PROJECT INFORMATION

2018-3: 1400 North—Roadway and Intersection Improvement Project, Logan City

FINAL CTAC SCORING RECOMMENDATION

<table>
<thead>
<tr>
<th>Congestion Score</th>
<th>Advance Corridor Preservation Score</th>
<th>Safety Score</th>
<th>Final CTAC Scoring Criteria Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Possible</td>
<td>9 Possible</td>
<td>15 Possible</td>
<td>39 Possible</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
</tbody>
</table>

INITIAL APPLICATION/PLAN REVIEW FINDINGS

Technical Review for CCCOG Applications: This review has been provided by the CMPO, County staff, and consulting engineers (CRS & JUB Engineers) to determine the eligibility and outline technical considerations for each project. All reviews are done to maintain compliance with the Local Transportation Funds Program Manual and best engineering and transportation practices.

**Initial application/plan review determination:** Project has minor deficiencies. Correct prior to CCCOG recommendation.

**Initial other findings, observations and technical considerations:**

- Submitted plans lack stamp by licensed engineer
- Seems to be discrepancies between the opinion of probable cost and project costs listed in COG application. Will need to be reconciled
- No pavement design (required by COG policy for full depth reconstruction)

REQUEST FOR ADDITIONAL INFORMATION REVIEW

Applicants were given an opportunity to provide additional information in response to the initial review findings.

**Subsequent staff review determination:** Project Appears to meet all COG requirements

- Information provided by applicant adequately responded to all substantial and minor issues identified (see attached applicant response memo and plan/documentation updates at http://cachempo.org/?page_id=1731).

Final Project Eligibility Review

| Regionally Significant Transportation Facility Arterial, Collector, or Logan-Cache Airport | YES | NO | N/A |
| Spot Improvement ($200,000 Limit) | X | | |
| Rural Set Aside (Outside MPO Boundaries) | | X | |
| Included within the CMPO Transportation Plan | X | | |
| Multi-Jurisdictional Letters of Support | | X | |
| Pavement Design New Road or full depth reconstruction | X | | |
| 90% Design for Construction Projects | X | | |
| 30% Design for Right-of-Way Projects | | X | |
| Detailed Cost Estimate Bids, Opinion of Probable Cost, non-COG betterments | X | | |
Response to CTAC Request for more Information

Memo

To: Cache Technical Advisory Committee; Attn: Jeff Gilbert
From: Tom Dickinson- City of Logan- Project Manager
CC: Bill Young; file
Date: 8/7/2018
Re: COG-1400 North 600 West Intersection- CTAC comments

RESPONSE TO CTAC COMMENTS

Thank you for the review comments to the City’s COG application package for the 1400 N 600 W intersection and roadway improvement project. Please accept this memo in response to the Cache Technical Advisory Committee review comments.

Project Eligibility
1. The project is included on UDOT’s Functional Classification Maps. A portion of the project is identified on the Cache County Regional Transportation Plan as a Phase 1 project. Project I-12 of the fiscally constrained projects outlined in the CMPO’s Transportation Master Plan shows an intersection signalization project only. The plan set submitted for this project includes work several hundred feet past the intersection in all directions. It is unclear the extent of the project included in the CMPO’s master plan. It will need to be determined what an “intersection signalization” project entails and how much of this project fits within that determination.

   a. In 2014, Logan city applied for and was awarded $200,000 of COG money for a spot improvement at the 1400 N 600 W intersection. Since that time, the project scope has changed significantly to include not only the traffic signal and railroad crossing, but now stretches almost 2 blocks to the south on 600 West and 2 blocks to the west on 1400 North. This includes full road reconstruction and expansion to increase the capacity of both roads. These improvements will greatly enhance both corridors, which, as recognized by CTAC, are identified on UDOT’s Functional Classification Map as Major Collectors.

New to the 2018 COG Manual, Section 2- Project Eligibility recognizes existing local roads as eligible (even if they are not shown in the UDOT system) for COG funds if they are included in the local jurisdiction’s transportation master plan and are shown as an arterial or collector road. Both 1400 North and 600 West roadways are designated minor arterial and collector roadways respectively thus qualifying this project eligible for COG funding.

