Roadway Excavation	C.Y.	\$11	55,795	\$585,851
HMA Concrete	Ton	\$85	15,567	\$1,323,186
Untreated Base Course	C.Y.	\$15	14,879	\$223,181
Granular Borrow	C.Y.	\$40	18,598	\$743,937
Curb and Gutter (2.5' width)	L.F.	\$23	35,446	\$797,545
Sidewalk (5' width)	L.F.	\$25	35,446	\$886,161
Drainage	L.F.	\$45	35,446	\$1,595,089
Right of Way	S.F.	\$2.30	1,665,982	\$3,831,759
Mirafi RS 280i fabric	S.F.	\$1	3,663	\$1,831
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$11,640,429
Mobilization (10% of Construction)	Lump	10%	1,164,043	\$1,164,043
Contingency (25% of Construction)	Lump	25%	2,910,107	\$2,910,107
			Subtotal	\$15,714,580

Preconstruction Engineering	10%	\$1,164,043
Construction Engineering	10%	\$1,164,043

<b>Total Project Costs</b>	\$18,043,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: **42**Improvement Type: **New Road**Completion Year: **2050** 

New Road (2000 East St): Project 33 above to 500 North St

Costs				
Item	Unit	Unit Cost	Quantity	Cost
Parkstrip	S.F.	\$10	63,444	\$634,436
Removal of Existing Asphalt	S.Y.	\$4	17,623	\$70,493
Clearing and Grubbing	Acre	\$2,000	14	\$28,037
Roadway Excavation	C.Y.	\$11	14,686	\$154,203
HMA Concrete	Ton	\$85	4,097	\$348,279
Untreated Base Course	C.Y.	\$15	3,916	\$58,744
Granular Borrow	C.Y.	\$40	4,895	\$195,813
Curb and Gutter (2.5' width)	L.F.	\$23	15,861	\$356,870
Sidewalk (5' width)	L.F.	\$25	15,861	\$396,522
Drainage	L.F.	\$45	15,861	\$713,740
Right of Way	S.F.	\$2.30	610,644	\$1,404,482
Mirafi RS 280i fabric	S.F.	\$1	1,639	\$819
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$4,362,439
Mobilization (10% of Construction)	Lump	10%	436,244	\$436,244
Contingency (25% of Construction)	Lump	25%	1,090,610	\$1,090,610
			Subtotal	\$5,889,293

Preconstruction Engineering	10%	\$436,244
Construction Engineering	10%	\$436,244

<b>Total Project Costs</b>	\$6,762,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

### **Project Parameters:**

Project Number: 43
Improvement Type: New Road
Completion Year: 2050

New Road (Porters Crossing Parkway): Golden Eagle Rd to Mid Valley Rd

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	32,084	\$320,842	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	7	\$14,179	
Roadway Excavation	C.Y.	\$11	14,854	\$155,965	
HMA Concrete	Ton	\$85	4,144	\$352,258	
Untreated Base Course	C.Y.	\$15	3,961	\$59,415	
Granular Borrow	C.Y.	\$40	4,951	\$198,051	
Curb and Gutter (2.5' width)	L.F.	\$23	8,021	\$180,474	
Sidewalk (5' width)	L.F.	\$25	8,021	\$200,527	
Drainage	L.F.	\$45	8,021	\$360,948	
Right of Way	S.F.	\$2.30	308,811	\$710,265	
Mirafi RS 280i fabric	S.F.	\$1	829	\$414	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$2,553,338	
Mobilization (10% of Construction)	Lump	10%	255,334	\$255,334	
Contingency (25% of Construction)	Lump	25%	638,335	\$638,335	
			Subtotal	\$3,447,007	

Preconstruction Engineering	10%	\$255,334
Construction Engineering	10%	\$255,334

**Total Project Costs** \$3,958,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 44
Improvement Type: New Road
Completion Year: 2050

New Road (SilverLake Parkway): Golden Eagle Rd to Mid Valley Rd

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	9,468	\$94,676
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	2	\$4,184
Roadway Excavation	C.Y.	\$11	4,383	\$46,023
HMA Concrete	Ton	\$85	1,223	\$103,947
Untreated Base Course	C.Y.	\$15	1,169	\$17,533
Granular Borrow	C.Y.	\$40	1,461	\$58,442
Curb and Gutter (2.5' width)	L.F.	\$23	2,367	\$53,256
Sidewalk (5' width)	L.F.	\$25	2,367	\$59,173
Drainage	L.F.	\$45	2,367	\$106,511
Right of Way	S.F.	\$2.30	91,126	\$209,590
Mirafi RS 280i fabric	S.F.	\$1	245	\$122
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$753,457
Mobilization (10% of Construction)	Lump	10%	75,346	\$75,346
Contingency (25% of Construction)	Lump	25%	188,364	\$188,364
			Subtotal	\$1,017,167

Preconstruction Engineering	10%	\$75,346
Construction Engineering	10%	\$75,346

<b>Total Pro</b>	ject Costs	\$1,168,000
		7/

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **45**Improvement Type: **New Road**Completion Year: **2050**Roadway Functional Class: **Minor Collector - 77'** 

New Road (Talus Ridge Drive): Scenic Mountain Dr to Mt Saratoga Blvd

Costs						
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	19,877	\$198,774		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	4	\$8,784		
Roadway Excavation	C.Y.	\$11	9,202	\$96,626		
HMA Concrete	Ton	\$85	2,567	\$218,237		
Untreated Base Course	C.Y.	\$15	2,454	\$36,810		
Granular Borrow	C.Y.	\$40	3,067	\$122,700		
Curb and Gutter (2.5' width)	L.F.	\$23	4,969	\$111,810		
Sidewalk (5' width)	L.F.	\$25	4,969	\$124,234		
Drainage	L.F.	\$45	4,969	\$223,621		
Right of Way	S.F.	\$2.30	191,320	\$440,036		
Mirafi RS 280i fabric	S.F.	\$1	513	\$257		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			<b>Construction Cost</b>	\$1,581,889		
Mobilization (10% of Construction)	Lump	10%	158,189	\$158,189		
Contingency (25% of Construction)	Lump	25%	395,472	\$395,472		
			Subtotal	\$2,135,550		
	Preconstruction	Engineering	10%	\$158,189		
	Construction	Engineering	10%	\$158,189		
			<b>Total Project Costs</b>	\$2,452,000		

**Overall Assumptions:** 

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

**Project Parameters:** 

Project Number: **46**Improvement Type: **New Road**Completion Year: **2030** 

New Road (Spring Mountain Drive): Spring Run Drive to Spring Mountain Drive

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	15,283	\$152,831	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	3	\$6,754	
Roadway Excavation	C.Y.	\$11	7,076	\$74,293	
HMA Concrete	Ton	\$85	1,974	\$167,796	
Untreated Base Course	C.Y.	\$15	1,887	\$28,302	
Granular Borrow	C.Y.	\$40	2,359	\$94,340	
Curb and Gutter (2.5' width)	L.F.	\$23	3,821	\$85,967	
Sidewalk (5' width)	L.F.	\$25	3,821	\$95,519	
Drainage	L.F.	\$45	3,821	\$171,935	
Right of Way	S.F.	\$2.30	147,100	\$338,330	
Mirafi RS 280i fabric	S.F.	\$1	395	\$197	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$1,216,265	
Mobilization (10% of Construction)	Lump	10%	121,626	\$121,626	
Contingency (25% of Construction)	Lump	25%	304,066	\$304,066	
			Subtotal	\$1,641,957	

