Treasury's CPF and NTIA's BEAD funding programs with a keynote from Joseph Wender. We will then pivot to look at how 5G, IoT, CBRS and Private Cellular Networks are enabling smart city innnovations. A keynote from David Clow, CIO, DC Metro Police will highlight how they use networks to keep the peace in America's capitol city.

Featured Speakers

DAVID CLOW
CIO | *DC Metro Police*

JOSEPH WENDER
Director | *US Treasury CPF Broadband*


Connected City
Smart City

OnGo alliance™

kajeet®

GraybaR®

Signify

NETWORK CONNEX

The 2023 calendar will focus on how Network Technology and the Cloud are enabling innovative new capabilities and services. Broadband, Fiber, 5G, Private LTE, Wi-Fi, LoRa, and IoT are key enabling technologies we will explore.

We will look at successful Use Cases, Technology Architectures, Business Models and Funding mechanisms for Cities, Schools, Building Owners, Utilities and Transportation.

FOR MORE INFORMATION, CONTACT:

@ PeterMurray@DenseNetworks.com
267-237-5907

2023 CALENDAR

MARCH 23	Las Vegas, NV
MARCH 28	Los Angeles, CA
APRIL 27	Washington D.C.
MAY 09	New Orleans, LA
JUNE 07	Cary, NC
SEPTEMBER 14	Colorado Springs, CO
SEPTEMBER 21	Dallas, TX
OCTOBER 12	Fort Myers, FL
DECEMBER 7	Phoenix, AZ

