TOWN OF VAIL

Memorandum

To: Town Council

From: Public Works Department

Date: 5-5-15

Subject: I-70 Vail Underpass Funding Decision

I. SUMMARY

The I-70 Vail Underpass is a proposed new multimodal pedestrian and vehicular connection that is midway between Main Vail and West Vail exits, passing under I-70. For reference, each of the past Town Council presentations and Council meeting video links along with additional project information and an updated 3D rendering video of the project is available at the project website at www.vailgov.com/underpass

The purpose of this Council session is to request additional funding for the I-70 Vail Underpass (Project) construction. The Project is currently over the original cost estimate. In order to keep this project on schedule, and to utilize the RAMP funds, the Town of Vail will need to commit to a maximum dollar amount to contribute to this Project at the May 5th regular Vail Town Council meeting. The maximum contribution amount will then be forwarded to the Colorado Transportation Commission for review and final funding request during their June meeting.

The design team completed the 90% design plans and the plan set has been thoroughly reviewed by CDOT and the Town. The Project received final approval from the Design Review Board in March. Based on this design the design team has completed an updated Opinion of Probable Construction Cost (OPCC#2). OPCC#2 was completed by the projects Construction Manager/General Contractor (CMGC) contractor, Edward Kraemer & Sons, and an independent cost estimator, Stanton Constructability Services. The total project cost is estimated at $30.1 million, $9.3 million over the original estimated budget. In order to maintain the current CDOT/Town of Vail funding partnership of 71%/29% respectively, the minimum additional funding the Town will need to provide is $2.73 million and CDOT will need to provide $6.57 million. This does not include the additional incremental funding the Town may decide to budget for Art in Public Places, which is recommended to be $335,000 by the AIPP Board.

The Town's $2.73 million additional contribution for the Project can be reduced by a credit of $0.2 million for in kind town staff salaries for project management, resulting in an additional funding need from the Town of $2.53 million for the Project plus $335,000 for art, or a total net additional cash contribution of $2.865 million funded by the VRA.

This additional lump sum contribution will go to the Transportation Commission for review. If the Transportation Commission decides to fully fund the Project, then a final IGA will be executed and the remaining funding and construction risk of the Project will be assigned to CDOT.

II. BACKGROUND, PURPOSE AND NEED

The I-70 Vail Underpass is a proposed new multimodal pedestrian and vehicular connection that is midway between Main Vail and West Vail exits, passing under I-70. This underpass has been identified in the Vail Transportation Master Plan (VTMP) and the CDOT I-70 Programmatic Environmental Impact Statement (PEIS) as a critical link between the North and South Frontage Roads. The Town and CDOT have entered into a Letter of Commitment and an Inter-Governmental Agreement (IGA) to jointly fund the design and construction of this project with an expected completion date of December 2017. CDOT, the Town of Vail, the selected design consultant, Felsburg, Holt & Ullevig (FHU), along with the CMGC contractor Edward Kraemer & Sons, and an Independent Cost Estimator, Stanton Constructability Services have completed the design development process, the 90% design drawings, and an updated Opinion of Probable Construction Cost (OPCC).

Project Overview

The project is located on the I-70 corridor between the West Vail (Mile Marker [MM] 173) and Vail (MM176) interchanges. The purpose of the project is to improve multi-modal connectivity between the north and south sides of I-70 within the Town of Vail. The project is also expected to provide congestion relief at the Vail and West Vail I-70 interchanges.

The project will construct a new underpass of I-70 at approximately MM174.8 to connect the existing north and south frontage roads through compact roundabout intersections. The new underpass will consist of one driving lane and a bike path/sidewalk in each direction. The underpass will provide:

- a safe vehicle, pedestrian and bicycle crossing of I-70
- additional reserve capacity at the two primary I-70 interchanges in Vail
- enhancements to transit service routing and connectivity
- improved emergency response routing
- water quality improvements for discharges to Gore Creek

There will be no new or changed connections to I-70 from the project.

