



UTAH DEPARTMENT
OF PUBLIC SAFETY
**KEEPING
UTAH SAFE**

Bangerter Highway - Mountain View Corridor **Resource Analysis / Proposal**

Executive Summary

In recent years, the west side of the Salt Lake Valley has grown significantly in both population and vehicular traffic. The increased population and vehicular traffic has caused UDOT (Utah Department of Transportation) to upgrade both Bangerter Highway and Mountain View Corridor into limited access, high-volume highways. This growth has had a significant impact on both highways and the local jurisdictions that patrol them. Often local police departments that cover Bangerter Highway and Mountain View Corridor are forced to take a reactive posture to both highways as they have higher priorities within their associated cities. This along with significant increases in vehicle traffic, vehicle collisions, and reliance as primary local and interstate traffic corridors have brought concerns related to traffic safety and roadway management.

The Utah Highway Patrol (UHP) has been requested by local police agencies who have jurisdictional authority to provide a proposal for the Utah Highway Patrol (UHP) to assume responsibilities for traffic enforcement and overall operations of both roadways. We quickly realized that in order to accomplish this proposal we would need to involve several different stakeholders. These stakeholders have been identified as the UHP, Utah Department of Transportation (UDOT), Department of Public Safety Communications, State Bureau of Investigation (SBI), and Major Crash Investigation Team (MCIT).

Growth in the area is only projected to increase with the cities that line both freeways. Populations have increased 13% or 70,000 people over the last 5 years. Current projections suggest that the rate of growth will continue to increase. Similarly, the sheer number of miles traveled by vehicles in this area has increased by over 15%. This suggests that traffic volume will increase even faster than population. This increase is supported by the development of the west side of the valley to include the Inland Port, Amazon distribution center, and additional increases in both residential and commercial buildings. Finally, adding both Bangerter Hwy and Mountain View Corridor to our area of responsibility will also add approximately 52% more road miles to cover within Salt Lake County.

The intention of this proposal is to plan for the future with a 3-5 year implementation structure. The intention of this plan is also to be flexible in providing different options for how

that implementation takes place. In order to assume responsibility for both roadways or a phased approach for one and then the other, the following resources and associated costs have been identified :

(*** All cost and salary information is based on current cost and salary numbers. Any increases in pay or cost would need to be reflected. July 6, 2022***)

UHP Staffing Needs

Both Roadways - 1 Lieutenant, 1 Civilian Staff Member, 4 Sergeants, 28 Troopers.

- Costs: Ongoing monies \$4,810,100 One time \$2,805,000

Bangerter Hwy Only - 1 Lieutenant, 1 Civilian Staff Member, 2 Sergeants, 16 Troopers

- Costs: Ongoing monies \$2,822,800 One Time \$1,615,000*

Mountain View Only - 1 Lieutenant, 1 Civilian Staff Member, 2 Sergeants, 12 Troopers

- Costs: Ongoing monies \$2,281,600 One Time \$1,275,000*

*Only (1) Lieutenant and (1) Civilian Staff would be required for any of three options

UDOT Staffing Needs (IMT)

Both Roadways - 10 IMT Units

- Costs: Annual ongoing \$1,750,000

Bangerter Hwy Only - 5 IMT Units

- Costs: Annual ongoing \$875,000

Mountain View Only - 5 IMT Units

- Costs: Annual ongoing \$875,000

DPS Communications

6 Additional FTE

Ongoing \$631,500

State Bureau of Investigations

4 Additional FTE

Both Roadways

- Ongoing \$625,000 One Time \$340,000

One Roadway

2 Additional FTE

- Ongoing \$312,500 One Time \$170,000

Major Crash Investigation Team (MCIT)

2 Additional FTE

Ongoing \$312,500 One Time \$170,000

Cost Per Position Title

	<i>Trooper</i>	<i>Sergeant</i>	<i>Lieutenant</i>	<i>Records Manager</i>	<i>Dispatcher</i>	<i>SBI</i>	<i>MCIT</i>
Ongoing	\$135,300	\$181,900	\$200,900	\$93,500	\$105,300	\$156,239	\$156,000
One Time	\$85,000	\$85,000	\$85,000		\$6,820	\$85,000	\$85,000