Preconstruction Engineering	10%	\$121,626
Construction Engineering	10%	\$121,626

<b>Total Pro</b>	ject Costs	\$1,886,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **47**Improvement Type: **New Road**Completion Year: **2050** 

New Road (possibly Wagstaff Way): N Spring Run Drive to Spring Run Parkway

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2024)	
Parkstrip	S.F.	\$10	14,000	\$154,347	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	3	\$6,821	
Roadway Excavation	C.Y.	\$11	6,481	\$75,030	
HMA Concrete	Ton	\$85	1,808	\$169,460	
Untreated Base Course	C.Y.	\$15	1,728	\$28,583	
Granular Borrow	C.Y.	\$40	2,160	\$95,276	
Curb and Gutter (2.5' width)	L.F.	\$23	3,500	\$86,820	
Sidewalk (5' width)	L.F.	\$25	3,500	\$96,467	
Drainage	L.F.	\$45	3,500	\$173,640	
Right of Way	S.F.	\$2.30	134,750	\$341,685	
Mirafi RS 280i fabric	S.F.	\$1	362	\$199	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$1,228,325	
Mobilization (10% of Construction)	Lump	10%	122,833	\$122,833	
Contingency (25% of Construction)	Lump	25%	307,081	\$307,081	
			Subtotal	\$1,658,239	

Preconstruction Engineering	10%	\$122,833
Construction Engineering	10%	\$122,833

<b>Total Project Costs</b>	\$1,904,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 48
Improvement Type: New Road
Completion Year: 2030

New Road (Spring Run Parkway): SR-73 to northern border

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2025)	
Parkstrip	S.F.	\$10	40,000	\$458,630	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	9	\$20,268	
Roadway Excavation	C.Y.	\$11	18,519	\$222,945	
HMA Concrete	Ton	\$85	5,167	\$503,537	
Untreated Base Course	C.Y.	\$15	4,938	\$84,931	
Granular Borrow	C.Y.	\$40	6,173	\$283,105	
Curb and Gutter (2.5' width)	L.F.	\$23	10,000	\$257,979	
Sidewalk (5' width)	L.F.	\$25	10,000	\$286,644	
Drainage	L.F.	\$45	10,000	\$515,958	
Right of Way	S.F.	\$2.30	385,000	\$1,015,291	
Mirafi RS 280i fabric	S.F.	\$1	1,033	\$592	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$221,289	
			<b>Construction Cost</b>	\$3,871,169	
Mobilization (10% of Construction)	Lump	10%	387,117	\$387,117	
Contingency (25% of Construction)	Lump	25%	967,792	\$967,792	
			Subtotal	\$5,226,078	

Preconstruction Engineering	10%	\$387,117
Construction Engineering	10%	\$387,117

<b>Total Project Costs</b>	\$6,001,000
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## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: **49**Improvement Type: **New Road**Completion Year: **2030** 

New Road (unknown W/E rd just south of norther border): Spring Run Parkway to Project 52

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	14,781	\$147,806
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	3	\$6,922
Roadway Excavation	C.Y.	\$11	7,664	\$80,472
HMA Concrete	Ton	\$85	1,604	\$136,314
Untreated Base Course	C.Y.	\$15	1,533	\$22,992
Granular Borrow	C.Y.	\$40	2,299	\$91,968
Curb and Gutter (2.5' width)	L.F.	\$23	5,912	\$133,025
Sidewalk (5' width)	L.F.	\$25	5,912	\$147,806
Drainage	L.F.	\$45	5,912	\$266,051
Right of Way	S.F.	\$2.30	150,762	\$346,753
Mirafi RS 280i fabric	S.F.	\$1	611	\$305
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$1,380,414
Mobilization (10% of Construction)	Lump	10%	138,041	\$138,041
Contingency (25% of Construction)	Lump	25%	345,103	\$345,103
			Subtotal	\$1,863,558

Preconstruction Engineering	10%	\$138,041
Construction Engineering	10%	\$138,041

## Total Project Costs \$2,140,000

<b>Overall Assumptions:</b>		Project Parameters:
HMA Pavement Density (pcf) =	155	Project Number: <b>50</b>
HMA Thickness (in) =	3	Improvement Type: New Road
Untreated Base Course Thickness (in) =	6	Completion Year: 2050
Granual Borrow Thickness (in) =	9	Roadway Functional Class: Local Street
Roadway Excavation Depth (ft) =	2.5	
Number of Sidewalks (No.) =	2	

New Road (possibly Wagstaff Way): Spring Run Parkway to eastern border

Unit	<b>Unit Cost</b>		
	Unit Cost	Quantity	Cost(2026)
S.F.	\$10	34,400	\$408,226
S.Y.	\$4	0	\$0
Acre	\$2,000	8	\$18,040
C.Y.	\$11	15,926	\$198,443
Ton	\$85	4,443	\$448,198
C.Y.	\$15	4,247	\$75,597
C.Y.	\$40	5,309	\$251,991
L.F.	\$23	8,600	\$229,627
L.F.	\$25	8,600	\$255,141
L.F.	\$45	8,600	\$459,254
S.F.	\$2.30	331,100	\$903,711
S.F.	\$1	889	\$527
S.F.	\$225	1,560	\$416,533
Each	\$193,000	0	\$0
		<b>Construction Cost</b>	\$3,665,291
Lump	10%	366,529	\$366,529
Lump	25%	916,323	\$916,323
		Subtotal	\$4,948,143
	S.Y. Acre C.Y. Ton C.Y. L.F. L.F. S.F. S.F. S.F. LEach	S.Y. \$4  Acre \$2,000  C.Y. \$11  Ton \$85  C.Y. \$15  C.Y. \$40  L.F. \$23  L.F. \$25  L.F. \$45  S.F. \$2.30  S.F. \$1  S.F. \$225  Each \$193,000	S.Y.         \$4         0           Acre         \$2,000         8           C.Y.         \$11         15,926           Ton         \$85         4,443           C.Y.         \$15         4,247           C.Y.         \$40         5,309           L.F.         \$23         8,600           L.F.         \$25         8,600           S.F.         \$45         8,600           S.F.         \$2.30         331,100           S.F.         \$1         889           S.F.         \$225         1,560           Each         \$193,000         0           Construction Cost           Lump         10%         366,529           Lump         25%         916,323

Preconstruction Engineering	10%	\$366,529
Construction Engineering	10%	\$366,529

, o tall i lojout Goots	<b>Total Pro</b>	ject Costs	\$5,682,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: **51**Improvement Type: **New Road**Completion Year: **2030** 

New Road (unknown N/S road just west of eastern border): SR-73 to northern border

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	21,265	\$212,648
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	5	\$9,959
Roadway Excavation	C.Y.	\$11	11,026	\$115,775
HMA Concrete	Ton	\$85	2,307	\$196,114
Untreated Base Course	C.Y.	\$15	2,205	\$33,079
Granular Borrow	C.Y.	\$40	3,308	\$132,314
Curb and Gutter (2.5' width)	L.F.	\$23	8,506	\$191,383
Sidewalk (5' width)	L.F.	\$25	8,506	\$212,648
Drainage	L.F.	\$45	8,506	\$382,766
Right of Way	S.F.	\$2.30	216,901	\$498,871
Mirafi RS 280i fabric	S.F.	\$1	879	\$439
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$1,985,996
Mobilization (10% of Construction)	Lump	10%	198,600	\$198,600
Contingency (25% of Construction)	Lump	25%	496,499	\$496,499
			Subtotal	\$2,681,094