Project Background

Since the early 1980's, an I-70 underpass to enhance community connectivity and traffic flow between the Vail and West Vail interchanges has been discussed. In 1993, the idea went through a public process as a part of the Vail Transportation Master Plan (VTMP). As a result of the VTMP, the underpass was nicknamed the "Simba Run Underpass" due to its location near the namesake Simba Run Condominiums. From that point forward, the underpass became a common theme in numerous Vail Master Plans, including: the Vail Lionshead Master Plan (1999); the Vail 20/20 Strategic Vision Plan (2007); the

VTMP Update (2009); the Colorado Department of Transportation (CDOT) long range Statewide Improvement Plans since 1996; and, the I-70 Programmatic Environmental Impact Statement (PEIS) and Record of Decision.

Analysis of the interchanges and Vail's connectivity issues has been on-going since the original VTMP was developed in 1991. Since then, numerous improvements to Vail's transportation system have been made, most notably the construction of the current interchange roundabouts. Possible new improvements have been discussed in many of the Town's relevant transportation documents. Each document suggested potential improvements to increase and/or relieve capacity at both the Vail and West Vail interchanges, with the most notable improvements being the Simba Run Underpass and expansion of the existing interchange roundabouts.

The Town of Vail underwent a period of unprecedented development and redevelopment between 2004 and 2009, which prompted the reevaluation and update of the VTMP (2009). Anticipated new growth is projected to strain the Town's existing transportation infrastructure; specifically the Vail and West Vail interchanges. Both of the interchanges are vital to Vail's connectivity, as they are the only means of crossing I-70 for three miles along the commercial and resort core areas of Vail and are the only nearby points to access I-70, the main artery within the Vail Valley. Straining the interchanges to operational failure would paralyze Vail's transportation network. Such failures have occurred in the recent past during peak visitor times when Vail was also overwhelmed with additional traffic from Vail Pass closures, causing all traffic, transit, emergency services and general town services to go to 'gridlock' in this area. The future growth of Vail will require additional relief to these two key interchanges.

All of this has led to the current project now known as the I-70 Vail Underpass. In a joint effort, the Town of Vail and CDOT are working with their consultant Felsburg Holt and Ullevig (FHU) to prepare design plans for the proposed underpass as described above. This effort includes evaluation of the existing and future operating conditions of the two I-70 interchanges, location verification for the underpass, obtaining NEPA clearances, and completing final design and construction of the underpass. The proposed underpass will be a grade-separated crossing of I-70 approximately half way between the Vail and West Vail interchanges. The project will add connectivity between the north and south sides of I-70, provide enhanced multi-modal mobility, and relieve the Vail and West Vail interchanges of unnecessary local traffic by providing a direct connection between the core resort village areas and the West Vail retail area.

The I-70 Vail Underpass project improvements are needed to address the following current and future deficiencies:

Community Connectivity

I-70 has long been the lifeline of Vail, but also a barrier within Vail. The Town of Vail is approximately ten miles long and 0.5 mile wide bifurcated along its long axis by I-70. Local travel is generally limited to two parallel Frontage Roads on either side of the interstate, the North and South Frontage Roads, with only three vehicular underpass crossings of I-70, located at the three I-70 interchanges (173, 176, 180). Within the most

populated four mile stretch of Vail (MM 172.5 to MM 176.5) there are two vehicular underpasses at the Vail and West Vail interchanges, and one pedestrian overpass over I-70 at MM 175.5. This limits the connectivity between the north and south sides of Vail. The Underpass Project will provide another connection point of multimodal travel between the north and south sides. The location of the underpass is strategically located about halfway between the Vail and West Vail interchanges, providing a connection point right in the middle of the commercially active areas of Vail, being Vail and Lionshead Villages and the West Vail Commercial area. It also is in close proximity to the largest employee housing center in Vail (Timber Ridge/Lions Ridge), providing convenience and efficient travel for employees to get to and from work.