COST SUMMARY

	<i>UHP</i>	<i>UDOT (IMT)</i>	<i>Communications</i>	<i>SBI</i>	<i>MCIT</i>	<i>TOTAL</i>
<i>Both Roadways</i>						
Ongoing	\$4,810,100	\$1,750,000	\$631,500	\$625,000	\$312,500	\$8,129,100
One Time	\$2,805,000	\$3,400,000		\$340,000	\$170,000	\$6,715,000
<i>Subtotal</i>	<i>\$7,615,100</i>	<i>\$5,150,000</i>	<i>\$631,500</i>	<i>\$965,000</i>	<i>\$482,500</i>	<i>\$14,844,100</i>
<i>Bangerter Highway Only</i>						
Ongoing	\$2,822,800	\$875,000	\$631,500	\$312,500	\$312,500	\$4,954,300
One Time	\$1,615,000	\$1,700,000		\$170,000	\$170,000	\$3,655,000
<i>Subtotal</i>	<i>\$4,437,800</i>	<i>\$2,575,000</i>	<i>\$631,500</i>	<i>\$482,500</i>	<i>\$482,500</i>	<i>\$8,609,300</i>
<i>Mountain View Only</i>						
Ongoing	\$2,281,600	\$875,000	\$631,500	\$312,500	\$312,500	\$4,413,100
One Time	\$1,275,000	\$1,700,000		\$170,000	\$170,000	\$3,315,000
<i>Subtotal</i>	<i>\$3,556,600</i>	<i>\$2,575,000</i>	<i>\$631,500</i>	<i>\$482,500</i>	<i>\$482,500</i>	<i>\$7,728,100</i>

Utah Highway Patrol (UHP)

Bangerter Highway (UT154) and Mountain View Corridor (UT85) are two major roadways in Salt Lake County. Each road is 24 miles and 35 miles long respectively. Over the last several years as the growth in southwest Salt Lake county has increased, these roads have had a significant increase in usage. Bangerter Highway has over the last few years been

transformed to a limited access highway with several Department of Transportation (UDOT) projects replacing the existing intersections with onramps and overpasses. Several law enforcement agencies that have jurisdiction over these roadways have expressed concern over the ability to effectively enforce and manage calls for service along these roadways. This proposal is a request for an increase of manpower for The Utah Highway Patrol, Utah Department of Transportation Incident management team and Department of Public Safety Communications to take jurisdiction of these two roadways.

Methodology:

In order to estimate staffing needs, the Utah Highway Patrol has traditionally used the methodology in the resource allocation module taught by the Northwestern University Center for Public Safety's School of Police Staff and Command. The resource allocation module has proven robust for this purpose. It was used in 2011 and 2018 to estimate field staffing needs, as well.

This methodology assumes that police services are best delivered with a mix of proactive and reactive activities by officers. Ideal staffing is estimated using obligated (reactive) and unobligated (proactive) time goals. In UHP's case, the administration has agreed that 60% obligated/reactive and 40% unobligated/proactive would be an ideal mix. This ratio promotes visibility and the active enforcement of traffic and criminal law. At the same time, it prevents crashes and optimizes traffic flow.

In early 2021, a study found that even without adding additional areas of responsibility (AOR's), UHP Section 4, Salt Lake County, was severely understaffed (see "Staffing Needs" below). This fact should be considered when evaluating the numbers below.

The major difficulty with estimating the additional workload incurred by adding Bangerter Highway and Mountain View Corridor is that police agencies currently responsible for those areas do not patrol or enforce it as aggressively as UHP likely will. Municipal agencies in those areas simply do not have the manpower to devote traffic services to the roadways. As such, the number of calls for service and hours devoted to the roadways by police in those areas are incongruent with UHP's strategies. Historical call data (with a few exceptions) is unsuitable for comparison.

This means that the exact Northwestern methodology used to estimate staff for UHP cannot be applied to the acquisition of new AOR's. Bangerter Hwy and Mountain View Corridor

are currently policed too differently to make an “apples to apples” comparison. As such, different variables were considered. These variables would allow for an estimate of how much more work UHP troopers would accrue by taking on the new roadways.

Data and Variables:

Because of this disparity in the data, UHP examined several variables that would likely impact the workload on UHP troopers. These variables include:

- Increase in Vehicle Miles Traveled (VMT), or traffic volume
- Increase in road miles covered
- Increase in traffic crashes handled

Each of the above factors is supported by data acquired from various sources.

