



# County of Santa Cruz

## COUNTY ADMINISTRATIVE OFFICE

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SUSAN MAURIELLO, J.D., COUNTY ADMINISTRATIVE OFFICER

September 3, 2013

Agenda: September 10, 2013

### BOARD OF SUPERVISORS

County of Santa Cruz  
701 Ocean Street  
Santa Cruz, CA 95060

## REPORT ON BROADBAND CONNECTIVITY AND EXPANSION

Dear Members of the Board,

On August 6, 2013, your Board directed staff to return on today's agenda with recommendations to enhance broadband connectivity and expansion in Santa Cruz County. The purpose of this letter is to provide your Board with information regarding the County's broadband coverage, and to discuss initiatives that pose the greatest opportunity for achieving the stated objectives.

Our office has coordinated the efforts of staff in the Information Services, Planning and Public Works Departments in order to explore and evaluate various administrative and planning initiatives that could lead to greater investment in broadband infrastructure in the County. These efforts have included meeting with broadband providers, reviewing a variety of information including coverage maps, dig once policies and conduit specifications, and working with regional stakeholders on ways to expand broadband. The results of these efforts have been summarized by department in the attachment to this report. At today's meeting, a PowerPoint presentation highlighting the issues identified in the material in this report will be presented.

It is therefore RECOMMENDED that your Board accept and file this report and direct staff to return on or before November 5, 2013 with updates on implementing recommended actions to expand broadband in Santa Cruz County, as follows:

#### Information Services

1. Finalize conduit specifications in collaboration with Public Works and broadband providers.
2. Work with County Counsel and Public Works to establish master lease agreements that allow the installation of broadband infrastructure on utility poles, light standards and County assets.

#### Planning

3. Allow the installation of equipment within public right of ways, subject only to "time, place and manner" of access, through the County's encroachment permit process.
4. Streamline the application process and ensure permit fees are based on actual costs.
5. Draft amendments to County regulations that facilitate the deployment of broadband technology.
6. Work with broadband providers on economic development opportunities.

Public Works

- 7. Work with utility companies on their financing and installation of conduit as part of County projects.
- 8. Draft an ordinance based on the San Francisco "dig once" model for the County of Santa Cruz.

Very truly yours,



SUSAN A. MAURIELLO  
County Administrative Officer

Attachments

- cc: Information Services Director
- Planning Director
- Public Works Director

COUNTY OF SANTA CRUZ

# Report on Broadband Connectivity and Expansion

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Prepared for the Board of Supervisors

9/3/2013

## Table of Contents

<b>Section 1: Information Services .....</b>	<b>2</b>
<b>Section 2: Planning .....</b>	<b>8</b>
<b>Section 3: Public Works .....</b>	<b>10</b>
<b>Attachment A: Santa Cruz County Broadband Coverage Maps.....</b>	<b>12</b>
<b>Attachment B: Proposed San Francisco Dig Once Ordinance.....</b>	<b>18</b>

## Section 1: Information Services

### What is Broadband

Broadband or high-speed Internet allows users to access the Internet and Internet-related services at significantly higher speeds than those available through “dial-up” Internet access services. Broadband speeds vary significantly depending on the particular type and level of service ordered and may range from as low as 200 kilobits per second (Kbps), or 200,000 bits per second, to 30 megabits per second (Mbps), or 30,000,000 bits per second. Some recent offerings even include 50 to 100 Mbps. Broadband services for residential consumers typically provide faster downstream speeds (from the Internet to your computer) than upstream speeds (from your computer to the Internet).

Broadband can be provided over different platforms:

- Digital Subscriber Line (DSL)
- Cable Modem
- Fiber
- Wireless
- Satellite
- T1/T3 Business Class

### ***Digital Subscriber Line (DSL)***

DSL is a wireline transmission technology that transmits data faster over traditional copper telephone lines already installed to homes and businesses. DSL-based broadband provides transmission speeds ranging from several hundred Kbps to millions of bits per second. The availability and speed of DSL service may depend on the distance from the home or business to the closest telephone company facility.

### ***Cable Modem***

Cable modem service enables cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV set. Most cable modems are external devices that have two connections, one to the cable wall outlet and the other to a computer. They provide transmission speeds of 1.5 Mbps to over 100 Mbps. Transmission speeds vary depending on the type of cable modem, cable network and traffic load. Speeds are comparable to or exceed typical residential DSL.

