**1.0 | Project Summary Information**

**1.1 Project Name** (35 letters max) 1200 West Center Street - EB Right Turn Bypass & Dual NB Left Turn Lanes

**1.2 Project Type Intersection Work**

**1.3 Limits** (descriptions should be identifiable. i.e: intersections, place names, landmarks, 35 characters max) Center Street; I-15 NB Off-ramp to 1200 West

**1.4 Project Description** (summary of project) Provide an exclusive eastbound right turn lane and right turn overlap signal phase for traffic exiting the I-15 Interchange and turning south onto 1200 West. As suggested by UDOT, it may be constructed similar to the right turn bypass at Knudsen's Corner (6200 South and I-215 in Salt Lake County). Additionally, dual northbound left turn lanes are proposed at the 1200 West and Center Street intersection. This project will significantly reduce existing peak hour traffic problems - and will facilitate future plans for 1200 West expansion. Due to significant regional benefits UDOT will be a joint project sponsor.

**1.5 Sponsor** (jurisdiction, agency name) Orem City & UDOT

**1.6 Contact Information**

- **Project Manager** Paul R. Goodrich, P.E.
- **Office Phone** 801-229-7320
- **Cell Phone** 801-592-4160
- **Fax** 801-229-7191
- **Email** prgoodrich@orem.org

**1.7 Cost Estimate**

- **Total Project Cost** (include matches, pledged funds, etc.) $3,336,000
- **MPO funding request** (include any match) $2,200,000 (less depending on UDOT contributions).
  - **PE Cost** $338,000
  - **ROW Cost** $172,000
**Construction Cost** $2,157,000  
**Soft Match proposed for project** 0

1.8 **Project Rank** (rank this project compared to your other submittals)  
   2

1.9 **Air Quality Benefit** (summarize CM/AQ Report, NA for non-CM/AQ eligible projects)  
   NA
2.0 | Project Scope
Always enter “NA” rather than leave an answer blank...

2.1 Describe purpose and need of project.
Due to growth of the UVU Campus, the current I-15 Interchange and nearby 1200 West Center Street intersection do not have the capacity for peak hour traffic demands. This project will help alleviate traffic congestion. This improvement will also pull some traffic away from the failing University Parkway interchange.

2.2 Describe existing service/conditions
Under existing conditions in the AM peak hour, the northbound right turn movement at the Center Street SPUI operates at LOS D with 37 seconds of delay per vehicle. At 1200 West, the eastbound right turn movement operates at LOS C with 22 seconds of delay and the northbound left operates at LOS F with 80 seconds of delay. At the overall intersection level, both operate at LOS C with 30 seconds of delay per vehicle at the SPUI and 26 seconds of delay at 1200 West.

2.3 Highway Project Information (for non-highway projects go to 2.4)

2.3.1 State Route # or Federal Aid Route #
2960 (Center St) & 3015 (1200 W)

2.3.2 Beginning Mile Post
NA

2.3.3 End Mile Post
NA

2.3.4 Length of project
0.22 Miles

2.3.5 Existing and proposed number of Travel Lanes
Existing: 7/Proposed: 7

2.3.6 Current and proposed width of facility (detail ROW, lanes, shoulders, ped/planter).
Center Street in project limits: Existing pavement: 100’ to 90’ Proposed pavement: 120’ to 90’; Existing shoulder: 3’ to 8’ Proposed shoulder: 0’ to 8’. Sidewalk is attached to curb and gutter with no existing park strip.

2.3.7 Facility surface type.
Asphalt

2.3.8 Describe how project is consistent with local or agency plans.
NA

2.3.9 Describe how project incorporates ITS needs.
Project will include upgrade of signal interconnect into fiber optic systems as well as improved traffic signal coordination.