Vehicle Miles Traveled (VMT):

UDOT maintains a wealth of data on traffic volumes. As the number of vehicles on the roadway would naturally be related to traffic incidents, looking at how much traffic volume these roads would add to UHP’s AOR is important. NOTE: Because of COVID-19, the UHP used 2019 numbers. As the population increases and traffic patterns return to normal after the pandemic, these VMT numbers should rise dramatically.

- 2019 VMT for UHP Sec. 4 AOR: 3,944,372,180
- 2019 VMT for Bangerter Hwy: 439,126,096 (11.13% increase over current AOR)
- 2019 VMT for Mountain View Corridor: 119,401,797 (3.03% increase over current AOR)

Please also note that in the 5 year span between 2014 and 2019, Mountain View Corridor increased VMT by 64% (66 million in 2014 to 119 million in 2019) as additional sections opened to the public. In contrast, the other roads considered here only increased by an average of 15% over the same 5-year span. Mountain View Corridor is seeing far higher increases in traffic year-on-year than the other roads. The VMT contribution by this roadway is extremely conservative. In reality, it will likely be much higher.

Road Miles Added:

A trooper’s job involves physically patrolling the assigned roadways looking for issues. If called to a specific location for a crash, stranded motorist, or call for backup, the sheer distance

a trooper is required to cover can become an issue. It can impact not only response times but also the amount of shift time spent in transit. As such, the number of road miles added is a consideration. Currently, UHP Sec. 4 covers all of SR-201, the stretches of I-15, I-215, and I-80 in the county, and a small stretch of Bangerter Hwy's north end (ignored here).

- Road Miles in Sec. 4's Current AOR: 112
- Bangerter Hwy Road Miles: 24 (21.43% increase)
- Mountain View Corridor Road Miles (when complete): 35 (31.25% increase)

Unreflected in this data is also the fact that ideal routes to locations on Bangerter Hwy and Mountain View Corridor would often include surface streets. The delay of clearing intersections and fighting through traffic will be a factor in trooper response times.

Crashes:

As stated above, traffic stops are a dubious metric for this study. Local agencies simply do not have the manpower to devote to traffic enforcement. However, crashes require a response and could significantly impact traffic flow. The numbers below include both property damage and injury crashes combined. Since this data does NOT include traffic stops/dispatch calls, it is slightly different from the communications data below. Communications notes the issues in their summary and UHP agrees with Communications that the increase in workload from calls and crashes is likely to be roughly 30-40% for both roads combined.

- UHP Sec. 4 Crashes: 5,123
- Bangerter Hwy Crashes: 1,253 (24% increase over current AOR)
- Mountain View Corridor Crashes: 470 (9% increase over current AOR)

Please note two additional things. First, both Bangerter Hwy and Mountain View Corridor have controlled intersections and cross traffic along their routes. Crashes at these intersections will require even more resources to manage than crashes on limited access highways because of the complications with traffic flow. Second, this data was collected from March 2020 to March 2021, during the height of the COVID-19 pandemic. The number of crashes due to decreased traffic volumes is likely much lower than would be expected in normal years.

Staffing Needs:

Section 4 Current Area of Responsibility: UHP conducted a manpower study in 2021. UHP Section 4 had a reactive/proactive ratio of 71%/29%. This is far below the departmental average of 64%/36% and even further below the ideal ratio of 60/40. According to the Northwestern

University model, Section 4 needs **101 sworn staff** to meet the workload at the desired ratios. As of September 27, 2021, there are 61 sworn personnel currently assigned to the section. This is a deficit of **40 sworn staff**. The section is running at, essentially, 58% capacity.

Adding Bangerter Hwy ONLY: Based on the above variables, adding Bangerter Hwy alone would add approximately 18.63% (averaged among the three variables above) to Section 4's workload. At current reactive/proactive trooper activity ratios, this would require an **additional 12 troopers**. At the ideal reactive/proactive trooper activity ratio of 60/40, this would require an **additional 19 troopers**.

Adding Mountain View Corridor ONLY: Adding Mountain View Corridor alone would add approximately 14.45% (averaged among the three variables above) to Section 4's workload. At current reactive/proactive trooper activity ratios, this would require an **additional 9 troopers**. At the ideal reactive/proactive trooper activity ratio of 60/40, this would require an **additional 15 troopers**.