Preconstruction Engineering	10%	\$198,600
Construction Engineering	10%	\$198,600

## **Total Project Costs** \$3,079,000

<b>Overall Assumptions:</b>		Project Parameters:
HMA Pavement Density (pcf) =	155	Project Number: 52
HMA Thickness (in) =	3	Improvement Type: New Road
Untreated Base Course Thickness (in) =	6	Completion Year: 2050
Granual Borrow Thickness (in) =	9	Roadway Functional Class: Local Street
Roadway Excavation Depth (ft) =	2.5	
Number of Sidewalks (No.) =	2	

New Road (Pony Express Parkway): 1000 N to southern border

Costs					
Item	Unit	Unit Cost	Quantity	Cost	
Parkstrip	S.F.	\$10	46,969	\$469,686	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	16	\$32,887	
Roadway Excavation	C.Y.	\$11	42,946	\$450,931	
HMA Concrete	Ton	\$85	11,982	\$1,018,460	
Untreated Base Course	C.Y.	\$15	11,452	\$171,783	
Granular Borrow	C.Y.	\$40	14,315	\$572,611	
Curb and Gutter (2.5' width)	L.F.	\$23	11,742	\$264,198	
Sidewalk (5' width)	L.F.	\$30	11,742	\$352,264	
Drainage	L.F.	\$45	11,742	\$528,397	
Right of Way	S.F.	\$2.30	716,271	\$1,647,423	
Mirafi RS 280i fabric	S.F.	\$1	1,213	\$607	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$5,509,246	
Mobilization (10% of Construction)	Lump	10%	550,925	\$550,925	
Contingency (25% of Construction)	Lump	25%	1,377,311	\$1,377,311	
			Subtotal	\$7,437,482	

Preconstruction Engineering	10%	\$550,925
Construction Engineering	10%	\$550,925

<b>Total Pro</b>	ject Costs	\$8,540,000
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## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **53**Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Minor Arterial - 122'

New Road (unknown N/S road): Mid Valley Road to Project 57

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	19,560	\$195,600	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	4	\$8,644	
Roadway Excavation	C.Y.	\$11	9,056	\$95,083	
HMA Concrete	Ton	\$85	2,527	\$214,753	
Untreated Base Course	C.Y.	\$15	2,415	\$36,222	
Granular Borrow	C.Y.	\$40	3,019	\$120,741	
Curb and Gutter (2.5' width)	L.F.	\$23	4,890	\$110,025	
Sidewalk (5' width)	L.F.	\$25	4,890	\$122,250	
Drainage	L.F.	\$45	4,890	\$220,050	
Right of Way	S.F.	\$2.30	188,265	\$433,010	
Mirafi RS 280i fabric	S.F.	\$1	505	\$253	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$1,556,630	
Mobilization (10% of Construction)	Lump	10%	155,663	\$155,663	
Contingency (25% of Construction)	Lump	25%	389,157	\$389,157	
			Subtotal	\$2,101,450	

Preconstruction Engineering	10%	\$155,663
Construction Engineering	10%	\$155,663

2

Total Project Co	sts \$2,413,000
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## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: **54**Improvement Type: **New Road**Completion Year: **2050** 

New Road (Pole Canyon Boulevard): East Expressway to Project 31 above

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	24,675	\$246,745	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	7	\$14,275	
Roadway Excavation	C.Y.	\$11	18,049	\$189,514	
HMA Concrete	Ton	\$85	5,036	\$428,031	
Untreated Base Course	C.Y.	\$15	4,813	\$72,196	
Granular Borrow	C.Y.	\$40	8,423	\$336,914	
Curb and Gutter (2.5' width)	L.F.	\$23	4,935	\$111,035	
Sidewalk (5' width)	L.F.	\$25	4,935	\$123,373	
Drainage	L.F.	\$45	4,935	\$222,071	
Right of Way	S.F.	\$2.30	310,899	\$715,068	
Mirafi RS 280i fabric	S.F.	\$1	510	\$255	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$2,459,475	
Mobilization (10% of Construction)	Lump	10%	245,948	\$245,948	
Contingency (25% of Construction)	Lump	25%	614,869	\$614,869	
			Subtotal	\$3,320,292	

Preconstruction Engineering	10%	\$245,948
Construction Engineering	10%	\$245,948

Total Project Costs \$3,813,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4
Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 55

Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (unknown W/E road): Pony Express Pkwy to Project 31 above

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2028)		
Parkstrip	S.F.	\$10	64,000	\$813,585		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	14	\$35,954		
Roadway Excavation	C.Y.	\$11	29,630	\$395,493		
HMA Concrete	Ton	\$85	8,267	\$893,249		
Untreated Base Course	C.Y.	\$15	7,901	\$150,664		
Granular Borrow	C.Y.	\$40	9,877	\$502,213		
Curb and Gutter (2.5' width)	L.F.	\$23	16,000	\$457,642		
Sidewalk (5' width)	L.F.	\$25	16,000	\$508,491		
Drainage	L.F.	\$45	16,000	\$915,284		
Right of Way	S.F.	\$2.30	616,000	\$1,801,075		
Mirafi RS 280i fabric	S.F.	\$1	1,653	\$1,051		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$6,474,700		
Mobilization (10% of Construction)	Lump	10%	647,470	\$647,470		
Contingency (25% of Construction)	Lump	25%	1,618,675	\$1,618,675		
			Subtotal	\$8,740,845		

Preconstruction Engineering	10%	\$647,470
Construction Engineering	10%	\$647,470

<b>Total Project Costs</b>	\$10,036,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: **56**Improvement Type: **New Road**Completion Year: **2030** 

New Road (unknown W/E road): Eagle Mountain Blvd to Pony Express Parkway

Unit	11-2-0-4		
	Unit Cost	Quantity	Cost(2027)
S.F.	\$10	44,000	\$540,425
S.Y.	\$4	0	\$0
Acre	\$2,000	10	\$23,882
C.Y.	\$11	20,370	\$262,707
Ton	\$85	5,683	\$593,342
C.Y.	\$15	5,432	\$100,079
C.Y.	\$40	6,790	\$333,596
L.F.	\$23	11,000	\$303,989
L.F.	\$25	11,000	\$337,766
L.F.	\$45	11,000	\$607,978
S.F.	\$2.30	423,500	\$1,196,366
S.F.	\$1	1,137	\$698
S.F.	\$225	0	\$0
Each	\$193,000	0	\$0
		<b>Construction Cost</b>	\$4,300,827
Lump	10%	430,083	\$430,083
Lump	25%	1,075,207	\$1,075,207
		Subtotal	\$5,806,117
	S.Y. Acre C.Y. Ton C.Y. L.F. L.F. S.F. S.F. S.F. Each	S.Y. \$4  Acre \$2,000  C.Y. \$11  Ton \$85  C.Y. \$15  C.Y. \$40  L.F. \$23  L.F. \$25  L.F. \$45  S.F. \$2.30  S.F. \$1  S.F. \$225  Each \$193,000	S.Y.         \$4         0           Acre         \$2,000         10           C.Y.         \$11         20,370           Ton         \$85         5,683           C.Y.         \$15         5,432           C.Y.         \$40         6,790           L.F.         \$23         11,000           L.F.         \$25         11,000           S.F.         \$2.30         423,500           S.F.         \$1         1,137           S.F.         \$225         0           Each         \$193,000         0           Construction Cost           Lump         10%         430,083           Lump         25%         1,075,207

Preconstruction Engineering	10%	\$430,083
Construction Engineering	10%	\$430,083

<b>Total Project Costs</b>	\$6,667,000
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## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: **57**Improvement Type: **New Road**Completion Year: **2030** 