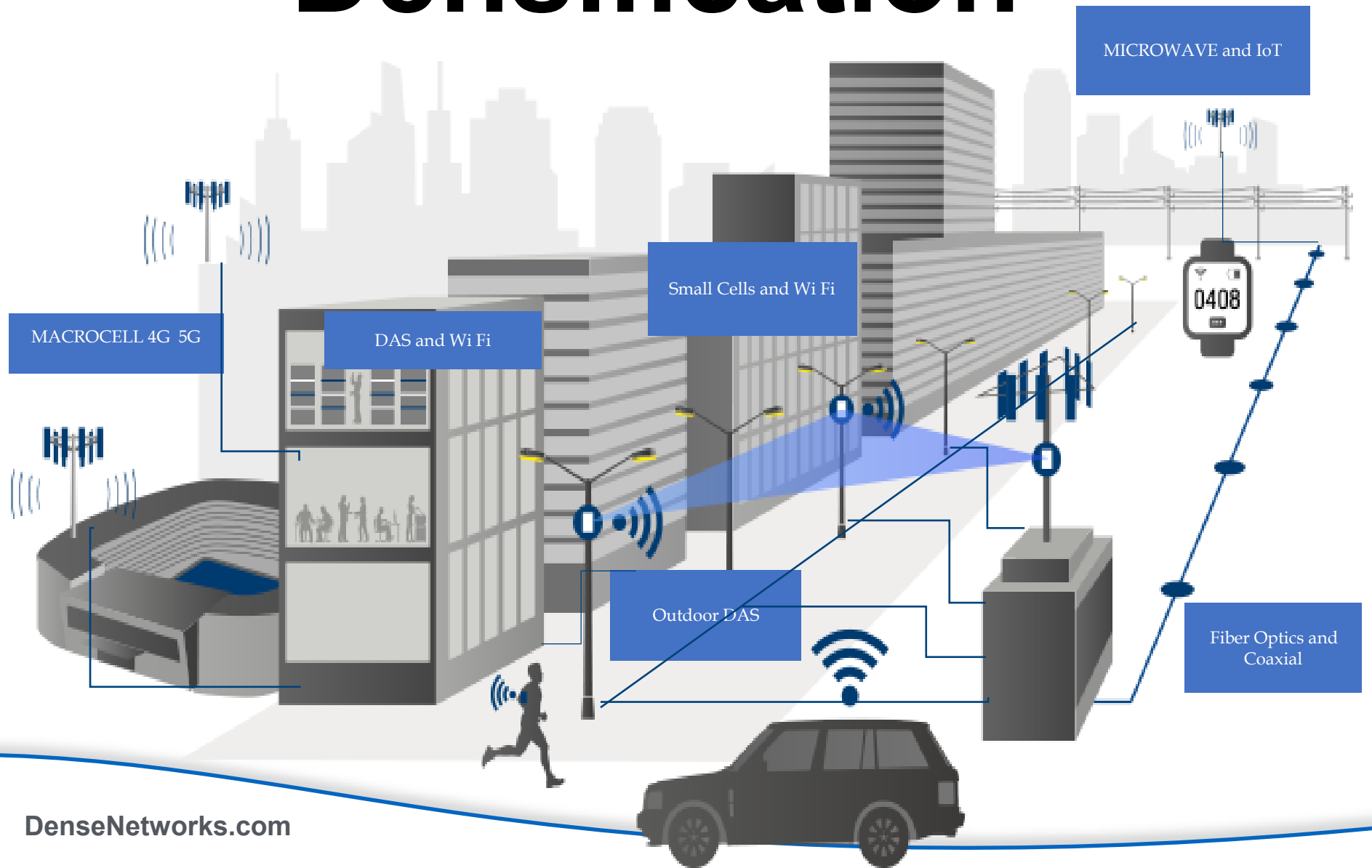
www.DenseNetworks.com

Agenda April 27, Washington DC, The Hamilton

9:05	Welcome	Peter Murray, Executive Director, Dense Networks
9:15	Capital Projects Fund (CPF) US Treasury	Joseph Wender, Director, US Treasury
9:45	Broadband, Equity, Access and Deployment (BEAD)	Andy Lipman, Morgan Lewis
10:10	Break	
10:20	Smart City Networks	Moderator, Peter Murray
	David Clow, CIO, DC Metro Police	
	Jon Minshew, Chief Technology and Innovation Officer, Dell	
	Malik Ishak, Director, Smart City, Signify	
	Uma Marques, Director, The Virginia Smart Community Testbed	
11:10	Break	
11:25	Wireless Network Innovations	Moderator, Peter Murray
	Eric Toenjes, National Market Manager, Graybar	
	Jamaal Smith, VP, Kajeet	