Multi-Modal Connectivity

Pedestrian and Bicycle Connectivity
Pedestrians and bicyclists regularly cross I-70 to access services, employment and recreational opportunities located on both the north and south sides of I-70. Within western Vail, pedestrian crossings of I-70 are available only at the interchanges and at one pedestrian bridge just west of the Vail interchange. Pedestrians have been observed to cross I-70 directly at grade and a well worn pedestrian trail is apparent crossing I-70 near the Timber Ridge housing complex. Pedestrian crossing of I-70 is prohibited, of course; however, pedestrians have crossed likely due to the much shorter distance. Such crossings are unsafe and a number of vehicle-pedestrian accidents, including fatalities, have occurred. At the interchanges, pedestrians and bicyclists must cross the ramps conflicting with the vehicles, which is more difficult during congested times.

Transit Operations
Vail has a well-developed local bus transit system and high transit usage, both among visitors and residents. This is complemented by regional bus and shuttle services to the community. The bus and shuttle systems are dependent on the interchanges for access to Vail and for crossing between the north and south sides of I-70. Congestion at the interchanges causes delays for bus and shuttle services, just as it does for private vehicles. Routing options for the buses and shuttles are limited because the interchanges provide the only connections across I-70 in Vail.

Constructing this new underpass will allow for operational and routing efficiencies for the Town of Vail Transit and ECO Transit, as well as many of the numerous private shuttle buses that run guests to and from the ski mountain and commercial areas. The Town of Vail will be able to take advantage of this additional crossing by rerouting the red and green bus routes, as well as adding a “line haul” route which could provide high frequency service to the major commercial areas within Town. This would be similar to the “In-Town” route where it would be a high frequency bus service which stopped at West Vail Commercial, Timber Ridge, Lionshead, Vail Village, Ford Park, and other destinations along the Frontage Roads as deemed appropriate.

Congestion / Operational Performance

Interchange Congestion / Operation

The Vail and West Vail interchanges are the primary access points to and from the Town of Vail on I-70 and are also the only locations for vehicles to cross I-70 for several miles. Current recurring and increasing congestion at these interchanges has resulted in severe and worsening delays. This situation is particularly acute during peak winter visitor days, when high travel demand often coincides with snowy and icy road conditions. Both the Vail and West Vail interchanges are projected to experience severe congestion (Level of Service F) with increasing frequency at peak travel times. The resulting delays at the interchanges negatively impact the movement of people and goods to/from the Town of Vail and between the north and south sides of I-70.

During times of severe congestion, traffic exiting at Vail and West Vail backs up onto I-70, at times forming a long queue of vehicles in the right lane of I-70. This situation presents operational and safety problems for I-70 as through traffic traveling along I-70 at freeway speeds can encounter vehicles stopped in the through traffic lane waiting to exit.

Traffic congestion at the Main Vail and West Vail ramp terminal intersections is expected to improve as a result of the project. In the design year of 2040, as compared with a "No Build" condition, overall traffic operations would be expected to improve from LOS C to LOS B in the AM peak hour at the Main Vail interchange north roundabout, and LOS C from LOS F in the PM peak hour at the West Vail interchange south roundabout. Queue lengths and individual movements would also be expected to improve for various approaches at all four of the interchange ramp terminal intersections.

LOS F operations would be expected in 2040 at the Main Vail interchange south roundabout for both peak periods, and at Main Vail interchange north roundabout in the PM peak hour. With the improvements recommended in the *2009 VTMP Update*, PM peak hour operations at the Main Vail interchange north roundabout would be expected to improve from LOS F to LOS C. It should be noted that both of the Main Vail interchange roundabouts currently operate at LOS F in the PM peak hour.

Interchange Additional Capacity
As previously discussed, improvements at the Main Vail and West Vail interchange roundabouts recommended in the *2009VTMP Update* are not being constructed as part of the I-70 Vail Underpass project. As such there will be no "added" capacity at the interchange roundabouts with the underpass project.

