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Overview of the Middle-Mile Broadband Initiative

PRESENTED TO: Assembly Committee on Communications and Conveyance
Hon. Sharon Quirk-Silva, Chair

LEGISLATIVE ANALYST'S OFFICE

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Overview of 2021-22 Multiyear Broadband Infrastructure Agreement

In 2021, the Administration and Legislature Reached a Three-Year, Multibillion Dollar Broadband Infrastructure Agreement

- In July 2021, the administration and the Legislature agreed to spend $6 billion total funds over three fiscal years (starting in 2021-22) on broadband infrastructure. Of the $6 billion, $4.3 billion comes from federal American Rescue Plan (ARP) fiscal relief funds and $1.7 billion from the General Fund. (The use of ARP fiscal relief funds comes with extensive reporting requirements to the federal government; there also are dates by which these funds must be allocated and then liquidated. The figure below provides the details of the three-year spending plan for the agreement.)

2021-22 Broadband Infrastructure Three-Year Spending Plan[a]

(In Millions)

	2021-22					All Fiscal Years		
Project or Program	Total Funds	General Fund	Federal Funds	2022-23 Total Funds[b]	2023-24 Total Funds[b]	Total Funds	General Fund	Federal Funds
Middle-mile network	$3,250	—	$3,250[c]	—	—	$3,250	—	$3,250
Last-mile projects	1,072	—	1,072[d]	$125	$803	2,000	$928	1,072
Broadband Loan Loss Reserve Account	50	$50	—	125	575	750	750	—
Totals	**$4,372**	**$50**	**$4,322**	**$250**	**$1,378**	**$6,000**	**$1,678**	**$4,322**

[a] This spending plan is pursuant to the 2021-22 budget agreement between the administration and the Legislature.

[b] All funding in 2022-23 and 2023-24 is General Fund.

[c] The $3.250 billion in federal funds for the middle-mile network in 2021-22 is appropriated to the California Department of Technology out of the state's American Rescue Plan (ARP) fiscal relief allocation.

[d] Of the $1.072 billion in federal funds for last-mile projects in 2021-22, $550 million is the state's allocation from the ARP's Coronavirus Capital Projects Fund and $522 million is some of the state's ARP fiscal relief allocation.

Overview of 2021-22 Multiyear Broadband Infrastructure Agreement

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Three Broadband Infrastructure Programs/Projects Funded by the Spending Plan

- The spending plan funds three broadband infrastructure programs/projects:
  - ***$3.25 Billion for the Statewide Open-Access Middle-Mile Network (the "Middle-Mile Network").*** The spending plan provides $3.25 billion from the state's ARP fiscal relief allocation in 2021-22 to the California Department of Technology (CDT) to implement (in coordination with other entities we discuss on page 7) the middle-mile network. The remainder of the handout will focus on this broadband infrastructure project.
  - ***$2 Billion for Last-Mile Projects.*** The spending plan allocates $2 billion (federal funds and General Fund) to the California Public Utilities Commission (CPUC) to offer last-mile broadband infrastructure project grants through CPUC's California Advanced Services Fund (CASF) program.
  - ***$750 Million for Broadband Loan Loss Reserve Fund.*** The spending plan allocates $750 million (General Fund) for a new Broadband Loan Loss Reserve Fund within CPUC's CASF program.

Chapter 112 of 2021 (SB 156, Committee on Budget and Fiscal Review) Implements the Broadband Infrastructure Agreement

- In July 2021, the Legislature also passed (and the Governor signed) SB 156 to implement the broadband infrastructure agreement. An overview of state law changes related to the implementation of the middle-mile network is provided on page 6.

Middle-Mile Broadband Network Infrastructure

Broadband Infrastructure Has Various Components

- High-speed internet often is provided to communities and households using broadband infrastructure. Broadband infrastructure can be categorized into three groups based on distance covered, from longest to shortest distance:
  - ***Backbone or Long-Haul.*** Often consisting of high-capacity fiber-optic cables laid over hundreds or thousands of miles to connect countries, states, and/or regions.
  - ***Middle-Mile.*** Often consisting of fiber-optic cables laid over tens or hundreds of miles that, once connected to by an internet service provider (ISP), can help deliver local high-speed internet service.
  - ***Last-Mile.*** Often consisting of antennae, cables, poles, wires, and other components that help connect middle-mile infrastructure to individual communities and households.