	Andrew Clegg, Spectrum Engineering, Google	
12:10	Lunch	
1:30	Adjourn	


WELCOME TO
ORLANDO
City Hall
CITY OF
ORLANDO

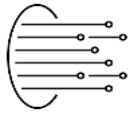
Densification



Digital Infrastructure

Scalable/Interconnected

Fiber	IoT	Cell-Macro, Small & DAS	Wi Fi	Private LTE & 5G	Smart Poles	Devices



NB-IoT

LoRa®

LTE

Lighting +

Cameras

Kiosks

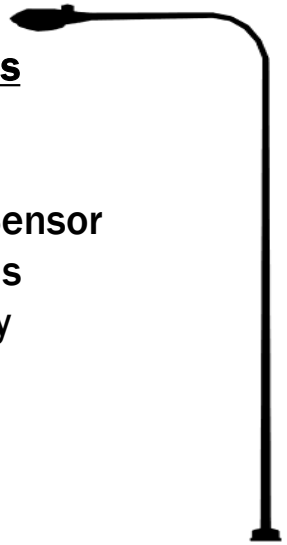
Computers/Tablets

Sensors

San Jose Broadband Strategy

STREETLIGHT

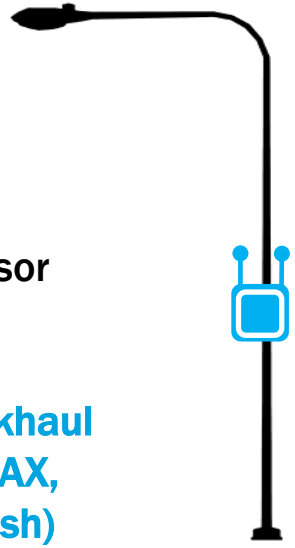
Light/Safety



Properties
- Height
- Power
- Light Sensor
- Lumens
- Density

SMALL CELLs

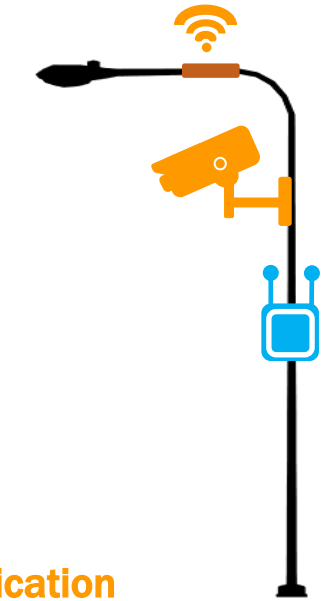
Broadband Digital Infrastructure



Properties
- Height
- Power
- Light Sensor
- Lumens
- Density
- Data Backhaul (Fiber, COAX, Radio mesh)