However, the underpass project is expected to divert as many as 282 and 559 trips from the interchange roundabouts in the Existing AM and PM peak hours, respectively. Of the total entering traffic at the interchange roundabouts, the diversion represents approximately 4% of trips in the AM peak hour, and 5% in the PM peak hour. The diverted traffic can be related as 4% additional capacity at the roundabouts in the AM peak hour and 5% in the PM peak hour.

Emergency Access and Response
Emergency access and emergency response is needed on both sides of I-70. As with other vehicles, emergency vehicles currently must travel through the Vail or West Vail

interchanges to cross between the north and south sides of Vail. Access to and from I-70 is also often needed for emergency vehicles. Even with emergency light and sirens activated, severe congestion at the interchanges combined with limited routing options can greatly slow response times for these critical emergency vehicles.

The I-70 Vail Underpass will provide that third option to safely cross I-70 for all modes of transportation and provide capacity relief at the existing I-70 interchanges. Every vehicle/bus, pedestrian/bicyclist, that uses the proposed I-70 Vail Underpass will equate to one less vehicle/bus, pedestrian/bicyclist that needs to use either Vail or West Vail interchanges.

III. PROJECT COST & COST SHARE

As a part of this Project a notable General Contractor, Edward Kraemer & Sons (EK), along with an independent cost estimator, Stanton Constructability Services, were added to the design team in order to provide accurate cost estimates, construction schedules, phasing input, and assist with value engineering and developing innovative construction techniques to reduce construction costs, schedule and impacts.

Since becoming a part of the design team EK has provided two Opinions of Probable Construction Costs (OPCC), one at the 30% design level and one at the 90% design level. Both estimates exceed the original 2013 budget of $20.8 million. The significant difference in estimating approach between OPCC#1 and OPCC#2 is that EK secured subcontractor and material supplier pricing for the OPCC#2 Project estimate.

I-70 Vail Underpass
Design, ROW, and Construction Phase Estimates

Phase	RAMP App May 2013	OPCC#1 Dec. 2014	OPCC #2 April 2015
Design	$ 2.5	$ 2.7	$ 2.8
ROW	$ 2.0	$ 3.0	$ 3.0
Construction	$ 14.5	$ 19.1	$ 20.2
Const. Eng. (CE)	$ 1.6	$ 4.2	$ 4.1
Total	**$ 20.6**	**$ 29.0**	**$ 30.1**
Budget	$ 20.8	$ 20.8	$ 20.8
Balance	$ 0.2	$ (8.2)	$ (9.3)

The current budget gap based on OPCC#2 is approximately $9.3 million. To maintain the current RAMP funding partnership between CDOT and the Town of Vail of 71%/29% respectively, the Town will need to fund an additional $2.73 million, for a total Project

contribution of $8.73 million (excluding any additional contribution for art); and CDOT will need to fund an additional $6.57 million, for a total Project contribution of $21.37 million.

The cost increase of this project is not uncommon among the other competing RAMP projects. According to the CDOT Construction Cost Index, cost increases of heavy highway construction projects from January of 2013 to September of 2014 increased an average of over 25% statewide. This increase, coupled with the inclusion of CDOT's Construction Engineering (CE) fees of 22.1% rather than the assumed 10% typical construction management fee; as well as the inclusion of the costs of two necessary utility relocates, high pressure gas and telephone fiber, that generally are the costs of the perspective utility companies; caused the budget gap.

In addition to the Project funding, AIPP has recommended that the Project provide a public art component. The art component is considered a betterment to the Project and will be at the sole cost of the Town. The current suggested locations for art placement are under the underpass along the retaining walls and/or as a headlight glare screen on the south side of the south roundabout. A typical guiding funding amount for public art for public and private development has been 1% of construction cost. Using that guideline the recommended art funding would be ~$200,000. AIPP has recommended $300,000 (~1.5% of construction or ~1% of total Project costs). In addition, Council suggested spending approximately $35,000 on an artistic headlight glare screen along the south roundabout. These two amounts combined is $335,000. This amount will be in addition to the recommended Project cost contribution, stated above.