Adding Both Bangerter Hwy and Mountain View Corridor: Adding both roadways and using the same methodology as above would add approximately 33% to Section 4's workload. At the current ratios, this would require an **additional 21 troopers**. At the ideal ratios, this would require an **additional 34 troopers**.

Please note that the committee was extremely careful in providing conservative estimates. Given the expected increase in population and traffic volume, and not factoring in traffic stops and other calls for service beyond crashes, the committee is confident that the workload increases provided here are likely too low. Also, these estimates of additionally needed troopers do not take into consideration the fact that UHP Section 4 is currently 40 troopers short of ideal staffing.

Staffing Increase Requested:

The Utah Highway Patrol is seeking funding to increase manpower by (34) FTEs in troopers, supervisors, and civilian staff to patrol these two roadways. The breakdown will be as follows:

- 1- Lieutenant
- 4- Sergeants
- 28- Troopers
- 1- Civilian Staff member

This will ensure that these two roadways have coverage 24/7 to proactively enforce laws and respond to calls for service. The enforcement efforts will ultimately reduce traffic crashes and impaired driving incidents.

Incident Management Team (IMT/UDOT)

The Utah Department of Transportation already has jurisdiction over both roadways. A vital part of traffic management is the traffic Incident Management Team (IMT) Units that can help to manage the incident, provide scene safety, including the use of TIM concepts and enhanced traffic control, coordinate with the UDOT Traffic Operations Center to manage traffic on the surrounding highway system, and assist stranded motorists when possible.

Methodology:

The UDOT IMT currently patrols I-15, I-80, I-215, and SR-201 in Salt Lake County. These highways are patrolled 24 hours per day, 365 days per year. Current staffing levels are 4 IMT during the morning/noon peak, 5 during the afternoon/early evening peak, 1 for the overnight graveyard, and one supervisor. These are all 8-hour shifts. There are 2 IMT for each weekend day, with each IMT on a separate 12 hour shift to provide complete 24 hour coverage. During the past fiscal year (FY-21), these individuals responded to 3,286 crashes, 2,185 debris removals, 1,748 abandoned vehicles, performed 1,156 tows, and assisted 15,806 motorists. These statistics only represent the calls that the IMT were able to respond to, not all the requests for service that were made.

There is no redundancy in personnel, and any shift that is not covered by the scheduled IMT is covered through overtime from another IMT. To provide adequate coverage in the Salt Lake Valley, it would be necessary to add 5 IMT, with the need for one additional IMT in the morning/noon peak, one for the overnight shift, two weekend personnel, and one supervisor. This deficit of staff indicates that the current Salt Lake IMT is operating at 72% of the desired capacity. This proposal does not address or request any additional IMT to resolve this issue.

Roadway Characteristics:

The character of these two highways is significantly different from the highways currently patrolled in the Salt Lake Valley. While the currently patrolled highways are almost all built to freeway standards (excluding a small portion of SR-201), only portions of Bangerter Highway and only the newly opened interchange with Mountain View Corridor are grade separated. The remaining portions are all at-grade intersections, which require different strategies and techniques to provide effective incident management. What can be accomplished with one IMT on the freeway with one direction of traffic and no cross streets may take up to 4 or more IMTs to control an intersection and adjacent ramps to provide scene safety for all responders and motorists.

Posted and operating speeds on these two highways are lower, and, with the congestion that occurs at intersections, both response time to incidents and routine patrolling take significantly longer than on the freeways, requiring greater coverage availability. It will take over twice as long to cover the same number of miles during off-peak times, and even significantly longer response time during the morning and afternoon peak travel times when the roads are congested.

Shoulders are not present on multiple sections of these highways, which will necessitate lane closures and additional IMTs to implement them that are not required on the freeways where there are adequate shoulders to place the disabled vehicle in a crash.

The Mountain View Corridor has an additional element that is different from both Bangerter Highway and the freeways in the center of the Salt Lake Valley: Mountain View Corridor is located on the west bench of the Salt Lake Valley, is at a higher elevation than Bangerter Highway, and will be subject to snow/weather events similar to those that occur on I-215 on the east bench of the Salt Lake Valley. These weather events will require additional resources due to additional crashes, slide-offs, and potential road closures.