INTERNET OF THINGS

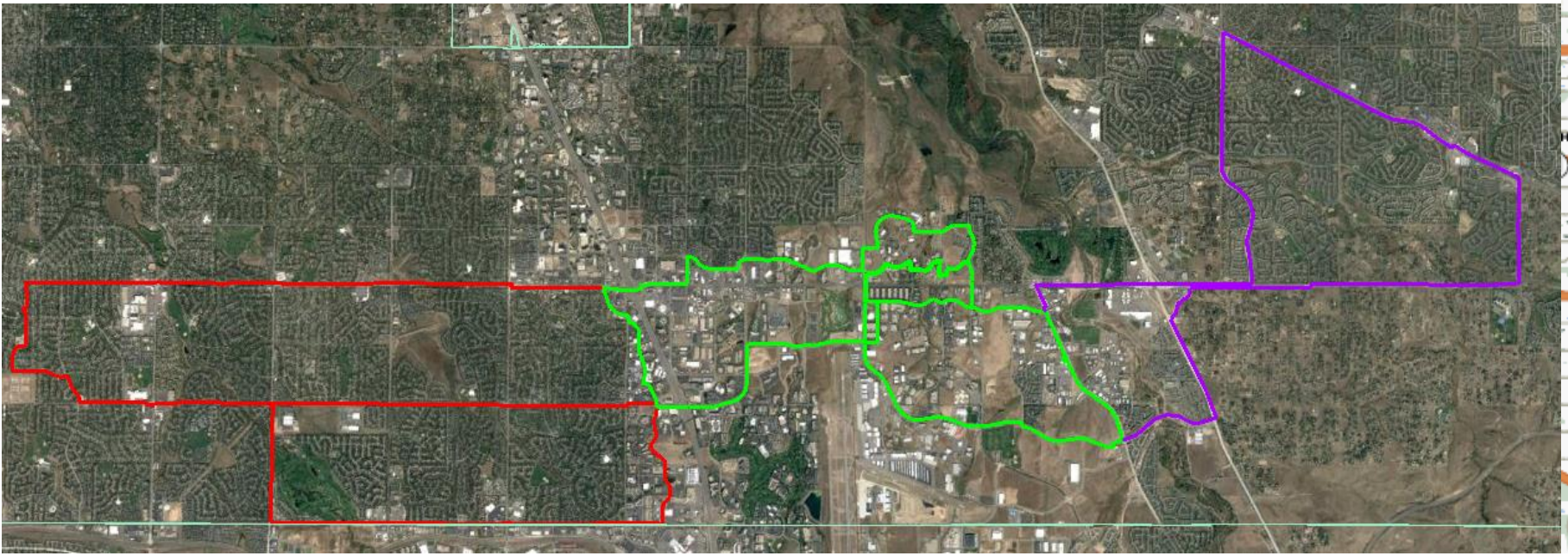
Smart Cities

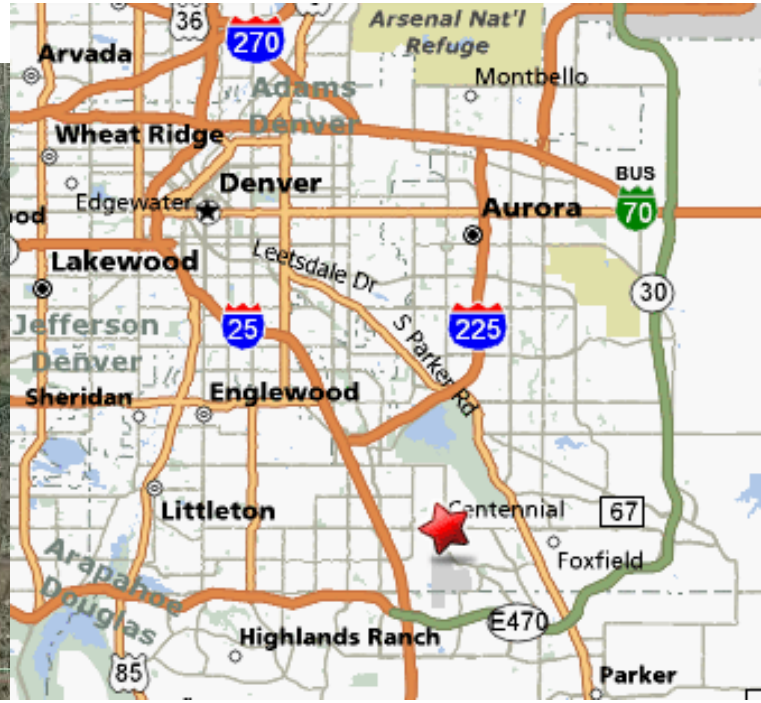


Properties
- Height
- Power
- Light Sensor
- Lumens
- Density
- Data Backhaul
- Sensors
- Cameras
- 2-way Communication
- Banner Advertising

Maturity:	**Mature**	**Emerging**	**Extremely Immature**
Possible Action:	**Proceed w/ LED Light Replacement Only**	**Re-examine in Broadband Strategy**	**Seek to Understand with Knight IoT Grant**

Fiber Backbone Open Access Model





CENTENNIAL FiberWorks

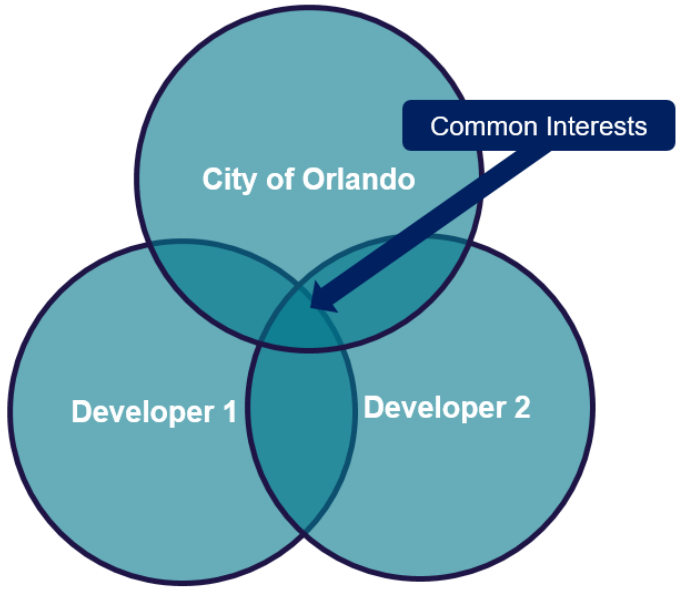
Fiber Backbone – Rings and Status

- Central Ring – Constructed
- East Ring – Under Construction
- West Ring – Under Construction

Centennial

The Utilities' Leverage

- Use of assets
  - Street Lighting poles – allowing small cell growth in territory
  - Data access and availability
- Expansion of our fiber network
  - Pilot opportunities
- Facilitating Conversations
  - Utility is a common stakeholder in all smart city verticals



Utility Lease Model

Colorado Springs Utilities
It's how we're all connected

Utilities of the Future:
- Over 2,000 miles of fiber buildout over the next 6 years
- Demand Side Management
- Distributed generation
- Advanced Metering Infrastructure

Fiber connectivity available to:
- Every address
- Every signalized intersection
- Every street light

Enabling infrastructure:
- High speed
- Low latency
- Highly secure
- Highly reliable