IV. FUNDING OPTIONS & RECOMMENDATION

The Town of Vail has multiple options for funding this Project and its current funding gap. The Council may choose to fund this project with Capital Funds, Vail Reinvestment Authority Funds (VRA), or Real Estate Transfer Tax (RETT) funds.

Staff recommends funding the incremental Project cost and the additional AIPP cost through the Vail Reinvestment Authority. However, we also recommend that $0.2 million of the Project cost be credited to the Town for "in kind" staffing indirect costs. This increases the total funding from the VRA for the Project from $6 million to $8.53 million; and the betterment funding for art to $335,000, for a total additional VRA investment of $2.865 million. These recommendations will make the total Project funding from the VRA $8.865 million. If Council agrees with staff and implements this recommendation the VRA is still projected to have a remaining fund balance of $4.0M at the end of 2019 after the Underpass cost sharing is complete (see attached VRA Projections). In review of the VRA Projections, one project previously funded in 2015 that will be delayed to 2019 is the widening of the frontage road between the Four Seasons and the Lionshead parking structure. The delay is not caused by the Underpass funding requirements but rather the decision made previously by Council to delay the Frontage Road project until the Vail Valley Medical Center improvements were better understood.

The town's other funds used to sponsor capital projects currently show fund balances of $6.7M (RETT) and $21.4M (Capital Projects Fund) by the end of 2019. These funds

may be required should Council move forward on any projects currently unfunded, such as reconstruction of roundabouts, redevelopment/remodel of the municipal building, Chamonix housing, and Lionshead parking structure enhancements or expanded parking. Another source of funding for several of the above projects is the Vail Reinvestment Authority, which will expire in 2030 and will have a sizable amount of funds available with projected balances of $10.7M (by 2021), $25.4M (by 2025) or $46.6M (by 2030). Considering the Underpass project is eligible for VRA funding, staff recommends using VRA funding over Capital or RETT funding.

Also attached is the Town of Vail "Unfunded" project list. You will note that the current "Unfunded" list for the VRA totals ~$22 - $40 million (Lionshead Parking Structure), well under the 2030 VRA Projection's balance VRA Projections of $46.6 million. This allows for future VRA projects and possibly the potential for other "Unfunded" projects that are on the list currently as RETT or Capital projects to be funded by VRA funds if they are eligible.

In General, the projections show that no funded or unfunded VRA project will be delayed or forgone as a result of contributing an additional $2.865 million to the Underpass Project; and by 2030 there will still be a projected $46.6 million dollar surplus in the VRA fund, less any future project expenditures, such as the Lionshead Parking Structure improvements or reconstruction; in which case the projected surplus would only be $6-$24 million.

V. PROJECT OPPORTUNITIES & RISK ASSESSMENT

Project cost savings opportunities that the Town is in control of include many of the aesthetic items. As previously discussed, some potential Project savings could be generated by;

- Reducing the 4" thick stone veneer to 2" stone veneer, providing a potential savings of ~$300-$400k
- Remove the stone veneer from south retaining wall that is hidden by trees along the steep bank, savings of ~$15k
- Reduce the amount of trees along the steep bank along Gore Creek, providing a savings of ~$16-$30k
- Remove the bridge abutment stone veneer as originally designed but then required by DRB, providing a savings of ~$80k

Any savings above taken advantage of would be a savings to the Project not directly to the Town. The Town's savings would be ~29% of the above costs. Considering the overall scope of the Project, and the Design Review Board's approval of these items, staff does not recommend implementing any of the above optional savings.

