

**Report on cable television-related
needs and interests, and system
technical review in the Comcast
franchise areas of The City of
Philadelphia, Pennsylvania**

Prepared December 31, 2014

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**REPORT ON CABLE TELEVISION-RELATED NEEDS AND
INTERESTS, AND SYSTEM TECHNICAL REVIEW
IN THE COMCAST FRANCHISE AREAS OF
THE CITY OF PHILADELPHIA, PENNSYLVANIA**

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EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

CBG Communications, Inc. (CBG), in conjunction with its Project Team Partners, Dr. Constance Book, Ph.D. of Elon University and President of Telecommunications Research Corporation; Carson Hamlin, Video Engineer/Media Integrations Specialist; Cohen Law Group; and Issues & Answers, Telephone Research Firm, has conducted a cable-related Residential Needs and Interests Assessment, Public, Educational and Governmental (PEG) Access Needs Assessment, Institutional Network Needs Assessment and Cable System Technical Review concerning the Comcast Cable Television System serving the four franchise areas in the City of Philadelphia, Pennsylvania (City). This Needs Ascertainment, Review and related research has been conducted as part of cable franchise renewal proceedings with a local cable television provider, Comcast Cable (Comcast).

The full results of all the reviews and assessments through the end of 2014 are presented in the Report that follows. The Report provides information for the City regarding issues of significance to the residents and organizations in the Philadelphia franchise areas that are related to cable communications and, correspondingly, the ability of the cable system and Comcast to meet these demonstrated needs and interests. As additional information is received in 2015 during the course of the franchise renewal process, CBG anticipates issuing addenda to the report as needed.

The key findings, recommendations and observations discussed in this summary and in the full Report are based on an extensive data collection including, but not limited to, the following:

- A telephone-based Residential Community survey on cable-related needs and interests, conducted with a random sampling of 800 franchise area residents. Of those interviewed, 400 were Comcast cable television subscribers and 400 were not. This sample size provides a margin of error of $\pm 3.4\%$. The information obtained provided statistically valid data on residents' needs, interests, attitudes and opinions related to Comcast cable television. Subject areas included, but were not limited to:¹
 - Respondents' familiarity and experiences with Comcast.
 - Reasons non-subscribers do not subscribe to Comcast cable service or stopped subscribing to Comcast.
 - Amount of the average monthly cable bill (all services and fees).
 - Type of cable package subscribed to by respondents.
 - Other services subscribed to with Comcast (telephone and Xfinity broadband).
 - General level of satisfaction with Comcast.
 - Suggestions on how to improve the services provided by Comcast.
 - Quality of specific service features provided by Comcast.

¹ See Section A, Residential Telephone Survey, pp. 12-13.

- List of specific channels with poor picture quality or poor audio quality.
 - Ratings of communication and installation experiences with Comcast, including telephone-based customer service provided by the company.
 - The number of cable outages and subscriber experiences with restoration of services.
 - Awareness and opinions of government, education and public access programming currently offered and future interest in local programming. Non-subscribers were also asked about their interest in receiving local access programming.
 - Quality of the picture and sound of local access programming and evaluation of the programming's informational and entertainment value.
 - Interest in receiving local access programming in HD and via the On Demand feature of the Comcast cable television system.
 - The presence of broadband in the home in Philadelphia and current levels of online activity.
 - Interest in interactive government services from the City.
- In a further effort to extend the opportunity to all residents to provide feedback concerning cable television needs and interests, an online version of the Residential Community Survey was launched after the telephone study was completed. This survey covered the same topics as the telephone survey. It was also made available in hard copy form in local libraries and at locations throughout the City for its KEYSPOT community Internet access initiative. Three thousand, two hundred eleven (3,211) Philadelphia residents responded to the online survey to share their cable television experience.²
 - Focused discussions and update discussions with Public Access Staff and the Board of Directors from PhillyCAM, the independent non-profit providing Public Access services to Philadelphia residents, as well as extensive document review and focused discussions, and an online survey of PhillyCAM members who utilize the video production facilities and equipment and provide programming for distribution over PhillyCAM's Public Access Channels.³

The online survey of PhillyCAM producers, programmers and facility users obtained a variety of information from 100 respondents about both current operations and needs for the future.⁴

Site visits and observation, evaluation and analysis of the facilities and equipment were also made by CBG and its Team Partners of the existing PhillyCAM production facility on Ranstead Street to review age, condition, use and functionality of the existing facilities and equipment provided.

² See Section A, p. 43 and Exhibit A.2.