Office of Innovation

COLORADO SPRINGS
OLYMPIC CITY USA

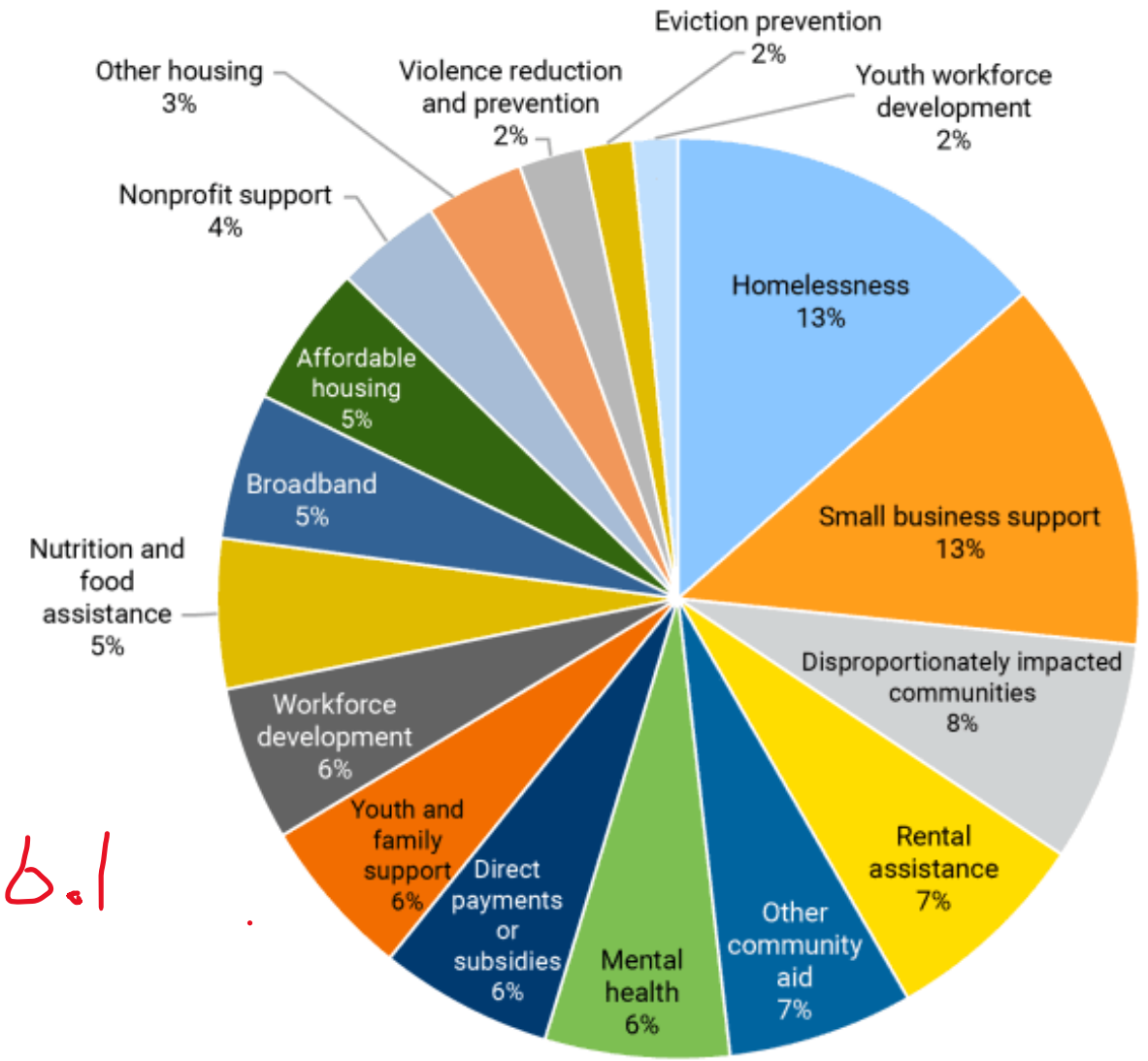

100
FW C 128
FEDERAL RESERVE NOTE
MF 5703513 1 B
F6
UNITED STATES FEDERAL RESERVE SYSTEM
Secretary of the Treasury.
Treasurer of the United States.
ONE HUNDRED
THIS NOTE IS
FOR ALL DEBTS, P
JULY 4, 1776.