2.3.10 If phased or segmented, describe how the phase has logical termini and what will future phases consist of.
NA

2.3.11 Is project being coordinated with or constructed with a larger project?
NA

2.3.12 Describe how project will alleviate congestion on this or other facilities.
The northbound I-15 off-ramp at Center Street with 600 vehicles in the AM peak hour is at LOS D. The free-right improvement will reduce the delay by over 70% from 37 seconds to 10 seconds to LOS B. The delay for the eastbound right turn at 1200 West will go down by 30% from 22 to 15 seconds. By providing additional right turn capacity, congestion on Center Street that has potential to spill back towards I-15 will be significantly alleviated. For the northbound left turn on 1200 West the LOS will go from F to E for AM and PM peak hours. Delay will be reduced by nearly 30% from 80 to 58 seconds in the AM peak hour and from 99 to 71 seconds in the PM peak hour. The 95th percentile queue length in the PM peak hour will decrease by 75% from over 1,200 feet to 300 feet.

2.3.13 Describe any traffic improvements. (i.e lanes, signal coordination, ITS, turn lanes, bus pullouts, etc.)
Additional right turn lane for Center Street to southbound 1200 West that only serves ramp traffic making this movement as well as dual left turn lanes off of 1200 West onto Center Street

2.3.14 Describe any safety improvements for vehicular and pedestrian traffic. (i.e. raised median, channelization of turn movements, barriers, parkway strips, etc.)
Safety will be enhanced by providing an exclusive lane that the NB off-ramp traffic can utilize to access 1200 West. The removes a weave movement for vehicles making this movement as well as allowing the other northbound right turn lane at the off-ramp to enter the closet eastbound thru lane instead of weaving across into the center lane. The northbound dual lefts on 1200 West will require protected phasing for the northbound and southbound left turns, which will increase safety by eliminating permitted left turns that currently have poor sight distance due to the curvature of 1200 West near Center Street.

2.3.15 How are complete streets addressed with this project? (plan for pedestrians, bikes, transit, trails, ITS)
This project maintains pedestrian connectivity by maintaining continuous sidewalks.

2.3.16 Describe traffic control changes at intersections. (include info to warrant changes)
By-pass right turn signalization as well as protected phasing for dual left turns at 1200 West is proposed.
2.3.17 What right-of-way is already secured?
A majority of the ROW required is currently owned by UDOT and will donated as part of their contribution to the project.

2.3.18 What additional right-of-way is needed?
A majority of the ROW required is currently owned by UDOT and will donated as part of their contribution to the project.

2.3.19 Describe utility work to be performed and indicate who will do the work.
Rocky Mountain Power has a line that runs along the south side of Center Street and will need to be relocated to facilitate roadway improvements. This work will be completed by Rocky Mountain Power.

2.3.20 What type of environmental work will most likely be needed?
Categorical Exclusion

2.4 Non-Highway Projects (Transit / ITS / Active Transportation, Park and Ride, etc.)

2.4.1 Transit Route #
841

2.4.2 Length of project
NA

2.4.3 What is the expected use of the facility or program?
NA

2.4.4 What services are provided in the operating of this project?
NA

2.4.5 Describe any equipment to be purchased (buses, ITS, etc.).
NA

2.4.6 Describe how project is consistent with local or agency plans.
NA

2.4.7 Describe how project incorporates ITS needs.
NA

2.4.8 If phased or segmented, describe how the phase has logical termini and what will future phases consist of.
NA

2.4.9 Is project being coordinated with or constructed with a larger project?
2.4.10 Describe how project will alleviate congestion on this or other facilities.
NA

2.4.11 Describe any traffic improvements. (i.e lanes, signal coordination, ITS, turn lanes, bus pullouts, etc.)
NA

2.4.12 Describe any safety improvements for transit and pedestrian traffic. (i.e. raised median, channelization of turn movements, barriers, parkway strips, bridges, etc.)
NA