Pole Canyon Blvd widening: W Lewiston Rd to Pony Express Pkwy

S.F. S.Y. Acre	\$10 \$4 \$2,000	<b>Quantity</b> 204,790 0	<b>Cost</b> \$2,047,900
S.Y. Acre	\$4	·	
Acre		0	ĊΩ
	¢2 በበበ		\$0
	⊋∠,∪∪∪	72	\$143,391
C.Y.	\$11	187,250	\$1,966,126
Ton	\$85	52,243	\$4,440,637
C.Y.	\$15	49,933	\$749,001
C.Y.	\$40	62,417	\$2,496,668
L.F.	\$23	51,198	\$1,151,944
L.F.	\$30	51,198	\$1,535,925
L.F.	\$45	51,198	\$2,303,888
S.F.	\$2.30	3,123,048	\$7,183,010
S.F.	\$1	5,290	\$2,645
S.F.	\$225	0	\$0
Each	\$193,000	0	\$0
		Construction Cost	\$24,021,135
Lump	10%	2,402,113	\$2,402,113
Lump	25%	6,005,284	\$6,005,284
		Subtotal	\$32,428,532
	C.Y. C.Y. L.F. L.F. S.F. S.F. S.F. Each	Ton \$85 C.Y. \$15 C.Y. \$40 L.F. \$23 L.F. \$30 L.F. \$45 S.F. \$2.30 S.F. \$1 S.F. \$225 Each \$193,000	Ton \$85 52,243 C.Y. \$15 49,933 C.Y. \$40 62,417 L.F. \$23 51,198 L.F. \$30 51,198 L.F. \$45 51,198 S.F. \$2.30 3,123,048 S.F. \$1 5,290 S.F. \$225 0 Each \$193,000 0  Construction Cost Lump 10% 2,402,113 Lump 25% 6,005,284

Preconstruction Engineering	10%	\$2,402,113
Construction Engineering	10%	\$2,402,113

## Total Project Costs \$37,233,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

2

Untreated Base Course Thickness (in) = **8** 

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 58

Improvement Type: Capacity Improvement

Completion Year: 2050

Roadway Functional Class: Minor Arterial - 122'

New Road (Eagle Mountain Boulevard): Cory Wride Hwy to 8000 North

Costs						
Item	Cost					
Parkstrip	S.F.	\$10	34,400	\$344,000		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	8	\$15,202		
Roadway Excavation	C.Y.	\$11	15,926	\$167,222		
HMA Concrete	Ton	\$85	4,443	\$377,683		
Untreated Base Course	C.Y.	\$15	4,247	\$63,704		
Granular Borrow	C.Y.	\$40	5,309	\$212,346		
Curb and Gutter (2.5' width)	L.F.	\$23	8,600	\$193,500		
Sidewalk (5' width)	L.F.	\$25	8,600	\$215,000		
Drainage	L.F.	\$45	8,600	\$387,000		
Right of Way	S.F.	\$2.30	331,100	\$761,530		
Mirafi RS 280i fabric	S.F.	\$1	889	\$444		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	1	\$193,000		
			<b>Construction Cost</b>	\$2,930,631		
Mobilization (10% of Construction)	Lump	10%	293,063	\$293,063		
Contingency (25% of Construction)	Lump	25%	732,658	\$732,658		
			Subtotal	\$3,956,352		

Preconstruction Engineering	10%	\$293,063
Construction Engineering	10%	\$293,063

<b>Total Project Costs</b>	\$4,543,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: **59**Improvement Type: **New Road**Completion Year: **2050** 

Six Mile Cutoff Rd Widening: Cory Wride Hwy to Abigail Ln

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	25,460	\$254,601		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	6	\$11,251		
Roadway Excavation	C.Y.	\$11	11,787	\$123,764		
HMA Concrete	Ton	\$85	3,289	\$279,530		
Untreated Base Course	C.Y.	\$15	3,143	\$47,148		
Granular Borrow	C.Y.	\$40	3,929	\$157,161		
Curb and Gutter (2.5' width)	L.F.	\$23	6,365	\$143,213		
Sidewalk (5' width)	L.F.	\$25	6,365	\$159,125		
Drainage	L.F.	\$45	6,365	\$286,426		
Right of Way	S.F.	\$2.30	245,053	\$563,623		
Mirafi RS 280i fabric	S.F.	\$1	658	\$329		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	1	\$193,000		
			Construction Cost	\$2,219,172		
Mobilization (10% of Construction)	Lump	10%	221,917	\$221,917		
Contingency (25% of Construction)	Lump	25%	554,793	\$554,793		
			Subtotal	\$2,995,882		

Preconstruction Engineering	10%	\$221,917
Construction Engineering	10%	\$221,917

## Total Project Costs \$3,440,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

2

Untreated Base Course Thickness (in) = **8** 

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

## Project Parameters:

Project Number: 60

Improvement Type: Capacity Improvement

Completion Year: 2050

New Road (Pole Canyon Boulevard): Pony Express Parkway to East Expressway

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2024)		
Parkstrip	S.F.	\$10	63,000	\$694,559		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	18	\$40,181		
Roadway Excavation	C.Y.	\$11	46,083	\$533,460		
HMA Concrete	Ton	\$85	12,857	\$1,204,858		
Untreated Base Course	C.Y.	\$15	12,289	\$203,223		
Granular Borrow	C.Y.	\$40	21,506	\$948,373		
Curb and Gutter (2.5' width)	L.F.	\$23	12,600	\$312,552		
Sidewalk (5' width)	L.F.	\$25	12,600	\$347,280		
Drainage	L.F.	\$45	12,600	\$625,103		
Right of Way	S.F.	\$2.30	793,800	\$2,012,833		
Mirafi RS 280i fabric	S.F.	\$1	1,302	\$718		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	1	\$212,778		
			Construction Cost	\$7,135,917		
Mobilization (10% of Construction)	Lump	10%	713,592	\$713,592		
Contingency (25% of Construction)	Lump	25%	1,783,979	\$1,783,979		
			Subtotal	\$9,633,488		

Preconstruction Engineering	10%	\$713,592
Construction Engineering	10%	\$713,592

**Total Project Costs** \$11,061,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

> Granual Borrow Thickness (in) = 14 Roadway Excavation Depth (ft) = 2.5 2

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 61

Improvement Type: New Road Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (Aviator Avenue): Pony Express Parkway to East Expressway - New 3 lane road

Costs						
Item	Quantity	Cost(2023)				
Parkstrip	S.F.	\$10	40,000	\$422,000		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	11	\$22,766		
Roadway Excavation	C.Y.	\$11	25,000	\$276,938		
HMA Concrete	Ton	\$85	6,975	\$625,483		
Untreated Base Course	C.Y.	\$15	6,667	\$105,500		
Granular Borrow	C.Y.	\$40	8,333	\$351,667		
Curb and Gutter (2.5' width)	L.F.	\$23	10,000	\$237,375		
Sidewalk (5' width)	L.F.	\$25	10,000	\$263,750		
Drainage	L.F.	\$45	10,000	\$474,750		
Right of Way	S.F.	\$2.30	470,000	\$1,140,455		
Mirafi RS 280i fabric	S.F.	\$1	1,033	\$545		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			<b>Construction Cost</b>	\$3,921,229		
Mobilization (10% of Construction)	Lump	10%	392,123	\$392,123		
Contingency (25% of Construction)	Lump	25%	980,307	\$980,307		
			Subtotal	\$5,293,659		

Preconstruction Engineering	10%	\$392,123
Construction Engineering	10%	\$392,123

70,070,000	<b>Total Pro</b>	ject Costs	\$6,078,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: 62
Improvement Type: New Road
Completion Year: 2030
Roadway Functional Class: Major Collector - 94'