ARPA funds

	Budgeted ($)	Economic disadvantage ($)	Percentage (%)	Total Projects
Madison, Wisc.	22,800,000	21,800,000	95.6	28
Riverside, Calif.	29,242,594	27,090,000	92.6	29
Columbus, Ohio	53,284,081	48,209,406	90.5	8
St. Louis, Mo.	123,195,020	109,650,470	89.0	70
Nassau County, N.Y.	185,350,000	163,750,000	88.3	18
San Jose, Calif.	70,562,771	61,900,771	87.7	25
Clackamas County, Ore.	28,191,637	22,684,455	80.5	11
Washoe County, Nev.	46,312,296	37,192,053	80.3	25
Minneapolis, Minn.	108,527,983	84,885,905	78.2	67
Dane County, Wisc.	94,375,082	71,662,768	75.9	16
San Joaquin County, Calif.	66,011,593	49,932,146	75.6	11
Los Angeles County, Calif.	704,851,000	521,501,000	74.0	61
Prince William County, Va.	31,200,000	22,500,000	72.1	7
Northampton County, Pa.	22,658,617	15,704,262	69.3	6
San Mateo County, Calif.	74,448,909	50,748,909	68.2	19
Nashville-Davidson, Tenn.	78,381,250	51,713,996	66.0	17
Maricopa County, Ariz.	414,987,433	273,141,352	65.8	55
Pierce County, Wash.	175,781,445	115,159,256	65.5	79
Alameda County, Calif.	142,500,000	91,500,000	64.2	15
Phoenix, Ariz.	133,365,662	85,565,662	64.2	36
St. Paul, Minn.	33,630,184	21,031,000	62.5	19
Orange County, Fla.	135,830,857	82,362,846	60.6	38
Ingham County, Mich.	29,601,971	17,318,000	58.5	13
York County, Pa.	65,753,816	37,983,311	57.8	105
Mesa, Ariz.	27,800,000	16,000,000	57.6	4

$ 16.1

Brookings Metro



Joey Wender, US Treasury

Director, Capital Projects Fund

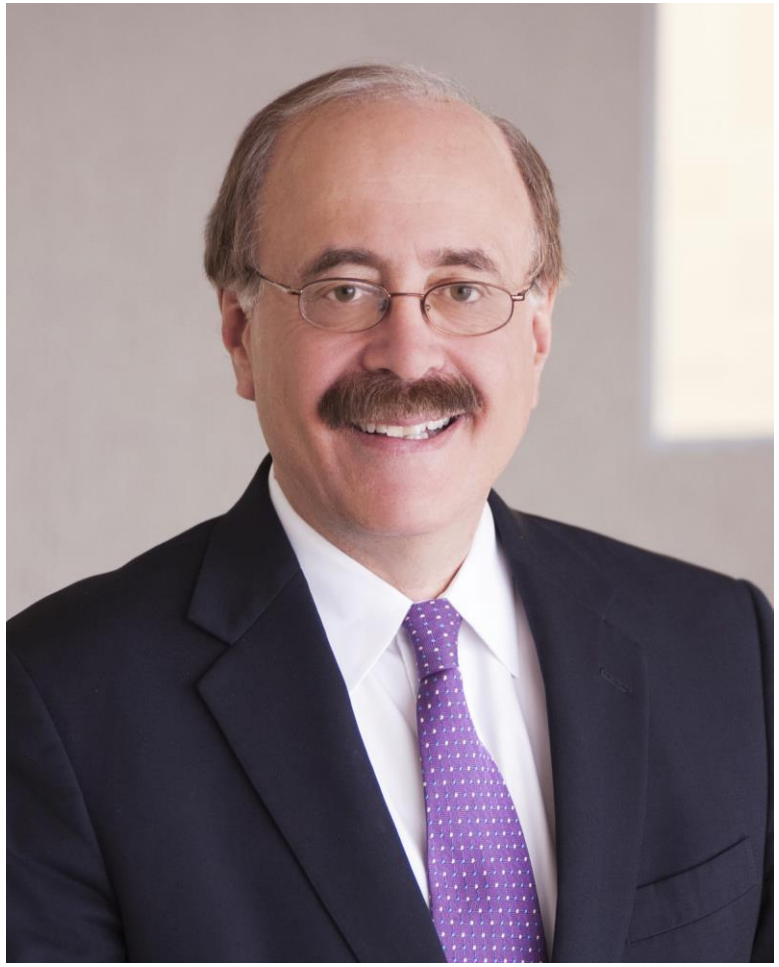
Q & A

-Can you explain the difference in all infrastructure programs like Louisiana and programs like Florida that have 3 components-Infrastructure (70%), Multipurpose Centers (25%) and Connectivity/Devices (5%)

-How does Digital Equity influence the scoring of grant applications?
-Workforce, Literacy, Devices, Affordability, Telehealth?

-Any insights when more funding awards will be made?

-Can Fixed Wireless be part of the Solution?
-Unlicensed?



Andy Lipman, Morgan Lewis