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Attachments: 1. Board Summary Report, 2. Agencies which have participated in informal Fiber Consortium Meetings

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9/7/2021	1	Board of County Commissioners Study Session		

To: Board of County Commissioners

Through: David Bessen, Director, Information Technology

Prepared By:

David Bessen, Director, Information Technology and Bryan Weimer, Director, Public Works and Development.

Presenter: David Bessen, Director, Information Technology

Subject:

Arapahoe County Fiber Consortium

Purpose and Request:

This study session is request approval from the Board of County Commissioners for the formal creation of an Arapahoe County Fiber Consortium, a working group of County-based municipalities and other public agencies and the County that has the purpose of collaboratively planning fiber optic deployments for the transport of data and traffic data.

Background and Discussion: For the past four years, the County IT and Public Works and Development Departments have had informal discussions with several municipalities (see attached list) within the County-as

well as school and library districts, DRCOG, and the State-concerning the deployment of fiber optic networks in our geography. These discussions have centered around identifying existing fiber and its ownership and capacity, as well as what our plans were for deploying additional fiber for both data and traffic data/video transport. With the creation of the City of Centennial's fiber infrastructure additional possibilities were created for linking fiber networks. For example, with traffic data, there is a desire to be able to share data feeds and video streams across jurisdictions to better manage traffic flows on specific roadways that cross multiple jurisdictions. For data transport, there are opportunities for the County and other agencies to deploy fiber, perhaps connecting and 'riding' across the Centennial infrastructure, to connect various facilities. Some examples of this would be using the Centennial infrastructure and links to it to connect our data centers at Admin and at the Sheriff's Office or providing a disaster recovery site for the cities of Centennial within County data centers. The overall goal of this collaboration and the need to create a consortium is to minimize the costs of deploying fiber-sharing the fiber and the implementation cost is much less than the aggregate cost of each agency deploying its own-and to coordinate the use of some of the data to improve traffic operations. The working consortium will work to provide a forum for the collaboration and planning, much as some of our regional planning groups perform for roadways. The requirement for participating in the consortium would be for an agency to be within Arapahoe County; to have an interest in deploying and/or sharing fiber networks; and to share information about the agency's fiber needs, plans and existing infrastructure. Because of the regional nature of the fiber infrastructure, occasionally agencies from outside the County may be asked to join in collaborative efforts. For example, the Yosemite Traffic Corridor spans the City of Lone Tree, Centennial and Greenwood Village. In addition, because the location of fiber infrastructure is sensitive, each agency would be required to execute a Non-Disclosure Agreement prior to being given access to shared information (primarily maps and capacity information) from other agencies. Similar working groups for fiber deployment exist elsewhere in the United States and in Colorado. The Fiber Consortium will also serve as a resource to stay abreast of grant opportunities, fiber projects, and advances in the technology. The consortium may also be able to leverage resources from the Smart Cities Alliance, of which the County is a member, as well as resources that other agencies may bring to the table. The next steps if the Fiber Consortium were formally constituted would be to perform the following tasks: 1) Establish the Governance, 2) Formalize the Governance via an IGA or an MOU, 3) Have agencies share data, information, and plans, after agreeing to a Non-disclosure Agreement, 4) Formalize understandings on existing fiber and create a composite map of that infrastructure, and 5) Coordinate on Projects

Fiscal Impact: The creation of the consortium itself will not have a fiscal impact on the County. That said, the County-as well as other agencies-may design and seek funding for specific fiber projects, but those would be budgeted and funded separate from the formal creation of the working group.

Alternatives: The creation of a fiber consortium is optional; however, it does provide a platform for coordination and collaboration jointly on projects as they may benefit the mutual partners. If the consortium were not to be formed, then each agency could deploy its own fiber infrastructure as it needs to and the opportunity for cost savings and collaboration, for traffic and data, would be lost or more difficult to achieve.

Alignment with Strategic Plan:

- ☒ Be fiscally sustainable
- ☒ Provide essential and mandated service

☒ Be community focused

Staff Recommendation: The Information Technology and Public Works and Development Departments support the formation of an Arapahoe County Fiber Consortium.

Concurrence: Both IT and PWD concur with moving forward with the establishment of the Fiber Consortium. Furthermore, the entities of Aurora, Centennial, and Littleton support the formation of the Consortium.