Plan-Set Review
1. The project was reviewed to verify it was stamped by a licensed professional engineer. The plans list an approving engineer, but there is no stamp or signature.

   a. It is not customary to stamp 90% drawings. The design team has concerns with stamping 90% drawings as State Rule R156-22-601 requires only final plans to bear an engineer’s original seal. Upon completion and submittal to COG for review and construction planned for summer 2019, final plans shall bear the stamp of the design team in accordance with
State Rule. As a compromise to meet COG requirements, the design team has offered to submit to CTAC a letter listing responsible engineers with appropriate professional seals.

2. After a quick review it appears that the plans meet or exceed City standards. The roadway cross section west of 1400 N 600 W cross section is 102 feet as outlined in the City's master plan and the cross section east of the intersection is 88 feet which exceeds the 80 feet cross section outlined in the City standard. It is believed that this added width is to facilitate continuation of the bike paths on both sides of the road. Standard features such as curb, gutter, sidewalk, drainage facilities, etc. have been included in the design of the roadway.

   a. The Logan City Bicycle & Pedestrian Master Plan adopted in 2015, proposes 600 West as a shared road bikeway. The 88-ft cross section on 600 West is the result of a 2011 Federal Highway Administration (FHWA) Environmental Assessment (EA) performed on a 200 East Minor Arterial roadway recommending a 55-ft roadway width and 88-ft Cross-section. 600 West is identified as a Minor Arterial roadway in accordance with the City’s Transportation Master Plan and as such, the recommendations proposed in the 2011 FHWA EA are reflected in the 600 West roadway design. See diagram below:

![Diagram of Logan 200 East]

3. No pavement design calculations or geotechnical report was provided for review. However, the pavement sections provide appear to have thicker sections than the City’s typical cross section provided in their design standards found on the City’s website. These pavement sections should be compared to actual pavement design calculations.

   a. A pavement design is contained in a 2008 geotechnical report performed by Terracon Consultants, Inc. In error, this report was not included in the COG application package but was provided to CTAC at the July 30, 2018 meeting. The design consultant is performing another geotechnical investigation that will be used to confirm the decade old pavement
design. The new geotechnical report will be available in October 2018 and any changes will be reflected in the final design plans.

Opinion of Probable Cost
1. It should be noted that there is a discrepancy between the application costs and those shown on the cost estimate attached with the drawings. The cost estimate clearly breaks out eligible and not eligible costs in the “total project costs (not including betterments)”. This change will impact the other costs listed in the application, which makes it difficult to know that the exact match percentage is.

   a. The discrepancy was the result of misinterpretation of eligible match items listed the COG Manual in section COST ITEMS INCLUDED FOR 7% LOCAL MATCH MINIMUM. Please accept the following revision to the application.

   | COG REQUESTED AMOUNT | $2,500,000.00 |
   | LOCAL MATCH OF COG ELIGIBLE AMOUNT | $1,844,346.78 |
   | TOTAL PROJECT COST (NOT INCLUDING BETTERMENTS) | $4,344,346.78 |
   | PERCENT MATCH | 26.23% |
   | TOTAL PROJECT COST | $5,764,764.78 |

2. Also of concern is the extent of the project. The Program Manual requires that projects located within the Regional Transportation Plan be included in Phases 1 through 3. As stated previously, Project I-12 of this plan is considered an “Intersection Signalization”. The extent of the submitted project includes 3000 linear feet of roadway outside of the intersection. The extent of the project that is eligible will need to be determined.

   a. See comments addressed in the City’s response to CTAC’s comment on Project Eligibility.

Right-of-Way Review
1. There is very little detail provided regarding acquisition of the proposed ROW. No property information, land acquisition quantities, land acquisition costs, etc. were provided for review. It is unclear whether any full takes would be required. Additional information will be required in order to do a complete review of the property acquisition.

   a. The City acknowledges this statement. There will be no full takes required for this project. As mentioned in the explanation letter to CCOG dated June 26, 2018, the City has been working with previous developments to the north, east, and south, landowners to the north and west, and Bridgerland Technical College to the south and west for property acquisition through cash purchases, dedication, and “in-kind” trades. A large portion of the property will be donated by BTC in exchange for installation of improvements. The ROW cost included in the COG application is an estimate based on estimated ROW impacts and land costs. As final project design is completed, real property impacts will be refined, property descriptions will be prepared, and land acquisition will commence.

I am available to address further questions or for additional clarification.