### ***Fiber***

Fiber optic technology converts electrical signals carrying data to light and sends the light through transparent glass fibers about the diameter of a human hair. Fiber transmits data at speeds far exceeding current DSL or cable modem speeds, typically by tens or even hundreds of Mbps. The actual speed you experience, however, will vary depending upon a variety of factors, such as how close to your computer the service provider brings the fiber and how the service provider configures the service, including the amount of bandwidth used. The same fiber providing your broadband can also simultaneously deliver voice (VoIP) and video services, including video-on-demand.

### **Wireless**

Wireless fidelity (WiFi) is a "short range" technology that is often used in conjunction with a customer's DSL or cable modem service to connect end-user devices, such as PCs, laptops and smartphones, located within the customer's home or business to the Internet. In these cases, WiFi allows users to move WiFi-enabled devices around within their homes or businesses without installing additional inside wiring, but the actual "connection" to the service provider is via the customer's DSL or cable modem service. WiFi technology can also be "networked" to provide wider geographic coverage, and when configured this way, may be used by some service providers in offering broadband service.

Fixed wireless technologies using longer range directional equipment can provide broadband service in remote or sparsely populated areas where other types of broadband would be too costly to provide. Speeds are generally comparable to DSL service speeds. An external antenna is usually required. With newer services now being deployed (WiMax), a small antenna located inside a home near a window is usually adequate, and higher speeds are possible.

### **Satellite**

Just as satellites orbiting the earth provide necessary links for telephone and television service, they can also provide links for broadband services. Satellite broadband is another form of broadband technology and is particularly useful for serving remote or sparsely populated areas. Downstream and upstream speeds for satellite broadband depend on several factors, including the provider and service package purchased, the consumer's line of sight to the orbiting satellite, and the weather. Satellite service can be disrupted in extreme weather conditions. Typically a consumer can expect to receive (download) at a speed of about 1 Mbps and send (upload) at a speed of about 200 Kbps. These speeds may be slower than DSL and cable modem, but the download speed is still much faster than the download speed with dial-up Internet access. Obtaining satellite broadband can be more costly or more involved than obtaining DSL or cable modem.

### **T1 / T3 Business Class**

Traditional business class service to commercial entities include T1 /T3 and the ethernet class services. These are higher cost, reliable dedicated network services over copper infrastructure that are packaged for non-residential use. The T1 (1.5 Mbps) and the T3 (45 Mbps) are still widely used. The relative high cost of these types of broadband, particularly T3s, has seen their usage mainly centered in commercial/business situations requiring higher volume bandwidth. A newer circuit technology, Ethernet over FiberOptic, now offers business class service over existing fiber networks up to 10 Gbps speeds. The cost of these services makes them only economically feasible for large businesses and large public entities, such as universities and governments.

### **Current State of Broadband Coverage**

Extensive analysis of broadband access for consumer and commercial use has been completed as part of the American Recovery and Reinvestment Act of 2009. As a result, there is comprehensive data for the County regarding broadband availability and provider capacity and gaps. This data can be obtained from the National Telecommunications and Information

Administration (NTIA)<sup>1</sup>, California Public Utilities Commission (CPUC)<sup>2</sup> and independent sites<sup>3</sup>, and includes detailed information regarding geographic coverage maps and provider diversity in a specific area. A Countywide map showing unserved and underserved areas and maps showing portions of the County's unserved areas (in red) and areas served by only one provider (in green) are attached to this report. A more detailed view of the maps will be presented at the Board meeting.

In comparison to the national average, Santa Cruz has extensive broadband coverage with the exception of some minor gaps in the rural areas of the Santa Cruz Mountains, North Coast and Watsonville areas. The major providers include AT&T and the two cable providers, Comcast and Charter. There is one major local Internet Service Provider (ISP), Cruzio, whose network consists of a combination of Sunesys deployed fiber and self-deployed wireless point-to-point. There are several other smaller ISPs in Santa Cruz County, including Got.net and Surfnet. These smaller providers provide service to consumers and commercial entities through a combination of leasing fiber and other infrastructure from the major providers, such as Comcast and AT&T. From an availability standpoint, the County has extensive fiber and broadband networks that meet the needs of commercial and residential usage, although it can be expensive for smaller commercial uses.

### ***Existing Broadband Services in the County***

AT&T is one of the largest providers of broadband service in Santa Cruz County with a fiber network that covers most of the County's geographic areas. AT&T services include residential U-verse with speeds ranging from 3 Mbps to 24 Mbps depending on the residential location, and business class service from T1 up to 10 Gbps. U-verse is delivered over AT&T's LightSpeed network in some of the County's incorporated areas. AT&T has proposed an expansion of their LightSpeed network in the unincorporated area, which would bring higher speeds to residential and small-to-medium business customers. These plans are currently under review in Planning and Public Works.