Middle-Mile Broadband Network Infrastructure

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Middle-Mile Network Will Cover an Estimated 8,000 Road Miles

- California's middle-mile network of high-capacity fiber-optic cables likely will be deployed primarily along the state's highways and other rights of way. According to recent data from CPUC, the total length of the network will be an estimated 8,000 road miles (once completed).
  - ***Administration Selected 18 Initial Middle-Mile Network Project Locations in Late 2021.*** In November 2021, the administration announced its identification of 18 initial middle-mile network projects. The administration intends to use these initial projects to accelerate existing projects in areas unserved by open-access middle-mile infrastructure, coordinate existing CASF last-mile broadband infrastructure projects with middle-mile infrastructure, incorporate new middle-mile infrastructure into pending California Department of Transportation (Caltrans) construction projects, and test different approaches to implementation across a variety of geographic areas. The estimated total length of the initial middle-mile network projects is between 800 and 900 miles, with projects that range from less than 10 miles in length to at least 150 miles in length.

Expected Benefits From California's Middle-Mile Network

- These benefits include, among others: (1) an increase in the availability of high-speed internet service in unserved and/or underserved areas of the state, (2) a decrease in consumer prices for high-speed internet service, and (3) an increase in economic development of areas with improved internet access (as well as additional jobs in network-related construction and/or implementation activities).

SB 156: Implementation Provisions for Middle-Mile Network

SB 156 Adds to and Changes State Law to Facilitate Implementation of the Middle-Mile Network

- ***Establishes the Roles and Responsibilities of State Government Entities Involved in the Middle-Mile Network Implementation.*** Senate Bill 156 codifies the roles and responsibilities of state government entities involved in the implementation of the middle-mile network. (See the next page for more details.)
- ***Requires the Retention of a Third-Party Administrator to Manage Critical Middle-Mile Network Activities.*** Senate Bill 156 also requires CDT's Office of Broadband and Digital Literacy (OBBDL) to retain a third-party administrator to help manage the development, acquisition, construction, maintenance, and operation of the middle-mile network. (See page 8 for more details.)
- ***Directs CPUC to Consider Certain Criteria in Its Identification and Prioritization of Middle-Mile Network Locations.*** Criteria for the identification of middle-mile network locations include, for example, locations without any known access to an open-access middle-mile network "with sufficient capacity, and at affordable rates," and projects that would enable last-mile service connections. Criteria for the prioritization of middle-mile network locations include, for example, a geographic diversity of locations across rural and urban areas, and projects that would offer last-mile service connections at current federal broadband benchmark speeds. Senate Bill 156 also requires the solicitation and receipt of public comment to inform the middle-mile network location identification and prioritization by CPUC.
- ***Provides Authorizations and Exemptions to Expedite the Construction and Establishment of the Middle-Mile Network.*** Authorizations and exemptions for Caltrans and others constructing and establishing the middle-mile network include, for example, the use of the design-build procurement process.

SB 156: Roles and Responsibilities of State Government Entities

A Number of State Government Entities Are Required to Implement Middle-Mile Network

The main roles and responsibilities of the state government entities involved in the implementation of the middle-mile network are as follows:

- ***CDT's OBBDL.*** OBBDL, led by CDT's Deputy Director of Broadband, oversees the acquisition and management of contracts to develop and construct, as well as to maintain and operate, the middle-mile network. Pursuant to statute, the office also retained a third-party administrator and created a nine-person broadband advisory committee, discussed in greater details on pages 8 through 10. As California's middle-mile network is constructed and/or established, OBDDL will create policies, practices, rules, and standards related to the operation and use of the middle-mile network.
- ***CPUC.*** CPUC identifies and prioritizes the middle-mile network locations based on the statutory criteria and then provides them to entities including Caltrans, OBBDL, and the third-party administrator. CPUC also solicits and receives public comment to inform its identification and prioritization of middle-mile network locations.
- ***Caltrans.*** Caltrans will construct and establish at least some of the middle-mile network locations. Caltrans also will help incorporate new middle-mile network locations into some of its pending projects.
- ***Department of Finance (DOF).*** DOF ensures state compliance with reporting requirements on ARP fiscal relief funds.
- ***California State Transportation Agency (CalSTA) and Government Operations Agency (GovOps).*** CalSTA and GovOps are state government agencies for some of the entities involved in implementation of California's middle-mile network. CalSTA includes Caltrans, and GovOps includes CDT.