Vehicles Miles Traveled (VMT):

As noted in the UHP *Vehicle Miles Traveled (VMT)* section above, there will be a substantial increase in the VMT served with the addition of these two highways, currently projected to be 14.1%. Calculation of crash rates is partly based on the VMT--the greater the VMT, the greater the probability that there will be additional crashes. A yearly increase in VMT also indicates the overall number of crashes on these highways will continue to increase, and those incidents will require an additional response by IMT. The number of motorist assists will also increase due to the increased number of vehicles that are traveling.

Road Miles Added:

Bangerter Highway is 24 miles long, and, at completion, Mountain View Corridor will be 35 miles long. The addition of the two highways will add 21.9% (Bangerter Highway) and 32.0% (Mountain View Corridor) road miles to the coverage area. It needs to be clarified that the number of miles that will be required to be covered is actually greater than just the centerline miles of the roadways. Each direction of travel will need to be patrolled, as well as the ramps and the cross streets directly under (over) the highway at each intersection or interchange. The actual distance patrolled will be over twice the centerline distance. The limited access character of the highways may require a responding IMT to proceed out-of-direction to the next intersection or interchange to respond to an incident in the opposing direction of traffic, increasing the distance to be traveled.

Crashes:

As noted in the UHP *Crashes* section above, it is anticipated there will be an additional 33% in total crashes that will need to be responded to with the addition of both highways, with many of those crashes at intersections. The control of these crash scenes will require additional resources above those that are normally required on a freeway type of roadway due to the nature of the traffic flow. The closure or restriction of lanes through an incident scene at an intersection will take multiple units to implement a safe crash scene for the public and the responders.

Staffing Needs

Adding Bangerter Highway ONLY: Based on the above variables, adding Bangerter Highway alone would add 21.9% additional road miles of coverage to the Salt Lake IMT. The actual time to cover these additional road miles is a minimum factor of 2 because of the reduced speed limits and the delay from intersections and congestion compared to the current patrolling of freeways only. The increase in workload to add Bangerter Highway only is a minimum of 43.8%. To achieve basic coverage of this highway, which is a minimum of 48 miles round trip, will require an additional 5 IMT units. This staffing level will provide 1 IMT on the corridor during the morning/noon peak shift, 1 IMT on the corridor during the afternoon/early evening peak shift, 1 IMT on the corridor for the overnight graveyard shift, and 2 IMTs on the corridor for the weekend, working back-to-back 12 hour shifts. This will provide 24 hour/365 day coverage similar to the rest of the Salt Lake Valley.

Adding Mountain View Corridor ONLY: Based on the above variables, adding Bangerter Highway alone would add 32.0% additional road miles of coverage to the Salt Lake IMT. The actual time to cover these additional road miles is a minimum factor of 2 because of the reduced speed limits and the delay from intersections and congestion compared to the current patrolling of freeways only. The increase in workload to add Mountain View Corridor only is a minimum of 64.0%. Achieving basic coverage, which is a minimum of 70 miles round trip, will require an additional 5 IMT units. This staffing level will provide 1 IMT on the corridor during the morning/noon peak shift, 1 IMT on the corridor during the afternoon/early evening peak shift, 1 IMT on the corridor for the overnight graveyard shift, and 2 IMTs on the corridor for the weekend, working back-to-back 12 hour shifts. This will provide 24 hour/365 day coverage similar to the rest of the Salt Lake Valley.

Adding BOTH Bangerter Highway and Mountain View Corridor: Based on the above variables, adding both Bangerter Highway and Mountain View Corridor would add 53.9% additional road miles of coverage to the Salt Lake IMT. The actual time to cover these additional road miles is a minimum factor of 2 because of the reduced speed limits and the delay from intersections and congestion compared to the current patrolling of freeways only. The increase in workload to add both Bangerter Highway and Mountain View Corridor is a minimum of 107.8%. To achieve basic coverage, which involves round trip distances of 48 miles on Bangerter Highway and 70 miles on Mountain View Corridor,, this will require an additional 10 IMT units. This staffing

level will provide 1 IMT on each corridor during the morning/noon peak shift, 1 IMT on each corridor during the afternoon/early evening peak shift, 1 IMT on each corridor for the overnight graveyard shift, and 2 IMTs on each corridor during the weekend, working back-to-back 12 hour shifts. This will provide 24 hour/365 day coverage similar to the rest of the Salt Lake Valley.