Comcast and Charter are the two cable franchise providers in Santa Cruz County. Both companies provide cable broadband to residential customers and in the past three years have established business class offerings in the County. Charter, which provides cable services to South County, some parts of Aptos and Capitola, offers residential speeds up to 100 Mbps and commercial speeds up to 1 Gbps. Comcast, which serves the cities of Santa Cruz and Scotts Valley and the northern area of Santa Cruz County, provides speeds up to 45 Mbps. Comcast has recently converted their network to digital, and will be upgrading their offerings in the near future. Both providers have a strong presence in the residential areas as cable television providers. Comcast just completed an expansion in several mountain and rural communities and is under construction for the Loma Prieta area now.

Of the smaller providers, Cruzio has the largest presence with a concentration of customers in the area surrounding the City of Santa Cruz. They continue to grow their offerings for residential and commercial DSL with their Velocity product line, which offers speeds up to 48 Mbps. Cruzio also offers commercial class Internet access, but it is limited to several key geographic areas, including the cities of Santa Cruz and Watsonville and parts of the unincorporated area in Live Oak.

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<sup>1</sup> <http://www.ntia.doc.gov/category/broadband>

<sup>2</sup> <http://www.broadbandmap.ca.gov/>

<sup>3</sup> <http://www.broadband.org/>

**Availability and Cost of High Volume Bandwidth**

While broadband access is readily available in most of Santa Cruz County, there are several issues that remain hurdles to broadband availability. While the majority of the County meets the ARRA definition of served areas, there are significant pockets of residential and commercial customers in need of greater availability to larger bandwidth. These include the mountain areas bordering Santa Clara County and the rural areas surrounding Watsonville. Also, the increased demands of home based businesses and telecommuters working out of their homes have caused increased demand for larger and cost effective capacity.

The cost of larger bandwidth capacity in Santa Cruz County has also been a limiting factor. As shown on the attached maps, there are several key areas of the County for which there is only one broadband provider. As a result, many residential customers and smaller businesses with large Internet requirements are confronted with limited and potentially expensive current offerings. As an example, as the medical industry moves more towards the electronic transmission of data, local medical provider offices are seeing increased capacity needs that require data circuits that can run from \$400 to \$1,000 per month for capacities barely above DSL standards.

Finally, while the cable broadband networks have made significant inroads into residential broadband, there is still some lack of cable broadband infrastructure and availability in commercial and business areas. So while broadband is widely available in the County, there are pockets that lack affordable broadband or at least are not available at rates that are attractive to the end consumer.

**Gigabit Network: Financial, Legal and Other Barriers**

One of the solutions for increased capacity and competitive pricing is the implementation of a gigabit network, such as the Google fiber network or the Gig.U initiative that centers on universities as network "anchor" institutions. However, in Santa Cruz County, the major providers have few incentives to further build out existing infrastructures, which are already extensive. The business focus of providers has been to sign up customers while keeping capital costs at a minimum. Many of these gigabit projects target high density population areas or cities where there is a high volume of web usage, which means higher rates of advertising revenue for providers that build and maintain the network and infrastructure.

There are also significant fiscal and legal barriers. The cost of building and maintaining a competitive business model within existing markets can be prohibitive in many circumstances. Existing ordinances and permitting processes can prove to be daunting to providers, which want to quickly implement infrastructure or receive carte-blanche to run fiber in areas such as sewers and abandoned infrastructure.

**Expansion Plans in Progress**

Several major providers have indicated expansion plans for broadband in Santa Cruz County. There have also been discussions regarding opportunities to expand broadband in joint projects between the Santa Cruz County Regional Transportation Commission (SCCRTC) and the major providers. These projects include AT&T's proposed expansion of their LightSpeed network, the joint Sunesys/UCSC project to deploy a 90-mile backbone network between Santa Cruz and



Soledad, and the potential deployment of broadband infrastructure as part of the Monterey Bay Scenic Trail project.

### ***AT&T LightSpeed Project***

AT&T has proposed expanding its LightSpeed network to the County's unincorporated area. The LightSpeed network upgrade builds upon AT&T's existing fiber network by extending fiber further into residential neighborhoods. While in most cases the additional fiber would be placed in conduit that is already in place, trenching may be required to install new conduit or repair and replace existing conduit. LightSpeed also involves the construction of new 4' x 4' x 2' cabinets that house the electronics needed to light the fiber-optics and convert the fiber signal to a bandwidth that can be transmitted from the new cabinets to homes over the existing copper distribution network. The detailed plans are under review by Planning and Public Works. With LightSpeed in place, AT&T can offer its U-verse service, which bundles television, voice and Internet, to additional consumers in the unincorporated area.