Reducing risk on the overall Project will be the best way to provide savings to the Town. Now that the Project's design is complete and the Project is within 7-8 months of going under contract, the risks have been minimized. The Project is also still carrying significant contingencies to accommodate unknowns, such as inflation, construction

issues, and right-of-way acquisition unknowns. All total the Project is still carrying over $2.5 million in contingency.

However, the best insurance against rising costs for the Town is that CDOT will take over the Project construction. Once the Town of Vail commits to a funding amount, and the Transportation Commission approves the balance, all of the project cost risk is assigned to CDOT. This will be done by executing an IGA. This is one of many benefits to having CDOT manage the construction of the project; it also justifies the significantly higher Construction Engineering (CE) fees that are charged to the project by CDOT.

One potential funding opportunity is the possibility to receive another grant to make up the Project's $9.3 million funding gap. However in order to utilize the RAMP funding, a grant application would have to be made, reviewed, and awarded to the Project by this fall. If not received by this fall the Project would not start on time to be completed by the end of 2017 which is a requirement to utilize RAMP funds. One such grant is the TIGER VII Grant. CDOT and the Town will be applying for this grant by June 5th in hopes of receiving the award this fall. The TIGER grants are extremely competitive nationwide. In the past only 5% of applicants received any money, therefore we need to assume we will not receive it for funding purposes.

VI. IMPACTS OF NOT MOVING PROJECT FORWARD

When the Town received the RAMP funding, this Project went from being expected to be solely funded by the Town at some point, to being 71% funded by CDOT. Even with the current budget gap, the Project still has ~50% committed funding from CDOT, a funding ratio better than originally conceived. The Project is also in position to request to be funded by CDOT at the original 71% RAMP match. For this Project to be in this funding situation, where it is at least 50% funded and possibly up to 71% funded by CDOT, is unprecedented.

If the Project goes unfunded and is "shelved," it is unlikely there will be a similar match of this magnitude for the Project by any other agency. As time goes on, construction costs will increase and grant matching opportunities are likely to decline. If a nominal 3% construction inflation rate is assumed the Projects cost will escalate to $40.5 million by 2025. Therefore if the Town believes that this Project is right for Vail, now or in the near future, this is the opportunity to move forward. The Project will never be less costly and more funded than it is now, and since we have just completed a 2 year public design process for the Project, it will never have more public transparency than it does now.

Other impacts of not completing this Project now is the loss of the potential community connectivity, for pedestrians, bicyclists, vehicles, transit efficiencies, emergency response efficiencies, as well as the loss of a third option for crossing I-70 during times when the existing two interchanges at Main Vail and West Vail are congested. It will also accelerate the need to expand the Main and West Vail interchanges to accommodate future growth of Vail.

VII. NEXT STEPS

The next steps for the Underpass Project are for the Vail Town Council to determine how much additional funding should go towards this Project. The decision made tonight will be forwarded to the Transportation Commission, who will hear the additional funding request for RAMP funds on June 18th, 2015. Based on the outcome of that decision, we will know if this Project will be funded or "shelved."

If funded, the Project schedule will be as follows;

ROW Acquisition Process	May 2015 - May 2016
CMGC Contract Negotiations	Dec. 2015 - Jan 2016
Public Bid if CMGC is unsuccessful	*Jan 2016 - March 2016*
Construction	April 2016 - Dec. 2017

If unfunded, the Project will be "shelved" indefinitely until funded.

VIII. STAFF RECOMMENDATION

Staff recommends the Town of Vail fund a minimum total of $9.065 million for this Project. This equates to a net additional $3.065 million. Of that additional $3.065 million, $0.2 million would be in kind project management (Town indirect and staff costs), resulting in a total additional cash contribution of $2.865 million for the Project and art ($2.53 million for the Project and $335,000 for art). Both the Project funding and the art funding would be funded by the VRA without delaying or eliminating any other scheduled VRA projects. The $0.2 million credit for indirect and staff costs is already funded by the General Fund in staff salaries.