2.4.13 How are complete streets addressed with this project? (plan for pedestrians, bikes, transit, trails, ITS)
NA

2.4.14 What right-of-way is already secured?
NA

2.4.15 What additional right-of-way is needed?
NA

2.4.16 Describe utility work to be performed and indicate who will do the work.
NA

2.4.17 What type of environmental work will most likely be needed?
Choose an item.

2.5 Facility Design

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<tr>
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<th>Current Conditions</th>
<th>Design Year 2018</th>
<th>Design Year w/o Improvements</th>
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<tr>
<td>Average Daily Traffic</td>
<td>29,000 (Center)</td>
<td>29,000 (Center)</td>
<td>29,000 (Center)</td>
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<tr>
<td></td>
<td>14,000 (1200 W)</td>
<td>14,000 (1200 W)</td>
<td>14,000 (1200 W)</td>
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<tr>
<td>Level of Service</td>
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<td>LOS C @ SPUI</td>
<td>LOS C @ SPUI</td>
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<tr>
<td></td>
<td>LOS D @ 1200W</td>
<td>LOS D @ 1200W</td>
<td>LOS D @ 1200W</td>
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<tr>
<td>Functional Class</td>
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<td>Principle Arterial</td>
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<td>Design Speed</td>
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<tr>
<td>*Accident Rate</td>
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<td>NA</td>
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<td>Transit Ridership</td>
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<td>NA</td>
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<tr>
<td>Ped/Trail Usage</td>
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<tr>
<td>Park and Ride Usage</td>
<td>NA</td>
<td>NA</td>
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</table>
3.0 | Project Ranking

The following categories will be used by MPO staff to score each project. The points associated with each category show what total points MPO staff can give. MPO staff’s recommendations will be made available to the MPO TAC Committee for their use in making final project selection recommendations. MPO staff ranking is a tool to aid the MPO TAC Committee in their final selection. The committee is not required to pick projects solely on MPO staff ranks. Please note, if questions pertinent to the project are not answered, zero points will be given.

3.1 Congestion Relief (25 Points)

Explain if the project...

a) Provides an alternate transportation facility that corrects an identified congested problem? The proposed by-pass right turn lane provides an alternate transportation facility by allowing vehicles on the I-15 northbound off-ramp to free flow into 1200 West. This improvement decreases queuing and congestion on the I-15 northbound off-ramp as well as the number of vehicles on Center Street, subsequently the overall congestion in this area. This project also provides dual northbound left turn lanes on 1200 West at Center Street and will reduce delay for that movement by about 30% and PM queue lengths by 75%. This improvement will also take some traffic away from the failing University Parkway interchange.

b) Reduces congestion by reducing the number of vehicles. The proposed by-pass right turn lane provides an alternate transportation facility by allowing vehicles on the I-15 northbound off-ramp to free flow into 1200 West instead of having to merge into Center Street first. This improvement decreases the number of vehicles on Center Street and subsequently the overall congestion in this area.

c) Reduces the need for additional highway lanes for peak hour capacity. Since this improvement is taking vehicles off of Center Street it reduces the need to add additional peak hour lanes in the future.

d) Increases the efficiency of transportation system through traffic management measures. The proposed by-pass right turn lane introduces efficiency to the transportation system by providing a specific free-flow design for a common movement that currently has the potential to be stopped at two traffic signal locations, while with the proposed improvements there will be none.

e) Adds turning movements to relieve a congested intersection. The proposed by-pass right turn lane provides an alternate transportation facility by allowing vehicles on the I-15 northbound off-ramp to free flow into 1200 West. This improvement decreases congestion on the I-15 northbound off-ramp as well as the number of vehicles on Center Street, subsequently the overall congestion in this area. The proposed dual northbound left turn lanes on 1200 West reduces congestion for this heavy movement by providing additional capacity.
3.2 Mode Choice (25 points)
Explain if the project...

a) Benefits multiple transportation systems (transit and highway, pedestrian and transit). The proposed by-pass right turn lane provides direct access to a public parking lot, providing easier access to carpooling, while the northbound dual left will make it easier for vehicles to exit the parking lot due to reduced queuing on 1200 West and also easier for vehicles to turn onto Center Street.

b) Promotes alternative transportation solution to SOV use. The proposed by-pass right turn lane provides direct access to a public parking lot, providing easier access to carpooling, while the northbound dual left will make it easier for vehicles to exit the parking lot due to reduced queuing on 1200 West and also easier for vehicles to turn onto Center Street.