### ***Sunesys Backbone Network Project***

The Sunesys project has proposed to deploy a major fiber backbone network from Santa Cruz to Soledad (Monterey County) that would further extend their existing network in Santa Cruz. The current installed infrastructure provides broadband capacity to UCSC and Cruzio, a local ISP, and includes a major broadband connection from Sunnyvale, CA to Santa Cruz. While this would provide a large capacity backbone through the County, it will require an ISP, such as Cruzio, to provide the "last mile" connections to residential and commercial areas. The project is to be funded through a grant from the California Advanced Service Fund (CASF). At this time, the grant proposal is pending review and approval by the CPUC.

### ***Monterey Bay Scenic Trail Project***

With the acquisition of the rail line by the SCCRTC, there has been some preliminary discussion between SCCRTC Board members, AT&T and Verizon to deploy fiber along the existing rail, either on poles or through microtrenching into the existing track areas. Like the proposed Sunesys project, this would provide a backbone fiber network that would run the length of the County and intersect several major commercial areas from Davenport to Watsonville. Discussions to date have been preliminary. Further investigation of the potential of this proposed joint project is still required.

### **Input from Internet Service Providers**

Over the past three months, County staff have met with six providers, including both large and local companies offering broadband services. These discussions have focused on fiber availability and mapping, broadband expansion plans and how that relates to economic development, and what the County can do to facilitate broadband expansion.

- **Fiber availability and mapping** – Most providers are unwilling to provide detailed maps showing the location of their fiber networks due to proprietary and security concerns, but they are willing to discuss fiber availability in specific areas that are still needed. Only Sunesys provided detailed maps of their existing and proposed fiber routes.

- **Broadband expansion plans** – Both large and local providers are interested in expanding their broadband service within the County. As described, AT&T would like to expand its LightSpeed network to offer its U-verse service in the unincorporated area. Local providers are interested in building off of the existing and proposed fiber routes to compete with the large providers and offer more options to residents and businesses. All providers are eager to work with the County on expanding broadband in connection with economic development.
- **What the County can do** – Local providers are interested in working with the County to expand broadband infrastructure. Some providers also expressed an interest in having the County develop conduit specifications based on existing industry standards so they can more easily install their networks. Information Services has drafted preliminary conduit specifications and provided them to Public Works for analysis and costing. Finally, at least one provider would like to see the County establish master lease agreements that allow the installation of broadband infrastructure on utility poles, light standards and County assets.

**Summary and Conclusion**

In summary, while providers have done extensive build outs of the County’s fiber backbone, there is still room for improvement. Many areas of the County are limited to a single provider. To address this issue, the County could make it easier for the ISPs to work through the regulatory and permitting process, as discussed by Planning in Attachment B.

Information Services recommends the following actions:

1. Finalize conduit specifications in collaboration with Public Works and broadband providers.
2. Work with County Counsel and Public Works to establish master lease agreements that allow the installation of broadband infrastructure on utility poles, light standards and County assets.

## Section 2: Planning

### **Broadband and Economic Development**

The need for greater speed, reliability and ability to use several devices simultaneously has been expressed at various community workshops related to the Sustainable Community Plan/Transit Corridor Plan and the Economic Vitality Strategy. The ability to offer high-speed Internet access, including larger bandwidth capacity at a reasonable cost, could facilitate the County's business attraction and job creation efforts. Improved broadband infrastructure combined with our proximity to the Silicon Valley, the presence of several universities (i.e., USCS, Cabrillo and Cal State Monterey Bay), and our creative and innovative culture offer great potential for economic development in Santa Cruz County. Broadband providers are eager to work with the County, and the County should welcome their contributions to our economic development opportunities.

### **Regulatory and Permitting Processes**

The industries related to television, telephone and Internet services are rapidly evolving and converging. The 2006 Digital Infrastructure and Video Competition Act (DIVCA) eliminated the ability of local governments to enter into "franchise agreements", and provided that the installation of a network within the public right of way must be allowed in the same way that telephone companies are allowed within the public right of way. The County can limit installations only where public access and safety would be affected. Currently, Planning continues to process applications for installations within the public right of way, and Public Works is responsible for encroachment permits. The County could allow the installation of equipment within public right of ways, subject only to "time, place and manner" of access, through our encroachment permit process. This would make Public Works solely responsible for these applications and would expedite the process.