SB 156: Roles and Responsibilities of the Third-Party Administrator

SB 156 Requires CDT's OBBDL to Retain a Third-Party Administrator

- CDT's OBBDL is required to retain a third-party administrator that is "a California based nonprofit entity with demonstrated experience serving libraries, elementary and secondary schools, and institutions of higher education with broadband connectivity."

In September 2021, OBBDL Retained the Corporation for Education Network Initiatives in California (CENIC) Middle-Mile Broadband Initiative (MMBI) as Third-Party Administrator

- In September 2021, CDT's OBBDL announced its retention of CENIC MMBI (now referred to as "GoldenStateNet") as the third-party administrator of California's middle-mile network. Consistent with statute, CENIC is a California-based nonprofit entity that currently operates the California Research and Education Network which serves over 20 million Californians, including many of the state's education institutions and students, with high-speed internet access and other offerings. Advisory board members, executive staff, and other GoldenStateNet staff are drawn from CENIC and other relevant stakeholders including counties and tribes.

GoldenStateNet Is Responsible for a Variety of Middle-Mile Network Activities

- GoldenStateNet manages the development, acquisition, construction, maintenance, and operation of the middle-mile network under the oversight of CDT's OBBDL. GoldenStateNet also works with CPUC to provide OBBDL (among others) with the prioritized locations for construction and establishment of the middle-mile network.

SB 156: MMAC

SB 156 Directs CDT to Establish Broadband Advisory Committee

- Senate Bill 156 directs CDT to establish a broadband advisory committee to monitor the construction and establishment of the statewide open-access middle-mile network, and to provide policy advice to the third-party administrator. CDT's MMAC was established as the broadband advisory committee shortly after SB 156 was signed into law in July 2021.

MMAC Comprised of Nine Members

- Five members represent entities involved in the construction and establishment of the middle-mile network including Caltrans, CDT, CPUC, DOF, and GovOps. State law designates CDT's representative as the Chair of the MMAC. Four ex officio members represent the Legislature, two from the Assembly and two from the Senate. Below are the current MMAC members and the entities they represent:
  - Russ Nichols, Acting Director, CDT (MMAC Chair).
  - Alice Reynolds, President, CPUC.
  - Gayle Miller, Chief Deputy Director, DOF.
  - Toks Omishakin, Director, Caltrans.
  - Yolanda Richardson, Secretary, GovOps.
  - Assembly Member Sharon Quirk-Silva.
  - Assembly Member Jim Wood.
  - Senator Lena Gonzalez.
  - Senator Mike McGuire.

SB 156: MMAC

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MMAC Meetings Will Be Held At Least Monthly Through July 2022 and Quarterly Thereafter

- Senate Bill 156 requires MMAC meetings be held at least monthly for the first 12 months following the effective date of SB 156, and then quarterly thereafter. MMAC held its first monthly meeting on August 18, 2021. During meetings, committee members from the administration provide updates on middle-mile network implementation, seek input from other members, and receive public comment. Future MMAC meetings are scheduled for the third Friday of each month until July 2022.

SB 156: Required Annual Reporting to the Legislature

SB 156 Requires CDT's OBBDL to Submit Annual Legislative Report on Middle-Mile Network Implementation

- Senate Bill 156 requires OBBDL, in consultation with CDT and DOF, to submit a report on or before March 1, 2022 and annually thereafter on the construction and establishment of the middle-mile network. The report to both legislative budget committees must include the following information:
  - Total length of the middle-mile network.
  - Length of the middle-mile network constructed in the preceding year, by quarter.
  - Number of ISPs using the middle-mile network.
  - Number of households projected to connect to the middle-mile network.
  - Total expenditures for each project, by quarter.
  - Projected goals for the total length, length constructed, number of ISPs, and number of households connected to the middle-mile over the 18 months that follow the annual report.