New Road (Lone Tree Parkway): Old Airport Road to Seabiscuit Road

Costs					
Item	Unit	Unit Cost	Quantity	Cost(2024)	
Parkstrip	S.F.	\$10	25,600	\$282,234	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	6	\$12,472	
Roadway Excavation	C.Y.	\$11	11,852	\$137,197	
HMA Concrete	Ton	\$85	3,307	\$309,869	
Untreated Base Course	C.Y.	\$15	3,160	\$52,265	
Granular Borrow	C.Y.	\$40	3,951	\$174,218	
Curb and Gutter (2.5' width)	L.F.	\$23	6,400	\$158,756	
Sidewalk (5' width)	L.F.	\$25	6,400	\$176,396	
Drainage	L.F.	\$45	6,400	\$317,513	
Right of Way	S.F.	\$2.30	246,400	\$624,795	
Mirafi RS 280i fabric	S.F.	\$1	661	\$365	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$2,246,080	
Mobilization (10% of Construction)	Lump	10%	224,608	\$224,608	
Contingency (25% of Construction)	Lump	25%	561,520	\$561,520	
			Subtotal	\$3,032,208	

Preconstruction Engineering	10%	\$224,608
Construction Engineering	10%	\$224,608

#### **Total Project Costs** \$3,482,000

## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155 HMA Thickness (in) = 4

8

2

Untreated Base Course Thickness (in) =

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 63

Improvement Type: New Road

Completion Year: 2030

New Road (Lone Tree Parkway): Eagle Mountain Blvd to Old Airport Road

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	16,000	\$160,000	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	6	\$11,203	
Roadway Excavation	C.Y.	\$11	14,630	\$153,611	
HMA Concrete	Ton	\$85	4,082	\$346,942	
Untreated Base Course	C.Y.	\$15	3,901	\$58,519	
Granular Borrow	C.Y.	\$40	4,877	\$195,062	
Curb and Gutter (2.5' width)	L.F.	\$23	4,000	\$90,000	
Sidewalk (5' width)	L.F.	\$30	4,000	\$120,000	
Drainage	L.F.	\$45	4,000	\$180,000	
Right of Way	S.F.	\$2.30	244,000	\$561,200	
Mirafi RS 280i fabric	S.F.	\$1	413	\$207	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$1,876,743	
Mobilization (10% of Construction)	Lump	10%	187,674	\$187,674	
Contingency (25% of Construction)	Lump	25%	469,186	\$469,186	
			Subtotal	\$2,533,603	

Preconstruction Engineering	10%	\$187,674
Construction Engineering	10%	\$187,674

2

## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: **64**Improvement Type: **New Road**Completion Year: **2050**Roadway Functional Class: **Minor Arterial - 122'** 

### Pony Express Parkway Widening: Eagle Mountain Blvd to Eagle Mountain Public Works

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2026)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	28,622	\$135,864	
Clearing and Grubbing	Acre	\$2,000	16	\$37,094	
Roadway Excavation	C.Y.	\$11	43,444	\$541,335	
HMA Concrete	Ton	\$85	12,121	\$1,222,643	
Untreated Base Course	C.Y.	\$15	11,585	\$206,223	
Granular Borrow	C.Y.	\$40	20,274	\$962,373	
Curb and Gutter (2.5' width)	L.F.	\$23	18,400	\$491,295	
Sidewalk (5' width)	L.F.	\$25	18,400	\$545,884	
Drainage	L.F.	\$45	18,400	\$982,591	
Right of Way	S.F.	\$2.30	9,200	\$25,111	
Mirafi RS 280i fabric	S.F.	\$1	1,901	\$1,128	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$5,151,542	
Mobilization (10% of Construction)	Lump	10%	515,154	\$515,154	
Contingency (25% of Construction)	Lump	25%	1,287,885	\$1,287,885	
			Subtotal	\$6,954,581	

Preconstruction Engineering	10%	\$515,154
Construction Engineering	10%	\$515,154

Total Project Costs \$7,985,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14 Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 65

Improvement Type: Capacity Improvement

Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (unknown W/E road): Pony Express Parkway to East Expressway

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	10	\$19,268	
Roadway Excavation	C.Y.	\$11	20,185	\$211,944	
HMA Concrete	Ton	\$85	5,632	\$478,692	
Untreated Base Course	C.Y.	\$15	5,383	\$80,741	
Granular Borrow	C.Y.	\$40	6,728	\$269,136	
Curb and Gutter (2.5' width)	L.F.	\$23	10,900	\$245,250	
Sidewalk (5' width)	L.F.	\$25	10,900	\$272,500	
Drainage	L.F.	\$45	10,900	\$490,500	
Right of Way	S.F.	\$2.30	5,450	\$12,535	
Mirafi RS 280i fabric	S.F.	\$1	1,126	\$563	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			<b>Construction Cost</b>	\$2,081,128	
Mobilization (10% of Construction)	Lump	10%	208,113	\$208,113	
Contingency (25% of Construction)	Lump	25%	520,282	\$520,282	
			Subtotal	\$2,809,523	

Preconstruction Engineering	10%	\$208,113
Construction Engineering	10%	\$208,113

<b>Total Project Costs</b>	\$3,226,000
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## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 66
Improvement Type: New Road
Completion Year: 2050
Roadway Functional Class: Minor Collector - 77'

## WoodHaven Blvd & Pony Express Pkwy - New Signal

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2023)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$203,615	
			Construction Cost	\$203,615	
Mobilization (10% of Construction)	Lump	10%	20,362	\$20,362	
Contingency (25% of Construction)	Lump	25%	50,904	\$50,904	
Subtotal					

Preconstruction Engineering	10%	\$20,362
Construction Engineering	10%	\$20,362

0

## **Total Project Costs** \$316,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

<u>Project Parameters:</u>

Project Number: 67

Improvement Type: Traffic Signal

Completion Year: 2030

## Pony Express Pkwy & East Expressway - New Signal

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2022)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
			Construction Cost	\$193,000	
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

## **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) = Number of Sidewalks (No.) = <u>Project Parameters:</u>

Project Number: 68

Improvement Type: Traffic Signal

Completion Year: 2030

## Eagle Mountain Boulevard & Project 57 - New Signal

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2027)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$237,050	
			<b>Construction Cost</b>	\$237,050	
Mobilization (10% of Construction)	Lump	10%	23,705	\$23,705	
Contingency (25% of Construction)	Lump	25%	59,263	\$59,263	
			Subtotal	\$320,018	

Preconstruction Engineering	10%	\$23,705
Construction Engineering	10%	\$23,705

0

#### **Total Project Costs** \$368,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

> Granual Borrow Thickness (in) = 0 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 69

Improvement Type: Traffic Signal

Completion Year: 2030

## Bobby Wren Boulevard & Pony Express Parkway - New Signal

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2022)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
Construction Cost					
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

## **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 70

Improvement Type: Traffic Signal

Completion Year: 2030

## Eagle Mountain Boulevard & Major Street - New Signal

Costs					
Item	Item Unit Unit Cost Quantity				
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$212,778	
			Construction Cost	\$212,778	
Mobilization (10% of Construction)	Lump	10%	21,278	\$21,278	
Contingency (25% of Construction)	Lump	25%	53,194	\$53,194	
			Subtotal	\$287,250	

Preconstruction Engineering	10%	\$21,278
Construction Engineering	10%	\$21,278

0

## **Total Project Costs** \$330,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: **71** 

Improvement Type: Traffic Signal

Completion Year: 2030

## Pony Express Pkwy & Eagle Mountain Boulevard - New Signal

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2023)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	132	\$69	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$203,615	
			Construction Cost	\$203,684	
Mobilization (10% of Construction)	Lump	10%	20,368	\$20,368	
Contingency (25% of Construction)	Lump	25%	50,921	\$50,921	
			Subtotal	\$274,974	