According to providers, Santa Cruz County's existing ordinances and permitting processes are considered obstacles to expanding service. In order to achieve the goal of providing greater broadband services at competitive prices, the County could apply less stringent and more streamlined regulatory approaches to foster greater competition among providers and to encourage providers to go into underserved areas. This would require streamlining the application process, including what type of information is required, when an application is considered "complete" for processing, and how extensive the "visualization" requirements need to be. It could also require ensuring permit fees are based on an "at cost" fee structure, rather than a "flat fee". Lastly, the County could consider amendments to regulations that would facilitate the deployment of broadband technology, particularly within hard-to-serve residential areas, agriculture areas and public right of ways.

As noted by Information Services, AT&T would like to expand its "U-verse" service in the unincorporated area and is preparing an application to install 80 new above-ground cabinets at a size of approximately 4' x 4' x 2' in the public right of way within both residential and commercial areas. An accommodating and streamlined County permit process would enable AT&T to deploy this improved infrastructure in the near future. Currently, these plans are being reviewed by Planning and Public Works.

**Summary and Conclusion**

In summary, efforts to expand broadband would benefit businesses, residents and students in Santa Cruz County. To assist providers in deploying new and improved infrastructure, the County could support a number of changes to its regulatory and permitting processes.

Planning recommends the following actions:

- 3. Allow the installation of equipment within public right of ways, subject only to “time, place and manner” of access, through the County’s encroachment permit process.
- 4. Streamline the application process and ensure permit fees are based on actual costs.
- 5. Draft amendments to County regulations that facilitate the deployment of broadband technology.
- 6. Work with broadband providers on economic development opportunities.

## Section 3: Public Works

### Coordination with Utility Companies

The County Department of Public Works (DPW) works with utility companies (AT&T, PG&E, Comcast, Verizon, Soquel Creek Water, etc.) and other local public agencies (city and county water and sewer districts, and city public works departments) through quarterly utility meetings for updating and coordinating improvement projects. When County staff initiates a public works project at the design stage, DPW works directly with the affected utility companies and public agency to coordinate specific relocation of individual utilities. Once a year, the County sends a letter to all the utilities and local cities regarding upcoming improvement projects. Likewise, utility companies and the cities coordinate their improvement projects through the County encroachment section of DPW for their own utility projects.

### County Utility Projects and Cost of Conduit

In reviewing upcoming utility improvement projects by the County, the Sanitation District is currently in the design phase for three sewer replacement projects in the Live Oak and Aptos areas. The projects are scheduled for construction over the next several years and will provide for the replacement of sewer lines that are at the end of their service life. These projects include the replacement of sewer lines on East Cliff Drive between 12th and 17th Avenues (approximately 1,940 linear feet), a larger project on 17th Avenue between Brommer Street and Felt Street and then on Felt Street between 17th Avenue and the Rodeo Gulch Pump Station (approximately 5,630 linear feet), and a project located under Highway 1 near Valencia Creek between Aptos Street and Moosehead Drive (approximately 765 linear feet). Because all three projects are funded by the rate payers of the County Sanitation District, additional funding would be necessary to install conduit for communication purposes (fiber optic) in the roadway adjacent to the new sewer line trenches. In situations such as this, as well as some of our roadway improvement projects, DPW would work with utility companies if they were interested in financing the installation of conduit in conjunction with County projects.

In reviewing recent cost estimates for installing conduit for a recent sanitation project, DPW is estimating a construction cost of \$30 per linear foot based to install conduit for with a pull tape (includes materials, excavation, backfill, asphalt-concrete cap, and a slurry seal over the trench). This cost does not include the installation of the fiber optic lines or wire in the conduit. Additionally, this assumes pull boxes every 200 feet, with additional boxes set closer where there are bends or turns.

In evaluating abandoned sewer or drainage lines for possible installation of conduit, it would be difficult to utilize these lines since they have reached the end of their useful service life. The sewer lines that are being replaced or have been abandoned are in extremely poor structural condition due to wastewater environment the lines have been subjected too. Many of these old sewer lines were manufactured with asbestos/concrete materials which require special hazardous waste handling when removed, and they are generally located between 3 and 20 feet beneath the roadway surface. If a line is abandoned, they generally fill with water due to localized high ground water tables. In most cases, as a localized drainage line is being replaced due to its existing condition, a new drainage line is installed in the same location for purposes of keeping facilities within the existing utility easements.

**Dig Once Ordinance**

Currently, DPW is reviewing a proposed amendment to an existing ordinance in the City and County of San Francisco (City and County) that would require the Public Works Department or other municipal utilities to evaluate and coordinate the installation of electrical or communications infrastructure, to the maximum extent practical and feasible, in the public right of way whenever a new capital improvement project is under consideration at the planning stage, construction or reconstruction, or a roadway is being considered for repaving. The ordinance would essentially require revisions to the City and County Public Works Department’s standard plans and specifications to accommodate the electrical and communications infrastructure, as well as implement an extensive notification and project coordination process with other City and County departments, utility companies and other municipal agencies. The proposed legislation is attached to this report.