c) Creates or improves linkages between transportation modes. The proposed by-pass right turn lane provides direct access to a public parking lot, providing easier access to carpooling, while the northbound dual left will make it easier for vehicles to exit the parking lot due to reduced queuing on 1200 West and also easier for vehicles to turn onto Center Street.

d) Reduces physical, psychological, or economic barriers to carpool, bike, walk, or transit use. The proposed by-pass right turn lane provides direct access to a public parking lot, providing easier access to carpooling, while the northbound dual left will make it easier for vehicles to exit the parking lot due to reduced queuing on 1200 West and also easier for vehicles to turn onto Center Street.

e) Provides incentives to carpool, bike, walk, or transit use. The proposed by-pass right turn lane provides direct access to a public parking lot, providing easier access to carpooling, while the northbound dual left will make it easier for vehicles to exit the parking lot due to reduced queuing on 1200 West and also easier for vehicles to turn onto Center Street.

3.3 Environmental Quality (15 points)
Explain if the project...

a) Provides cost effective emission reductions (air quality score). The proposed improvements reduces overall congestion and vehicle queuing in the project area which will improve air quality

b) Minimizes environmental impacts or reduces existing impacts (e.g. air/water/noise pollution). The proposed improvements reduces overall congestion and vehicle queuing in the project area which will improve air quality

c) Enhances the natural, cultural, or historic environment. NA
d) Mitigates invasive impacts to existing neighborhoods/commercial areas (minimal relocations).
   NA

3.4 Safety (20 points)
Explain if the project...

a) Corrects/improves a verified or potential safety or accident problem.
   Safety will be enhanced by providing an exclusive lane that the NB off-ramp traffic can utilize to access 1200 West. This removes a weave movement for vehicles making this movement as well as allowing the other northbound right turn lane at the off-ramp to enter the closest eastbound thru lane instead of weaving across into the center lane. The protected phasing associated with the dual northbound left turn lanes will eliminate permitted left turns that have poor sight distance due to the curvature of 1200 West near Center Street.

b) Improves information/communications for traffic operations and emergency responders.
   NA

c) Reduces severity of crashes.
   Safety will be enhanced by providing an exclusive lane that the NB off-ramp traffic can utilize to access 1200 West. This removes a weave movement for vehicles making this movement as well as allowing the other northbound right turn lane at the off-ramp to enter the closest eastbound thru lane instead of weaving across into the center lane. The protected phasing associated with the dual northbound left turn lanes will eliminate permitted left turns that have poor sight distance due to the curvature of 1200 West near Center Street.

d) Enhances safe movement of pedestrian, bicycle traffic.
   NA

e) Provides an intermodal safety improvement (e.g. separation of vehicles-trains, vehicles-pedestrian).
   NA

3.5 Other Considerations (15 points)
Explain if the project...

a) Effectively distributes funding throughout the MPO area.
   UDOT participation helps to minimize MAG funding needed.

b) Phases project in a manner that the MPO can use limited funds efficiently.
   The right-turn bypass and dual northbound left turn lanes could be phases and constructed independently of one another.
c) Additional funding above required match is pledged toward project (including any soft match). UDOT proposes contributing $1M in funding and donating ROW with an estimated value of $140K to the project.

d) Project sponsor ranking of project.
   2

e) Project is numbered project within the current RTP.
   NA
4.0 | Air Quality Report
All projects that are eligible for CM/AQ and CM/AQ-PM2.5 funds must complete this report. These funds are eligible for projects and programs countywide. Contact Susan Hardy at Mountainland AOG if you need help completing 4.4 Quantitative Analysis below, 801/229-3842 or shardy@mountainland.org.

4.1 Eligibility
CM/AQ funds can only be used for projects and programs that a direct benefit to air quality can be demonstrated. Highway expansion, such as new single occupancy vehicle lanes, is not eligible. Turn lanes at congested intersections, transit programs, pedestrian and trail projects, signal modernization, ITS, and IM programs are typical eligible CM/AQ projects.

4.2 CM/AQ Program
The purpose of the CM/AQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) in Ozone (O₃), Carbon monoxide (CO), Particulate Matter – 10 microns (PM₁₀), and PM₂.₅ non-attainment and maintenance areas. The city of Provo is a maintenance area for CO and Utah County is a non-attainment area for PM₁₀ and PM₂.₅.