Preconstruction Engineering	10%	\$20,368
Construction Engineering	10%	\$20,368

Total Project Costs \$316,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

2

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14
Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 72

Improvement Type: Capacity Improvement

Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

## **Eagle Mountain Boulevard and SR-73 - New Signal**

Costs					
Item	Item Unit Unit Cost Quantity				
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
Construction Cost					
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

> Granual Borrow Thickness (in) = 0 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 73

Improvement Type: Traffic Signal

Completion Year: 2030

## Lone Tree Parkway & Eagle Mountain Blvd - New Signal

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
			<b>Construction Cost</b>	\$193,000	
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

## **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 74

Improvement Type: Traffic Signal

Completion Year: 2050

## Pony Express Parkway & Project 57 - New Signal

Costs					
Item	Item Unit Unit Cost Quantity				
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
Construction Cost					
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

## **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0** 

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 75

Improvement Type: Traffic Signal

Completion Year: 2050

### Pole Canyon Boulevard & SR-73 - New Signal

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
Construction Cost					
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

## **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = 0
Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 76

Improvement Type: Traffic Signal

Completion Year: 2050

## Pole Canyon Boulevard & Pony Express Parkway

Costs					
Item	Item Unit Unit Cost Quantity				
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
Construction Cost					
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

## **Total Project Costs** \$300,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

## **Project Parameters:**

Project Number: 77

Improvement Type: Traffic Signal

Completion Year: 2050

New Road (Cory Wride Freeway):Ranches Parkway to East Expressway- New freeway, frontage roads

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost		
Parkstrip	S.F.	\$10	0	\$0		
Removal of Existing Asphalt	S.Y.	\$4	0	\$0		
Clearing and Grubbing	Acre	\$2,000	265	\$529,277		
Roadway Excavation	C.Y.	\$11	669,228	\$7,026,892		
HMA Concrete	Ton	\$85	186,715	\$15,870,738		
Untreated Base Course	C.Y.	\$15	178,461	\$2,676,911		
Granular Borrow	C.Y.	\$40	312,306	\$12,492,253		
Curb and Gutter (2.5' width)	L.F.	\$23	182,979	\$4,117,022		
Sidewalk (5' width)	L.F.	\$25	182,979	\$4,574,469		
Drainage	L.F.	\$45	182,979	\$8,234,044		
Right of Way	S.F.	\$2.30	91,489	\$210,426		
Mirafi RS 280i fabric	S.F.	\$1	18,908	\$9,454		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
			Construction Cost	\$55,741,487		
Mobilization (10% of Construction)	Lump	10%	5,574,149	\$5,574,149		
Contingency (25% of Construction)	Lump	25%	13,935,372	\$13,935,372		
			Subtotal	\$75,251,007		

Preconstruction Engineering	10%	\$5,574,149
Construction Engineering	10%	\$5,574,149

Total Project Costs \$86,400,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4
Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14 Roadway Excavation Depth (ft) = 2.5

2

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 78

Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (1600 West): Aviator Avenue to 4000 North

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2024)
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	11	\$25,218
Roadway Excavation	C.Y.	\$11	26,500	\$306,764
HMA Concrete	Ton	\$85	7,394	\$692,848
Untreated Base Course	C.Y.	\$15	7,067	\$116,862
Granular Borrow	C.Y.	\$40	8,833	\$389,541
Curb and Gutter (2.5' width)	L.F.	\$23	10,600	\$262,940
Sidewalk (5' width)	L.F.	\$25	10,600	\$292,156
Drainage	L.F.	\$45	10,600	\$525,881
Right of Way	S.F.	\$2.30	5,300	\$13,439
Mirafi RS 280i fabric	S.F.	\$1	1,095	\$604
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$2,626,253
Mobilization (10% of Construction)	Lump	10%	262,625	\$262,625
Contingency (25% of Construction)	Lump	25%	656,563	\$656,563
			Subtotal	\$3,545,441

Preconstruction Engineering	10%	\$262,625
Construction Engineering	10%	\$262,625

Total Pro	ject Costs	\$4,071,000
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## **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

## **Project Parameters:**

Project Number: **79**Improvement Type: **New Road**Completion Year: **2030** 

New High-T Signal: Ranches Parkway & Campus Drive

Costs					
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2025)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	4	\$8,429	
Roadway Excavation	C.Y.	\$11	9,295	\$111,901	
HMA Concrete	Ton	\$85	2,593	\$252,737	
Untreated Base Course	C.Y.	\$15	2,479	\$42,629	
Granular Borrow	C.Y.	\$40	4,338	\$198,935	
Curb and Gutter (2.5' width)	L.F.	\$23	2,541	\$65,562	
Sidewalk (5' width)	L.F.	\$25	2,541	\$72,847	
Drainage	L.F.	\$45	2,541	\$131,125	
Right of Way	S.F.	\$2.30	1,271	\$3,351	
Mirafi RS 280i fabric	S.F.	\$1	263	\$151	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$221,289	
Construction Cost \$1,108,955					
Mobilization (10% of Construction)	Lump	10%	110,895	\$110,895	
Contingency (25% of Construction)	Lump	25%	277,239	\$277,239	
			Subtotal	\$1,497,089	

Preconstruction Engineering	10%	\$110,895
Construction Engineering	10%	\$110,895

## **Total Project Costs**

\$1,719,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) =

4

Untreated Base Course Thickness (in) = 8

> Granual Borrow Thickness (in) = 14

> Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

### **Project Parameters:**

Project Number: 80

Improvement Type: Capacity Improvement

Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (unknown W/E road): Cedar Valley Freeway to East Expressway

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	17	\$33,276
Roadway Excavation	C.Y.	\$11	34,860	\$366,034
HMA Concrete	Ton	\$85	9,726	\$826,713
Untreated Base Course	C.Y.	\$15	9,296	\$139,441
Granular Borrow	C.Y.	\$40	11,620	\$464,804
Curb and Gutter (2.5' width)	L.F.	\$23	18,825	\$423,553
Sidewalk (5' width)	L.F.	\$25	18,825	\$470,615
Drainage	L.F.	\$45	18,825	\$847,106
Right of Way	S.F.	\$2.30	9,412	\$21,648
Mirafi RS 280i fabric	S.F.	\$1	1,945	\$973
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$3,594,162
Mobilization (10% of Construction)	Lump	10%	359,416	\$359,416
Contingency (25% of Construction)	Lump	25%	898,541	\$898,541
			Subtotal	\$4,852,119

Preconstruction Engineering	10%	\$359,416
Construction Engineering	10%	\$359,416

2

## Total Project Costs \$5,571,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: **81**Improvement Type: **New Road**Completion Year: **2050** 

Hidden Valley Pkwy widening: Pony Express Pkwy to Project 83

Item Parkstrip	Unit S.F.	<b>Unit Cost</b>	Quantity	0
Darketrin	S.F.		Qualitity	Cost
Parkstrip		\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	6,311	\$25,244
Clearing and Grubbing	Acre	\$2,000	1	\$1,118
Roadway Excavation	C.Y.	\$11	2,254	\$23,666
HMA Concrete	Ton	\$85	629	\$53,452
Untreated Base Course	C.Y.	\$15	601	\$9,016
Granular Borrow	C.Y.	\$40	751	\$30,052
Curb and Gutter (2.5' width)	L.F.	\$23	4,057	\$91,284
Sidewalk (5' width)	L.F.	\$25	4,057	\$101,427
Drainage	L.F.	\$45	4,057	\$182,568
Right of Way	S.F.	\$2.30	2,029	\$4,666
Mirafi RS 280i fabric	S.F.	\$1	419	\$210
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			Construction Cost	\$522,701
Mobilization (10% of Construction)	Lump	10%	52,270	\$52,270
Contingency (25% of Construction)	Lump	25%	130,675	\$130,675
			Subtotal	\$705,646