DPW believes that if a similar “dig once” ordinance to the City of County of San Francisco was approved by your Board, it would allow us to move forward with a coordinated approach on the installation of communication network within the County. This coordinated effort would also require revisions to the County Design Criteria to provide recommendations on a recommended installation process of the communication system with the utility companies. DPW will continue to monitor the City and County of San Francisco’s proposed ordinance amendments to accommodate communication infrastructure.

**Summary and Conclusion**

In summary, broadband infrastructure could be added to a number of utility improvement projects in the County based on available funding. A coordinated approach to installing a County-wide communication network could be accomplished by establishing a “dig once” ordinance similar to proposed legislation in the City and County of San Francisco.

Public Works recommends the following actions:

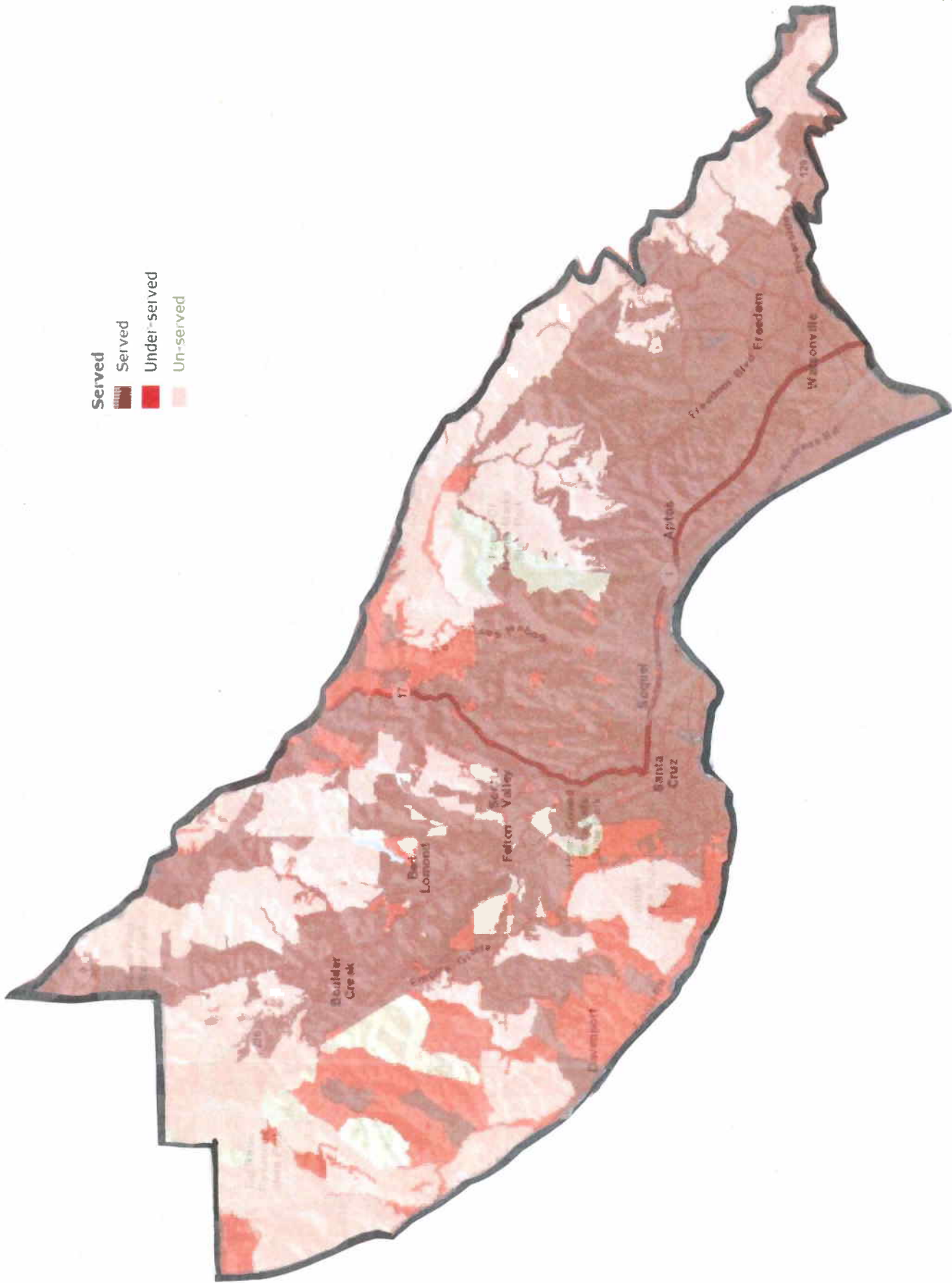
- 7. Work with utility companies on their financing and installation of conduit as part of County projects.
- 8. Draft an ordinance based on the San Francisco “dig once” model for the County of Santa Cruz.