The estimates for staffing were generated using extremely conservative approaches and estimates. For example, there are no provisions to have an 'extra' IMT available to cover for annual leave and sick absences. UDOT is not requesting additional supervisors or clerical support staff. These adjustments will have to be made through the existing staff, and may lead to future coverage shortages.

Additionally, the above requests are structured to provide 24 hour/365 day coverage, including weekends and holidays. A reduction in the proposed staffing would reduce the hours of coverage, and increase the response time to incidents. Additionally, if the UHP calls for an IMT on one or both of these facilities and they are not adequately staffed, either an IMT would need to respond from the existing IMT coverage of the freeways, leaving those areas uncovered, or there may not be an available IMT to be able to respond at all, leaving the UHP Trooper without assistance and the incident scene unmanaged. This would increase the duration of the incident, increase the likelihood of a secondary crash, and increase the cost to motorists and Utah's economy.

Staffing Increase Requested:

UDOT is seeking funding for an increase of 10 IMT personnel to patrol these two roadways.

The breakdown is as follows:

10 IMT Specialists

This will ensure that these two roadways have basic coverage 24/7/365 to provide incident management, enhanced incident clearance, motorist assistance, and local agency support. The cross streets for these two roadways are responded to by the local agencies, and there will be coordination and support for these agencies on these roads. This will involve response on these highways to protect the public and responding personnel on the cross roads that are impacting the operation of these highways. Response by the IMT units will result in quicker clearance times for the traffic lanes on the road and for the incident, which will additionally decrease the likelihood of secondary crashes which are often more severe in nature. When IMT units are not responding to and managing incidents on the highways, they are also available to provide motorist assistance to disabled vehicles. By getting them on their way, or removing them immediately from traffic, it will make the roadways safer, and reduce the possibility of those motorists being involved in a crash.

For both highways (Bangerter Highway and Mountain View Corridor), the one-time cost for UDOT to provide 10 fully equipped Incident Management vehicles, personnel equipment and supplies is \$1,650,000. The annual personal services and operating costs for the 10 IMTs are \$1,750,000, including personnel, operating expenses, and equipment operating costs. The total first year cost is \$3,400,000. Subsequent years will be \$1,750,000.

The one-time costs for each individual highway (either Bangerter Highway or Mountain View Corridor) for UDOT to provide 5 fully equipped Incident Management vehicles, personnel equipment and supplies is \$825,000. The annual personal services and operating costs for the 10 IMTs are \$875,000, including personnel, operating expenses, and equipment operating costs. The total first year cost is \$1,700,000. Subsequent years will be \$875,000.

The personnel and equipment requirements are based on the basic coverage necessary to staff and patrol these two highways immediately upon UHP accepting the responsibility for providing enforcement activities on them. Both roads are currently open to traffic, have significant existing traffic volumes, and will continue to see increases in VMT and the number of crashes and incidents in the future.

It is anticipated the UDOT IMT will be co-located in either the UHP Section office or at the existing IMT office at the UDOT Traffic Operations Center. It is assumed that the UDOT IMT will not require a separate new facility at this time. A colocation will enhance a quicker response to any incidents that will occur on these highways.

Communications:

The Utah Department of Public Safety Communications bureau would see a substantial increase in the workload by acquiring either or both of these major roadways. To complete an educated estimate, Valley Emergency Communications Center (VECC) was contacted and their CAD data regarding these two roads were matched against the section 4 data during the same period (March 2020 - March 2021), Acknowledging that VECC doesn't track data exactly the same way as DPS, and understanding there to inherently be a small margin of discrepancy, it appears that overall workload will increase by the following margins:

- Injury/Fatal accidents/dispatch traffic
 - Bangerter: 215 (26%)
 - Mountain View: 141 (17%)
 - **Total: 356 (42%)**
- Non-injury accidents/dispatch traffic
 - Bangerter: 1038 (24%)
 - Mountain View: 320 (7%)
 - **Total: 1358 (32%)**

It should be noted that this increase in incidents would have a trickle effect, and would cause increases to BCI related inquiries, tow requests, NCIC searches, and all other auxiliary dispatch responsibilities.