Tom Dickinson EIT
City of Logan
Assistant City Engineer
CACHE COUNTY COUNCIL OF GOVERNMENTS
CACHE TECHNICAL ADVISORY COMMITTEE

Technical Review for CCCOG Applications: This review has been provided by the CMPO, County staff, and consulting engineers (CRS & JUB Engineers) to determine the eligibility and outline technical considerations for each project. All reviews are done to maintain compliance with the Local Transportation Funds Program Manual and best engineering and transportation practices.

Project: 2018-3 Logan City 1400 North Roadway and Intersection Improvements

Project Eligibility Review

| Regionally Significant Transportation Facility | YES | NO | N/A |
| Arterial, Collector, or Logan-Cache Airport   | X   |    |     |
| Spot Improvement ($200,000 Limit)            |     | X  |     |
| Rural Set Aside (Outside MPO Boundaries)     |     | X  |     |
| Included within the CMPO Transportation Plan | X   |    |     |
| Multi-Jurisdictional Letters of Support      |     | X  |     |
| Pavement Design                              |     | X  |     |
| New Road or full depth reconstruction        |     |    |     |
| 90% Design for Construction Projects         |     | X  |     |
| 30% Design for Right-of-Way Projects         |     | X  |     |
| Detailed Cost Estimate                       |     | X  |     |
| Bids, Opinion of Probable Cost, non-COG betterments | | | |

Project has minor deficiencies. Correct prior to CCCOG recommendation.

Additional Findings and Technical Considerations:
1) Submitted plans lack stamp by licensed engineer
2) Seems to be discrepancies between the opinion of probable cost and project costs listed in COG application. Will need to be reconciled.
3) No pavement design (required by COG policy for full depth reconstruction).

4) 
5) 
6) 

Detailed reviews provided by consulting engineer attached.
July 23, 2018

Jeff Gilbert  
Cache Metropolitan Planning Organization  
179 North Main, Suite 300  
Logan, Utah 84321

Re: Logan 1400 North COG Application Review

Dear Jeff:

This memo is a summary of our review of the Logan 1400 North Right of Way submittal for COG funding. The review procedure followed the steps outlined in the attached Checklist.

Project Eligibility

The project is included on UDOT’s Functional Classification Maps. A portion of the project is identified on the Cache County Regional Transportation plan as a Phase 1 project. Project 1-12 of the fiscally constrained projects outlined in the CMPO’s Transportation Master Plan shows an intersection signalization project only. The plan set submitted for this project includes work several hundred feet past the intersection in all directions. It is unclear the extent of the project included in the CMPO’s master plan. It will need to be determined what an “intersection signalization” project entails and how much of this project fits within that determination.

Plan-Set Review

After a review of the submitted application and plan-set for 1400 North in Logan City, we feel the packet meets the 90% design requirement.

A spot check sampling was taken of culverts/storm drain pipes for eligible projects. In our opinion, these culverts appear to be sized reasonably without any major over or under sizing of projects. This review was not all inclusive but used general guidelines and previous experience as a basis for the review.

The project was reviewed to verify it was stamped by a licensed professional engineer. The plans list an approving engineer, but there is no stamp or signature on the submitted plan set.

After a quick review it appears that the plans meet or exceed City standards. The roadway cross section west of the 1400 N 600 W cross section is 102 feet as outlined in the City’s master plan and the cross section east of the intersection is 88 feet which exceeds the 80 feet cross section outlined in the City standards. It is believed this added width is to facilitate continuation of the bike paths on both sides of the road. Standard features such as curb, gutter, sidewalk, drainage facilities, etc. have been included in the design of the roadway.
No pavement design calculations or geotechnical report were provided for review. However, the pavement sections provided appear to have thicker sections than the City’s typical cross section provided in their design standards found on the City’s website. These pavement sections should be compared to actual pavement design calculations.

We did not identify any structural items that were eligible for COG funding.

Opinion of Probable Cost Review

It should be noted that there is a discrepancy between the application costs and those shown on the cost estimate attached with the drawings. The cost estimate clearly breaks out eligible vs not eligible (betterment) costs. However, the application includes both eligible and not eligible costs in the “total project costs (not including betterments)”. This change will impact the other costs listed in the application, which makes it difficult to know what the exact match percentage is.

Also, of concern is the extent of the project. The Program Manual requires that projects located within the Regional Transportation Plan be included in Phases 1 through 3. As stated previously, Project I-12 of this plan is considered an “Intersection Signalization”. The extent of the submitted project includes the intersection of 1400 North and 600 West, but also includes improvements along approximately 3000 linear feet of roadway outside of the intersection. The extent of the project that is eligible will need to be determined.