# Attachment A

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Santa Cruz County Broadband Coverage Maps

Served  
 Served  
 Under-served  
 Un-served







Permalink

Short URL » nbm.gov/ARCp

17

Tweet

Like 1.4k

### Number of Broadband Providers Data as of: 12/31/12

Select a provider type:

WIRELINE

WIRELESS

Select area(s):

UNSERVED AREAS

SERVED AREAS



The National Broadband Map is a tool to search, analyze and map broadband availability across the United States. Created and maintained by the NTIA, in collaboration with the FCC, and in partnership with 50 states, five territories and the District of Columbia.





Permalink

Short URL » nbm.gov/ARCP

18

Tweet

Like 1.4k

### Number of Broadband Providers Data as of: 12/31/12

Select a provider type:

WIRELINE

WIRELESS

Select area(s):

UNSERVED AREAS

SERVED AREAS



The National Broadband Map is a tool to search, analyze and map broadband availability across the United States. Created and maintained by the NTIA, in collaboration with the FCC, and in partnership with 50 states, five territories and the District of Columbia.





Permalink

Short URL » nbm.gov/ARCp

19

Tweet

Like

1.4k

### Number of Broadband Providers Data as of: 12/31/12

Select a provider type:

**WIRELINE**

WIRELESS



Select area(s):

UNSERVED AREAS

**SERVED AREAS**

Minimum: 1  
Maximum: 1



The National Broadband Map is a tool to search, analyze and map broadband availability across the United States. Created and maintained by the NTIA, in collaboration with the FCC, and in partnership with 50 states, five territories and the District of Columbia.





Permalink

Short URL » nbm.gov/ARCp



Tweet

Like 1.4k

### Number of Broadband Providers Data as of: 12/31/12

Select a provider type:

WIRELINE

WIRELESS



Select area(s):

UNSERVED AREAS

SERVED AREAS

Minimum: 1  
Maximum: 1



The National Broadband Map is a tool to search, analyze and map broadband availability across the United States. Created and maintained by the NTIA, in collaboration with the FCC, and in partnership with 50 states, five territories and the District of Columbia.



# Attachment B

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Proposed San Francisco Dig Once Ordinance

1 [Public Works Code - Installation of City Infrastructure in Excavation Projects]

2 **Ordinance amending the Public Works Code to require the installation of City-owned**  
3 **telecommunications and electricity infrastructure in excavation projects where the City**  
4 **has determined that it is both financially feasible and consistent with the City's long-**  
5 **term goals to develop the City's electrical and communications infrastructure; and to**  
6 **coordinate the installation of the infrastructure with municipal and utility excavators.**

7 NOTE: Additions are *single-underline italics Times New Roman*;  
8 deletions are *strike-through italics Times New Roman*.  
9 Board amendment additions are double-underlined;  
Board amendment deletions are ~~strikethrough normal~~.

10 Be it ordained by the People of the City and County of San Francisco:

11 Section 1. The Public Works Code is hereby amended by amending Section 2.4.13, to  
12 read as follows:

13 SEC. 2.4.13. TRANSIT, PEDESTRIAN, BICYCLE, ~~AND STORMWATER~~, ELECTRIC,  
14 AND COMMUNICATIONS INFRASTRUCTURE IMPROVEMENTS AS PART OF PLANNING,  
15 CONSTRUCTION, RECONSTRUCTION, AND REPAVING PROJECTS.

16 (a) Whenever the Department or other Municipal Excavator undertakes a project  
17 involving the planning, construction, reconstruction, or repaving of a public right-of-way, such  
18 project shall include, to the maximum extent practicable and feasible, the following transit,  
19 pedestrian, bicycle, ~~and stormwater~~, electric, and communications infrastructure improvements:

20 (1) Street and pedestrian-scale sidewalk lighting;

21 (2) Pedestrian and bicycle safety improvement measures, as established in any  
22 official City adopted bicycle or pedestrian safety plan or other City adopted planning  
23 documents;

24 (3) Appropriate access in accordance with the Americans with Disabilities Act;  
25

1 (4) Public transit facilities accommodation, including, but not limited to designation  
2 of the right-of-way as a transit preferential street designation or bus rapid transit corridor;

3 (5) Traffic calming devices;

4 (6) Landscaping;

5 (7) Low-impact design stormwater facilities consistent with the Stormwater Design  
6 Guidelines;

7 (8) Other pedestrian and streetscape elements listed as appropriate to the relevant  
8 street type as identified and defined in the Better Streets Plan; and

9 (9) Other street and sidewalk improvements consistent with the City's "Transit First"  
10 Policy" (Section 16.102 of the City Charter) and "Better Streets Policy" (Chapter 98.1 of the  
11 San Francisco Administrative Code)-and

12 (10) Electric or communications infrastructure.