Traffic Stops are more difficult to pinpoint because the number of stops is directly related to the level of proactive enforcement on those roads. In addition, as of the time of this writing, VECC has been combining the data for all other traffic related problems (Debris etc..) into these totals for traffic stops. As it stands, Valley units completed 1805 traffic stops/traffic problems, which only represents about 7% of the Section 4 activity, but presumably, that number would be much higher with dedicated patrol/enforcement that is being recommended for this project. It is likely more akin to the 30-40% increase seen from the accident data.

In order to facilitate such an increase in radio traffic and auxiliary responsibilities, and seeing that the current Salt Lake channel is already at maximum capacity, it would become necessary to split the channel into two distinct operations to maintain activity at a safe and manageable level if either or both of these roadways are adopted. This could be accomplished by dividing geographically into an east/west orientation or it could be done based on assignment, with regular patrol and enforcement occupying one channel, while all support sections and operations could migrate to another. There is plenty of time to explore these options and talk about the preferences and needs of the troopers. For now, it is a conservative estimate to assume that Salt Lake Communications could utilize existing consoles and radios to reduce equipment cost, but would still require additional manpower to cover this new channel full-time. It is estimated that the cost would be \$516,000 ongoing annually to provide 6 FTE for 24/7 coverage of the new channel.

Major Crash Investigation Team (MCIT)

Looking at the current trends for fatal and serious crash numbers we have seen a large increase since the beginning of MCIT in 2019 with our current coverage area and a total of 6 Technical investigators (waiting on two to be released) and 1 Sergeant. In 2019 we saw a total number of 75 MCIT cases with an average completion time of 142 days (30-day goal) and a 100 % completion rate. In 2020 we doubled our caseload and saw 149 cases and are currently averaging 168.52 days (30-day goal) and an 83 % completion rate (26 cases outstanding). Currently, 2021 has seen another increase in fatal numbers. We are sitting at 90 cases for the year, which matches where we were at on 8/16/2020, and currently averaging 66 days for a case completion and a 42% completion rate (56 cases outstanding). If we match last year's numbers from this point on we will end up with 172 cases or a 14% increase from last year. Looking at the numbers for the addition of both SR-85 and SR-154 it would add an average of 3.6 fatalities per year or a 2 % increase in fatal numbers for a total of a 16% increase from the year before. Keeping in mind

that each case is unique in the amount of time that it takes to complete, please reference the chart below for case completion time to get a general idea of the hours it takes to complete each case.

Single Fatal / Non-Charges	Multiple Fatalities / Charges	Major Incident / Bus Crash
1 Investigator On-Scene Analysis – 5 hrs. Evidence – 10 hrs. Reconstruction / Report Review – 20 hrs Case follow-up – 5 hrs Court / Prosecution – 2 hrs Total – 42 hours	3 Investigators On-Scene Analysis – 15 hrs Evidence – 30 hrs Reconstruction / Report Review – 200 hrs Case follow-up – 20 hrs Court / Prosecution – 40 hrs Total – 305 hours	5 Investigators On-Scene Analysis – 50 hrs Evidence – 100 hrs Reconstruction / Report Review – 500 hrs Case follow-up – 100 hrs Court / Prosecution – 100 hrs Total – 850 hours

If the cases were single vehicle single occupant type that would add an average of 152 hours (3.8 weeks) of casework for 1 individual for those cases. It is unlikely that that would be the case as there are multiple intersections on both roadways which would more than likely put it in the multiple fatalities / charges category thus putting the numbers in a more realistic range of 1098 hours (27.45 weeks / 6.86 months) of casework with 3 technical investigators working solely on that case.

With the increase in vehicles traveling on Utah roadways, the addition of two more roadways with multiple intersections to our responsibilities, the current manpower challenge (fewer troopers working means less enforcement ability), and the continuous increase in fatal and serious injury crashes, the need for more MCIT members are crucial to our survival.

2 Additional FTE

Ongoing \$275,700 One Time \$120,000

State Bureau of Investigations (SBI)

The State Bureau of Investigation supports the Utah Highway Patrol by providing investigative support and expertise. Additionally, SBI is part of the Major Crash Investigation Team and responds to some fatal crashes and completes additional investigative support on fatal crashes. The additional jurisdictional responsibilities will add to the total overall number of serious and fatal crashes handled by the Utah Highway Patrol and the State Bureau of Investigation.