Preconstruction Engineering	10%	\$52,270
Construction Engineering	10%	\$52,270

## Total Project Costs \$811,000

### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: 82

Improvement Type: Capacity Improvement

Completion Year: 2050

New Road (Hidden Valley Pkwy): Locust Ave to Hidden Valley Road

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	15	\$29,248
Roadway Excavation	C.Y.	\$11	30,641	\$321,733
HMA Concrete	Ton	\$85	8,549	\$726,657
Untreated Base Course	C.Y.	\$15	8,171	\$122,565
Granular Borrow	C.Y.	\$40	10,214	\$408,550
Curb and Gutter (2.5' width)	L.F.	\$23	16,546	\$372,291
Sidewalk (5' width)	L.F.	\$25	16,546	\$413,657
Drainage	L.F.	\$45	16,546	\$744,582
Right of Way	S.F.	\$2.30	8,273	\$19,028
Mirafi RS 280i fabric	S.F.	\$1	1,710	\$855
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$3,159,165
Mobilization (10% of Construction)	Lump	10%	315,916	\$315,916
Contingency (25% of Construction)	Lump	25%	789,791	\$789,791
			Subtotal	\$4,264,872

Preconstruction Engineering	10%	\$315,916
Construction Engineering	10%	\$315,916

<b>Total Project Costs</b>	\$4,897,000
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### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **83**Improvement Type: **New Road**Completion Year: **2050** 

Intersection Improvement: Porter's Crossing Pkwy/Pony Express Pkwy

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost(2025)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	4,467	\$20,485	
Clearing and Grubbing	Acre	\$2,000	0	\$379	
Roadway Excavation	C.Y.	\$11	667	\$8,026	
HMA Concrete	Ton	\$85	186	\$18,127	
Untreated Base Course	C.Y.	\$15	178	\$3,058	
Granular Borrow	C.Y.	\$40	311	\$14,268	
Curb and Gutter (2.5' width)	L.F.	\$23	1,200	\$30,957	
Sidewalk (5' width)	L.F.	\$25	1,200	\$34,397	
Drainage	L.F.	\$45	1,200	\$61,915	
Right of Way	S.F.	\$2.30	600	\$1,582	
Mirafi RS 280i fabric	S.F.	\$1	124	\$71	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
			Construction Cost	\$193,267	
Mobilization (10% of Construction)	Lump	10%	19,327	\$19,327	
Contingency (25% of Construction)	Lump	25%	48,317	\$48,317	
			Subtotal	\$260,910	

Preconstruction Engineering	10%	\$19,327
Construction Engineering	10%	\$19,327

## **Total Project Costs**

\$300,000

**Overall Assumptions:** 

HMA Pavement Density (pcf) = 155

HMA Thickness (in) =

8

4

Untreated Base Course Thickness (in) =

Granual Borrow Thickness (in) = 14 2.5

Roadway Excavation Depth (ft) = Number of Sidewalks (No.) = **Project Parameters:** 

Project Number: 84

Improvement Type: Capacity Improvement

Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

Intersection Improvement: Ranches Pkwy/Pony Express Pkwy

Costs					
Item	Unit	Unit Cost	Quantity	Cost(2025)	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	1,222	\$5,605	
Clearing and Grubbing	Acre	\$2,000	0	\$253	
Roadway Excavation	C.Y.	\$11	444	\$5,351	
HMA Concrete	Ton	\$85	124	\$12,085	
Untreated Base Course	C.Y.	\$15	119	\$2,038	
Granular Borrow	C.Y.	\$40	207	\$9,512	
Curb and Gutter (2.5' width)	L.F.	\$23	400	\$10,319	
Sidewalk (5' width)	L.F.	\$25	400	\$11,466	
Drainage	L.F.	\$45	400	\$20,638	
Right of Way	S.F.	\$2.30	200	\$527	
Mirafi RS 280i fabric	S.F.	\$1	41	\$24	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	0	\$0	
Construction Cost \$77,819					
Mobilization (10% of Construction)	Lump	10%	7,782	\$7,782	
Contingency (25% of Construction)	Lump	25%	19,455	\$19,455	
			Subtotal	\$105,055	

Preconstruction Engineering	10%	\$7,782
Construction Engineering	10%	\$7,782

#### **Total Project Costs** \$121,000

**Overall Assumptions:** 

HMA Pavement Density (pcf) = 155

HMA Thickness (in) =

4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

**Project Parameters:** 

Project Number: 85

Improvement Type: Capacity Improvement

Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

#### Intersection Improvement: Lone Tree Pkwy/Pony Express Pkwy

Costs						
Item	Unit	<b>Unit Cost</b>	Quantity	Cost(2025)		
Parkstrip	S.F.	\$10	0	\$0		
Removal of Existing Asphalt	S.Y.	\$4	2,233	\$10,243		
Clearing and Grubbing	Acre	\$2,000	0	\$0		
Roadway Excavation	C.Y.	\$11	333	\$4,013		
HMA Concrete	Ton	\$85	93	\$9,064		
Untreated Base Course	C.Y.	\$15	89	\$1,529		
Granular Borrow	C.Y.	\$40	156	\$7,134		
Curb and Gutter (2.5' width)	L.F.	\$23	600	\$15,479		
Sidewalk (5' width)	L.F.	\$25	600	\$17,199		
Drainage	L.F.	\$45	600	\$30,957		
Right of Way	S.F.	\$2.30	0	\$0		
Mirafi RS 280i fabric	S.F.	\$1	62	\$36		
Bridge/Culvert	S.F.	\$225	0	\$0		
Traffic Signal	Each	\$193,000	0	\$0		
Construction Cost \$95,653						
Mobilization (10% of Construction)	Lump	10%	9,565	\$9,565		
Contingency (25% of Construction)	Lump	25%	23,913	\$23,913		
			Subtotal	\$129,131		

Preconstruction Engineering	10%	\$9,565
Construction Engineering	10%	\$9,565

#### **Total Project Costs** \$149,000

**Overall Assumptions:** 

HMA Pavement Density (pcf) = 155

HMA Thickness (in) =

4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 14

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

**Project Parameters:** 

Project Number: 86

Improvement Type: Capacity Improvement

Completion Year: 2030

Roadway Functional Class: Major Arterial - 126' - Five Lanes

New Road (unknown W/E road): Cedar Valley Freeway to Project 31

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	151	\$302,561
Roadway Excavation	C.Y.	\$11	350,520	\$3,680,460
HMA Concrete	Ton	\$85	97,795	\$8,312,582
Untreated Base Course	C.Y.	\$15	93,472	\$1,402,080
Granular Borrow	C.Y.	\$40	116,840	\$4,673,600
Curb and Gutter (2.5' width)	L.F.	\$23	140,208	\$3,154,680
Sidewalk (5' width)	L.F.	\$25	140,208	\$3,505,200
Drainage	L.F.	\$45	140,208	\$6,309,360
Right of Way	S.F.	\$2.30	70,104	\$161,239
Mirafi RS 280i fabric	S.F.	\$1	14,488	\$7,244
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$31,509,006
Mobilization (10% of Construction)	Lump	10%	3,150,901	\$3,150,901
Contingency (25% of Construction)	Lump	25%	7,877,251	\$7,877,251
			Subtotal	\$42,537,158