13 (b) The Director, in consultation with the Directors of the San Francisco Municipal  
14 Transportation Agency, Department of Public Health, Planning Department, Department on  
15 the Environment, San Francisco Public Utilities Commission, Department of Technology, and  
16 Mayor's Office on Disability shall develop orders, regulations, or amendments to the  
17 Department's Standard Plans and Specifications that address the improvements set forth in  
18 Subsection (a).

19 (c) To the maximum extent practicable and feasible, the Director shall condition all  
20 excavation and street improvement permits on the inclusion of the improvements set forth in  
21 Subsection (a). If such conditions would exceed the Director's regulatory authority, the  
22 Director shall coordinate with other City departments to provide, to the maximum extent  
23 practicable and feasible, said improvements on behalf of the City. As part of the decision on  
24 any permit or authorization pursuant to the Public Works Code, the Director shall take into  
25

1 account the permit activity's positive and negative impacts on the integration, enhancement,  
2 or preservation of the improvements set forth in Subsection (a).

3 Section 2. The Public Works Code is hereby amended by adding Section 2.4.14, to  
4 read as follows:

5 SEC. 2.4.14. COORDINATION WITH CITY AGENCIES.

6 (a) Notice to City Agencies.

7 (1) Before filing an application for a Permit, the Applicant shall notify the San Francisco  
8 Public Utilities Commission and the Department of Technology in writing that the Applicant intends to  
9 file an application for a Permit.

10 (2) The Applicant shall send the notice to the San Francisco Public Utilities Commission  
11 and the Department of Technology at least sixty (60) days before filing an application for a Permit  
12 under Section 2.4.10.

13 (3) The notice shall state the location of the proposed Excavation, the linear feet to be  
14 excavated, the anticipated date for filing the application, and the anticipated dates on which the  
15 Excavation will be commenced and completed. The notice shall also state that the City agencies have  
16 sixty (60) days to notify the Applicant and the Department that they intend to participate in the  
17 Excavation or they will be deemed to have elected not to participate.

18 (b) Application Process.

19 (1) Notice Required. The Department shall not approve an application and issue a Permit  
20 until the Department has determined that the Applicant has followed the notice process required in this  
21 Section 2.4.14.

22 (2) Denial of Application. The Department shall deny an application for a Permit if the  
23 Department determines that the Applicant has failed to comply with the notice requirements of this  
24 Section 2.4.14.

25 (3) Approval of Application.





1 so, the San Francisco Public Utilities Commission shall notify the Applicant and the Department in the  
2 time required by the notice that the San Francisco Public Utilities Commission intends to participate in  
3 the Excavation.

4 SEC. 2.4.96. DEPARTMENT OF TECHNOLOGY.

5 Upon receipt of a notice issued pursuant to Section § 2.4.14 that a Utility Excavator or  
6 Municipal Excavator intends to apply for a Permit under this Article, the Department of Technology  
7 shall review the application to determine whether it is both financially feasible and consistent with the  
8 City's long-term goals to add telecommunications infrastructure to be owned by the City to a proposed  
9 Excavation. If so, the Department of Technology shall notify the Applicant and the Department in the  
10 time required by the notice that the Department of Technology intends to participate in the Excavation.

11 Section 4. Effective Date. This ordinance shall become effective 30 days from the  
12 date of passage.

13 Section 5. This section is uncodified. In enacting this Ordinance, the Board intends to  
14 amend only those words, phrases, paragraphs, subsections, sections, articles, numbers,  
15 punctuation, charts, diagrams, or any other constituent part of the Public Works and  
16 Administrative Codes that are explicitly shown in this legislation as additions, deletions, Board  
17 amendment additions, and Board amendment deletions in accordance with the "Note" that  
18 appears under the official title of the legislation.

19 APPROVED AS TO FORM:  
20 DENNIS J. HERRERA, City Attorney

21  
22 By: \_\_\_\_\_  
23 WILLIAM K. SANDERS  
24 Deputy City Attorney

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