4.3 Completing this Report
All projects eligible for CM/AQ funds must complete this report. Completing this report can be quite technical, Susan Hardy, Air Quality Coordinator at Mountainland, can help with filling out this report. Contact her at 801/229-3842 or shardy@mountainland.org

4.4 Quantitative Analyses
A quantitative assessment of how a proposed project or program is expected to reduce emissions is important to assist in selecting the most effective use of this fund. List below all travel benefits directly related to this project. Air quality benefit calculations must utilize Mobile 6. The air quality analysis should include assessing emission reductions of transit, traffic flow improvements, ITS projects and programs, ridesharing, bicycle and pedestrian improvements. Complete at least one of the sections below. If quantitative analyses cannot be done, do a qualitative assessment in 4.3.

a) Vehicle Miles Traveled
Number of Vehicle Miles Traveled reduced (VMT): Click here to enter text.
Average distance of trips reduced: Click here to enter text.
Emission reduction per average weekday: Click here to enter text.

b) Idling Time
Average idling time per vehicle reduced: Click here to enter text.
Number of vehicles with reduced idling time: Click here to enter text.
Emission reduction per average weekday: Click here to enter text.

C) Vehicle Speed
Average change in vehicle speed (speed before and after): Click here to enter text.
Number of vehicles affected: Click here to enter text.
Emission reduction per average workday: Click here to enter text.
4.5 Qualitative Assessment
Although a quantitative analyses of air quality impacts is required whenever possible, some improvements may not lend themselves to rigorous quantitative analysis, because of the projects characteristics or because practical experience is lacking to adequately analyze the project. In these cases, a qualitative assessment based on a reason and logical examination of how the project or program will decrease emissions and contribute to attainment or maintenance of a NAAQS is appropriate.

Click here to enter text.
5.0 | Project Cost Estimate

To develop a project cost estimate, please supply a detailed cost breakdown of your unit costs, inflation, equipment, right-of-way, contingency, etc. To do so, use the Concept Costs Estimate Excel form provided by UDOT (available on Mountainland.org website). Non-construction projects such as equipment purchases, operations, administration programs, studies, etc. can use other methods to show their estimated costs. All sheets or methods used should be submitted as part of the Supplemental Information accompanying the Concept Report.

5.1 Cost Summary

Summarize the information from the Costs Estimate Excel form or other method. Enter NA for items that do not apply to the project.

- a) Preliminary Engineering $328,000
- b) Environmental Work $10,000
- c) Construction $2,157,000
- d) UDOT Review (project cost <$500k = $5k, >500K = $10k) $10,000
- e) Construction Engineering $196,000
- f) Subtotal (in today’s dollars) $2,844,000
- g) Inflated Cost Factor (inflate to 2022) 1.19
- h) Total 2022 Cost $3,336,000
- i) Non-MPO Funds Available to Project $1,136,761 (UDOT)
- j) MPO Funding Request (includes 6.77% local match) $2,200,000

6.0 | Supplemental Information

Please submit any supporting documentation including maps, diagrams, charts, cost estimates, etc. that will allow MPO and UDOT staff and any Technical Advisory Committee to make an informed decision regarding the proposed project. Keep Supplemental Information submittals to 8 pages total.

6.1 Concept Report Submittal

In order to facilitate the distribution of the Concept Reports and any supplemental information, all Concept Reports shall be combined with any supplemental information and saved in PDF format as one document. Please note that this might create a large data file that might be too large to emailed. Plan accordingly to submit your report in electronic format (CD, DVD, Flash Drive) by the required due date. Concept Reports are due by March 8, 2018 at 6pm.

6.2 Contacts, Questions

For help with the Concept Report or questions, please contact:

Bob Allen
801/229-3813 rallen@mountainland.org

Shawn Eliot, AICP
801/229-3841
1200 West Center Street
Right Turn Bypass
Dual left turn NB

UDOT Contribution
$1 Million
ROW

seliot@mountainland.org