Smart Cities & Service Improvements Committee

Kip Harkness and Dolan Beckel February 1 2018

Today's Reports

Innovation Roadmap Verbal Update CC 18-001

Digital Inclusion & Broadband Strategy Verbal Update CC 18-002

Digital Inclusion and Broadband Strategy Update Progress Since November 12th Approval

Broadband Governance

- Initiated broadband deployment partnership negotiations with three major telcos
- Secured commitment to deploy ~200 small cells in an equitable fashion
- Shepherded the permitting process to bring first wave of small cells online in December
- Agreed on private sector investment in permitting process improvements and staff
- Generated new revenue commitment to support proposed addition of staff ad mid year

• Vertical Infrastructure

- Small cell permitting remained a focused top priority
- First wave of small cells in Santana Row were permitted, installed, inspected and are now in service
- Currently working with broadband providers next waves of small cells and fiber
- Learning and implementing improvements to increase speed and predictability

The Strategy (Recap)

The strategy is to identify the <u>tipping point</u> where just enough city intervention and investment incents the private sector to:

- Utilize existing valuable city assets to deploy broadband infrastructure
- Invest up to \$2B in San Jose's broadband infrastructure
- Thereby generating a sustainable revenue stream to ensure an equitable build-out and expand inclusion programs
- Help bolster city's capability to accelerate the build-out

The Benefits (Recap)

- 10,000 construction and equipment jobs
- Over \$2B GDP growth
- \$600M in select smart city benefits
- \$80M annual direct economic benefit to digitally excluded households
- More choice, better quality, and lower price broadband
- Increased opportunity from digital inclusion including higher educational attainment job acquisition, and career advancement, and improved mental and physical health

Digital Inclusion and Broadband Strategy Update Unlock the Value of City Assets



Digital Inclusion and Broadband Strategy Update Leveraging Pole Attachment Lease Asset

Value Exchange Example:

- City invests by lowering costs of broadband deployment
- Private sector invests in broadband outcomes



City Small cell lease rate 1. Economic Development Private Sector -2. Digital Inclusion 3. Smart City and IoT

TIME





Digital Inclusion and Broadband Strategy Update "Interest" Based Provided Provide Negotiations

Provider Interests

- Speed
- Predictability
- Cost savings
- Specific location (project) based barriers

San Jose Interests

- Economic Development
- Digital Inclusion
- Support for IoT

<u>Joint Interests</u>

- Speed and predictability
- Private sector investment in permitting improvements
- Fronting permitting staff costs
- Re-usable knowledge capital
- Reduced lease rates
- Support for equity and inclusion

Digital Inclusion and Broadband Strategy Update Interest Based Provided Provide Negotiations

	Incremental Negotiation	City Wide Negotiation
TECHNOLOGY	• Wireless	Wireless and commercial wired
INITIAL SCOPE AND SCALE	• 200 4G small cells	 300 4G small cells 3000 5G small cells Hundreds of miles of fiber 3-4 new/re-sited macro towers
	 Additional Value Propositions including digital inclusion support in future agreement amendments. 	 Additional Value Propositions
PROVIDER VALUE TRADED (PRIVATE SECTOR INVESTMENT)	 Permitting improvement grant Up front investment in lieu of permitting fees Deployment equity 	 Re-engineering project Up front investment in lieu of permitting fees Deployment equity, hotspots, and free access
SAN JOSE VALUE TRADED	 Small cell lease revenue discount SLA annual lease rate \$1352 - \$1803 	Small cell lease revenue discount
NEW LEASE REVENUE (5 Years)	• \$1,500,000	• TBD
NEW PERMITTING "REVENUE"	• \$500,000	• \$7,500,000
NEGOTIATION STATUS	LOI SignedAgreement in provider legal review	Negotiating Letter of IntentMay deviate from existing policy

Digital Inclusion and Broadband Strategy Update San Jose Current Small Cell Lease Rates Policy

San Jose Annual Small Cell Lease Rate					
	2015-16	2016-17	2017-18	2018-19	
Zone 1	\$2,625	\$2,704	\$2,785	\$2,868	
Zone 2	\$2,975	\$3,064	\$3,156	\$3,251	
Zone 3	\$3,500	\$3,605	\$3,713	\$3,825	

Director of Economic Development may discount an additional 50% in support of promoting economic development and under served communities

Proposed Mid Year Staffing Additions

- Broadband Governance (Civic Innovation)
 - Broadband manager, policy analyst, demonstration manager, SCRUM practice leader fellow
 - Funded through small cell revenue and private sector investment and 'demonstration' project agreements
- Vertical Infrastructure (PW, DoT)
 - Team leader (Principal Engineer), additional permitting staff (3)
 - Funded through permitting revenue, small cell revenue, and private sector investment
- Key resource (electrical engineer) staffed in Vertical Infrastructure (PW)

Heavy Lift Policies Need Council Prioritization

- Privacy and data security
- Dig once
- Small cell master licensing agreement

Broadband Deployment Next Steps

- Conclude Negotiations
 - Bring agreements to Council for approval (may require policy exception)
- Prioritize and Revised Policies
 - Prioritize privacy and data security, small cell lease, dig once
 - Includes exploring demonstration policy project for micro/nano trenching

• Ramp-Up Teams

- Recruit and onboard mid year approved positions
- Continue and expand process improvements with a focus on reducing the permit to install service level intervals.
- Begin asset management technology updates (DoT)

Process Improvements Implemented

- Batching by lighting circuit
- Immediate site inspections
- Weekly conference calls, open door policy
- Electrical load calculation guidelines **Process Improvements in Backlog**
- Aesthetic design standards by pole type
- Electrical and structural design standards by pole type and circuit type
- Remediation standards and processes
- Pre-approved contractors for remediation and make ready
- Adopt SCRUM and much more

Broadband Work Streams

Negotiate partnerships, approve agreements, maintain relationships



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Appendix

Hybrid Approach – 80% results for 20% effort



Appendix

Approved Recommendations

Staffing and Leadership	Policy	Governance
 Broadband governance and execution Vertical infrastructure team Digital inclusion organization 	 <u>Dig once</u> <u>Small cell lease</u> <u>Privacy and data security</u> 	 Digital infrastructure master leasing organization
Digital Inclusion Programs and Projects		Infrastructure and Funding
 Digital inclusion awareness events Public Wi-Fi opportunistic expansion Device donation and/or refurbishment pilot Device leasing pilot Family digital literacy program Senior digital literary volunteer program 		 Private sector investment in permitting capability and digital inclusion Emergency Technology and Communications bond

PRINCIPAL ENGINEER IS A CRITICAL ROLE FOR BROADBAND



21ST CENTURY NETWORK – 18TH CENTURY INFRASTRUCTURE