Right-of-Way Review

There is very little detail provided regarding acquisition of the proposed ROW. No property information, land acquisition quantities, land acquisition costs, etc. were provided for review. It is unclear whether any full takes would be required. Additional information will be required in order to do a complete review of the property acquisition.

Sincerely,

CRS Engineers

Max Pierce, P.E.
Project Manager
(435) 374-4670
max.pierce@crsengineers.com
Cache County Council of Governments (COG)

Project Oversight & Cache County Stewardship Assistance

Consultant Scope Checklist

PROJECT NAME:  Logan 1400 North

PROJECT SPONSOR:  Logan City

Definitions:

- Project Sponsor – A city or county government who has applied for COG funding. In the case of multiple agencies submitting a combined application it would be the lead sponsor.
- Oversight Consultant – A consultant selected by Cache County to provide an oversight review of a project funded by the COG and to provide support to the COG staff.
- Sponsor Consultant – A consultant selected by the Project Sponsor to design and/or provide construction engineering management services for a project funded by the COG.
- Betterment – should we define it here or just later?

Project Application Screening

The project application and plan set review is to help COG staff and COG members ensure that application and plans are complete and meet COG standards as provided in the Local Transportation Fund Program Manual (see http://cachempo.org/wordpress/wp-content/uploads/2018/05/Local-Transportation-Funds-Program-Manual-2018-Executive-Committee-Approved.pdf).

Application and Buildable Plan-set Checklist

- ☒ Verify that plans are to 90% design for construction projects and 30% for ROW only projects (if engineering is required).
- ☒ Provide a sampling (spot check) review of the design. Check if something is being oversized or undersized (e.g. retaining walls, pipes, culverts, etc).
- ☒ Verify that project has been designed, reviewed and stamped by licensed professional engineers.
- ☒ Verify what design standard is being followed and that it is being met. A minimum is to adhere to Cache County road standards.
- ☒ Review geotechnical report/pavement design.
- ☒ Review structural design.
Review eligible versus non-eligible costs.

- Verify that the betterments have been correctly identified.

- Eligible items include:
  - All roadway construction activities that are associated with constructing the roadway pavement section (including bike lanes).
  - Any required utility system relocations (does not include utility upgrades or improvements).
  - Sidewalks or shared use paths (within same project limits and contribute to transportation function).
  - Road right-of-way purchase (limited to width needed for road pavement and sidewalks or pathways).
  - Drainage system improvements (required as a result of the project, but does not include curb and gutter).
  - Residential or business relocation costs required by roadway improvement (requires approval of the COG Executive Committee on a case-by-case basis at time of application).
  - Roadway safety elements (e.g. guardrail, signals, cross-walks, signage and pavement marking etc).
  - Site environmental cleanup or remediation costs will be considered on a case-by-case basis by the COG Executive Committee for eligibility.

- Non-eligible items include (to be considered a betterment):
  - Curb, gutter or decorative landscaping (beyond that required for soil stabilization with native seeding).
  - Right of way cost beyond that needed to accommodate the actual road cross-section (the local jurisdiction must pay the cost difference of remnant property or full property “takes”).
  - Project design or COG application development costs.
  - Utility system upgrades.
  - Roadway lighting.

Review Opinion of Probable Cost.

- Verify that betterments are broken out separately.

- Verify that necessary project costs are accounted for, including but not limited to:
  - Construction costs
  - Utility relocations
  - ROW acquisitions and easements
- Design Engineering (applicable as match)
- Construction Engineering Management services
- Permitting
- Project Sponsor cost match

☑ Review right-of-way (ROW) needs and process.

☑ Verify appropriate amount of ROW width being acquired for construction.

☑ Review full takes and partial takes being acquired and verify what portion of it will be needed for the project. Verify that the additional amount is included as a betterment.

☑ Verify that the ROW is consistent with the COG ROW purchase policy (see COG program manual).

☑ Verify that relocation costs have been approved by the County Executive Committee.

Deliverables:

☑ One DRAFT application/plan review memo for each project with a list of concerns/recommendations based on checklist items. In addition, the draft memo should provide the following:

1. Professional opinion of issues related to the overall functionality of the design.
2. Professional opinion of the project independent utility (if part of a phased project)
3. Professional opinion as to design elements that fail to incorporate “best design practices”.