Preconstruction Engineering	10%	\$3,150,901
Construction Engineering	10%	\$3,150,901

<b>Total Pro</b>	ject Costs	\$48,839,000
		T//

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) = 2

#### **Project Parameters:**

Project Number: **87**Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Major Collector - 94'

#### East Expressway & Eagle Mountain Blvd - New Signal

Costs					
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
Construction Cost \$					
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
Subtotal \$260,550					

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) = 0 0

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 88

Improvement Type: Traffic Signal

Completion Year: 2050

New Road (East Expressway): Eagle Mountain Blvd to Southern Border

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	75	\$150,596
Roadway Excavation	C.Y.	\$11	196,659	\$2,064,917
HMA Concrete	Ton	\$85	54,868	\$4,663,763
Untreated Base Course	C.Y.	\$15	52,442	\$786,635
Granular Borrow	C.Y.	\$40	65,553	\$2,622,117
Curb and Gutter (2.5' width)	L.F.	\$23	53,770	\$1,209,825
Sidewalk (5' width)	L.F.	\$30	53,770	\$1,613,100
Drainage	L.F.	\$45	53,770	\$2,419,650
Right of Way	S.F.	\$2.30	26,885	\$61,836
Mirafi RS 280i fabric	S.F.	\$1	5,556	\$2,778
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	0	\$0
			<b>Construction Cost</b>	\$15,595,217
Mobilization (10% of Construction)	Lump	10%	1,559,522	\$1,559,522
Contingency (25% of Construction)	Lump	25%	3,898,804	\$3,898,804
			Subtotal	\$21,053,543

Preconstruction Engineering	10%	\$1,559,522
Construction Engineering	10%	\$1,559,522

2

<b>Total Project Costs</b>	\$24,173,000
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#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 155

HMA Thickness (in) = 4

Untreated Base Course Thickness (in) = 8

Granual Borrow Thickness (in) = 10

Roadway Excavation Depth (ft) = 2.5

Number of Sidewalks (No.) =

#### Project Parameters:

Project Number: **89**Improvement Type: **New Road**Completion Year: **2050** 

Roadway Functional Class: Minor Arterial - 122'

#### East Expressway & Bobby Wren Blvd - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
			Subtotal	\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 90

Improvement Type: Traffic Signal

Completion Year: 2050

#### Oquirrh Ranch Pkwy & Pony Express Pkwy - New Signal

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			Construction Cost	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0
Roadway Excavation Depth (ft) = 0

Roadway Excavation Depth (ft) = Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 91

Improvement Type: Traffic Signal

Completion Year: 2050

#### Eagle Mountain Blvd & Mid Valley Road - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
			Subtotal	\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

> Granual Borrow Thickness (in) = 0 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 92

Improvement Type: Traffic Signal

Completion Year: 2050

#### Mid Valley Road & East Expressway - New Signal

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			Construction Cost	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0 HMA Thickness (in) =

0

Untreated Base Course Thickness (in) = 0 0

Granual Borrow Thickness (in) = Roadway Excavation Depth (ft) = 0

Number of Sidewalks (No.) =

**Project Parameters:** 

Project Number: 93

Improvement Type: Traffic Signal

Completion Year: 2050

#### East Expressway & Project 66 - New Signal

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			Construction Cost	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = **0** 

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 94

Improvement Type: Traffic Signal

Completion Year: 2050

#### East Expressway & 5000 North - New Signal

Costs					
ltem	Unit	Unit Cost	Quantity	Cost	
Parkstrip	S.F.	\$10	0	\$0	
Removal of Existing Asphalt	S.Y.	\$4	0	\$0	
Clearing and Grubbing	Acre	\$2,000	0	\$0	
Roadway Excavation	C.Y.	\$11	0	\$0	
HMA Concrete	Ton	\$85	0	\$0	
Untreated Base Course	C.Y.	\$15	0	\$0	
Granular Borrow	C.Y.	\$40	0	\$0	
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0	
Sidewalk (5' width)	L.F.	\$25	0	\$0	
Drainage	L.F.	\$45	0	\$0	
Right of Way	S.F.	\$2.30	0	\$0	
Mirafi RS 280i fabric	S.F.	\$1	0	\$0	
Bridge/Culvert	S.F.	\$225	0	\$0	
Traffic Signal	Each	\$193,000	1	\$193,000	
			<b>Construction Cost</b>	\$193,000	
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300	
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250	
			Subtotal	\$260,550	

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = 0
Roadway Excavation Depth (ft) = 0

Roadway Excavation Depth (ft) = Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 95

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pony Express Pkwy & Eagle Park Entry Road

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			Construction Cost	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 96

Improvement Type: Traffic Signal

Completion Year: 2050

#### Eagle Mountain Blvd & East Expressway - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
			Subtotal	\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 97

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pony Express Pkwy & Rachel Way

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			Construction Cost	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = 0

Granual Borrow Thickness (in) = 0 0

Roadway Excavation Depth (ft) = Number of Sidewalks (No.) =

0

#### **Project Parameters:**

Project Number: 98

Improvement Type: Traffic Signal

Completion Year: 2050

#### 4000 North & SR-73 - New Signal

Costs				
Item	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			Construction Cost	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0 HMA Thickness (in) =

0

Untreated Base Course Thickness (in) = 0

> Granual Borrow Thickness (in) = 0

Roadway Excavation Depth (ft) =

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 99

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pole Canyon Rd & Tyson Pkwy - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
			Subtotal	\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 100

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pole Canyon Rd & Tyson Pkwy - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
			Subtotal	\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 100

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pole Canyon Rd & Tyson Pkwy - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 100

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pole Canyon Rd & Tyson Pkwy - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 100

Improvement Type: Traffic Signal

Completion Year: 2050

#### Pole Canyon Rd & Tyson Pkwy - New Signal

Costs				
ltem	Unit	<b>Unit Cost</b>	Quantity	Cost
Parkstrip	S.F.	\$10	0	\$0
Removal of Existing Asphalt	S.Y.	\$4	0	\$0
Clearing and Grubbing	Acre	\$2,000	0	\$0
Roadway Excavation	C.Y.	\$11	0	\$0
HMA Concrete	Ton	\$85	0	\$0
Untreated Base Course	C.Y.	\$15	0	\$0
Granular Borrow	C.Y.	\$40	0	\$0
Curb and Gutter (2.5' width)	L.F.	\$23	0	\$0
Sidewalk (5' width)	L.F.	\$25	0	\$0
Drainage	L.F.	\$45	0	\$0
Right of Way	S.F.	\$2.30	0	\$0
Mirafi RS 280i fabric	S.F.	\$1	0	\$0
Bridge/Culvert	S.F.	\$225	0	\$0
Traffic Signal	Each	\$193,000	1	\$193,000
			<b>Construction Cost</b>	\$193,000
Mobilization (10% of Construction)	Lump	10%	19,300	\$19,300
Contingency (25% of Construction)	Lump	25%	48,250	\$48,250
Subtotal				\$260,550

Preconstruction Engineering	10%	\$19,300
Construction Engineering	10%	\$19,300

0

#### **Total Project Costs** \$300,000

#### **Overall Assumptions:**

HMA Pavement Density (pcf) = 0

HMA Thickness (in) = 0

Untreated Base Course Thickness (in) = **0** 

Granual Borrow Thickness (in) = **0**Roadway Excavation Depth (ft) = **0** 

Number of Sidewalks (No.) =

#### **Project Parameters:**

Project Number: 100

Improvement Type: Traffic Signal

Completion Year: 2050



# APPENDIX C: WILDLIFE CORRIDOR CONFLICT MAP