A review of the cases handled by SBI, in support of the Utah Highway Patrol, during the first 6 months of 2021 produced the following numbers and analysis: (Previous years' numbers would likely be similar but were not available for review at the time of the writing of this proposal)

To date, SBI has handled 48 Section 4 cases (on par for 100 by end of the year). Section 4 currently has 60 troopers, which equates to 0.8 cases generated per trooper. An additional 25 troopers would lead to an additional 20 cases over 6 months (or 40 per year). At roughly 50 man-hours per case on average, it is estimated that it would require an additional four agents to cover the increase of 40 cases per year.

Costs

Both Freeways - 4 Agents

Ongoing \$551,400 One Time \$240,000

Split Freeways - 2 Agents

Ongoing \$275,700 One Time \$120,000

Facilities:

This proposal would require additional facilities to support Bangerter and Mountain View roadways operations. With current efforts to relocate DPS operations to the new Taylorsville State Office Building (TSOB), there exists an opportunity to transform existing facilities to support this proposal. An additional option is the construction of a new facility at the most advantageous location possible to facilitate rapid response to the west side of SL County. An additional consideration is that the UHP Training Section is currently collocated at the Section 4 Office, which is currently above capacity.

UHP / DPS Facilities consideration:

Salt Lake County UHP Section 4 / UHP Training Office - 5681 S 320 W Murray UT, 84107

- Salt Lake County UHP (Section #4) would take over the entire facility to include all Bangerter/Mt. View personnel. This would be the UHP field office for Salt Lake County.
- There would be some additional one time money that would be needed to remodel the office to absorb the additional manpower from the new roadways.
- This would include potentially expanding the current evidence room and current squad room

DPS Drivers License Division Office - 4700 S 2780 W West Valley UT, 84129

- Anticipated move of current DLD operations to TSOB expected in 2023
- This is an ideal location for westside UHP Section 4 operations, as well as UHP Training operations.
- Good access to I-215W and Bangerter Highway.

- Co-located with the current DPS / DLD driving track which is currently utilized by UHP and other LE agencies for critical vehicle-based training.

Building #3 - Calvin Rampton Complex - 4501 S 2700 W Taylorsville UT, 84114

- UHP Commercial Vehicle and Safety Inspection Sections are currently located at this facility along with the State Bureau of Investigations Narcotics Unit, Utah Highway Safety Office, and DPS Office of Professional Standards.
- This facility is currently close to capacity and would require the relocation of current operations to facilitate this proposal
- Location is adjacent and across 2700 W from the current DLD Track across
- Potential to relocate UHP Training to this location and allow the current Section 4 to expand and support this proposal
- This is a less than ideal consideration.

New Construction on the west side of SL County - approximately location 7200 W 1500 S adjacent to Mountain View Corridor

- Current undeveloped DFCM-owned property
- Potential for construction of a new facility to support UHP westside field operations, and co-located UHP Training.
- Potential for the construction of a new driving track facility to support UHP and other LE training functions.
- Potential for excellent access to the Mountain View Corridor.

Timeline:

In order for this proposal to become effective, we will need to increase the staff prior to taking over these roadways. The following is an aggressive projection of when this proposal could be implemented:

Phase 1 (Approx. 1 year duration):

- Complete proposals, studies, and enforcement projects.
- Discussion with all affected agencies and jurisdictions to discuss concerns, questions, etc.
- Interim committee meetings
- Legislative approval/funding

Phase 2 (Approx. 2-3 years duration):

- Recruitment, hiring, and training of personnel (from hire to solo patrol is approximately one year)

- Preparation for facilities changes (remodeling planning and execution, equipment/furniture movements)
- Ordering of additional fleet and equipment

Phase 3 (Approx. 3-5 years duration):

- Implementation and deployment

Conclusion:

Over the next few years, growth will continue in the southwest portion of the Salt Lake Valley. Bangerter Highway and Mountain View corridor will only increase in vehicle miles driven. This proposal to increase the manpower of the Utah Highway Patrol and take jurisdictional control over these roadways will better enhance the consistency of law enforcement services and keep the motoring public safe.