³ See Section B, p. 77, and Exhibit B.1

⁴ See Section B, p. 77, and Exhibits B.2 and B.3.

- A focused discussion, interviews, and update discussions with City Governmental Access management and staff, as well as extensive document review and an online survey of government agency representatives and others that are familiar with, or who work with, the City's Cable TV Unit in the development of programming for the City's Governmental Access channels.⁵ The online survey, similar to that for PhillyCAM, obtained additional information about both current operations and needs for the future.⁶

Similar to the needs assessment tasks regarding PhillyCAM, CBG and its Team Partners also made site visits to multiple Cable TV Unit production locations to review and evaluate the City's Governmental Access operation and review, evaluate and analyze existing facilities and equipment concerning age, condition, use and functionality and needs for the future.

- Interviews with the School District of Philadelphia (SDP) and its PSTV Educational Access Channel management and staff concerning SDP's existing operation and needs for the future.⁷ Again, a site visit was made to review, evaluate and analyze age, condition, use and functionality of the existing facility, equipment and channel, and related needs for the future.
- Interviews with production and management staff for each of the four higher educational institutions that operate Educational Access Channels, including Temple University Television (TUTV), La Salle University Television (La Salle TV), Drexel University Television (DUTV) and Community College of Philadelphia Television (CCPTV) to assess channel capacity and utilization, and program content development and distribution. CBG also reviewed and analyzed a variety of documentation provided by the universities and college.
- Focused discussions and interviews with a variety of government agency representatives as well as OIT (Office of Innovation and Technology) officials and communications and networking staff related to development of an Institutional Network (I-Net).⁸ This included a work group discussion with City department Information Technology personnel and other City officials who provided their experiences and visions as to how the City's networking needs will evolve.
- A review of Cable System Technical and Operational information provided by Comcast.⁹
- A system plant (physical infrastructure) inspection using a random sample of City addresses, as well as a review of the headends and hubs in order to review compliance with Cable Franchise technical provisions, including compliance with codes such as the National Electrical Safety Code (NESC) and the National Electrical Code(NEC).

⁵ See Section B., p. 93 and Exhibit B.6.

⁶ See Section B., p. 94, and Exhibits B.7 and B.8.

⁷ See Section B, p. 104 and Exhibit B.10.

⁸ See Section C, p. 124. An Institutional Network (I-Net) is a separate part of the cable system developed for communications network uses by government institutions.

⁹ See Section D., p. 152.

The analysis of all the information obtained through the Needs Assessment and Review process enabled CBG and its Team Partners to focus on many elements related to a renewed cable franchise. From this analysis, CBG developed detailed Findings, along with Conclusions and Recommendations incorporated in the Report. The Key Findings, Conclusions and Recommendations for consideration by the City as it continues through the franchise renewal negotiation process are the following:

Residential Community Needs Assessment – Telephone Survey

- Philadelphia's cable television subscribers reported levels of satisfaction one to eleven percent (1%-11%) lower than other Comcast franchise areas in selected markets where studies were completed in the last six years. Specifically, seventy-four percent (74%) of Comcast cable subscribers are satisfied overall with their cable service, leaving 26% that indicated they are dissatisfied. Those that rated cable service negatively indicated that the rating could be improved if rates were lowered (45%), if more programming choices were offered (12%) and if there were fewer outages and breaks in service (8%). This suggests that working to rein in the increasing cost for commercial cable services, developing more affordable packages, and addressing technical issues related to signal outages and other reception problems would help improve satisfaction levels.
- Thirty-six percent (36%) of non-Comcast cable television subscribers indicated that they had never subscribed to Comcast cable services. The primary reason cited was the cost of service (35%), followed by 21% who indicated they were satellite subscribers and another 15% who don't watch or don't have time to watch television. For those who once, but no longer, subscribe to Comcast, cost was also the primary reason for no longer subscribing (58%). This was followed by those who have billing issues/problems (7%), those who experienced service problems (5%) and those who experienced poor customer service (2%). This suggests that taking the same steps to improve subscriber satisfaction would also serve to attract those who have never or previously subscribed.
- While the majority of Comcast cable subscribers indicated they were satisfied overall with picture quality, problems were noted with both signal outages and picture clarity or reception. Specifically, lengthy cable signal outages for periods of greater than 24 hours were noted by 17% of subscribers. Nineteen percent (19%) of Comcast subscribers reported problems with picture clarity or reception, including 11% of those who indicated the problems were constant and 9% who indicated that they occurred every few days. A substantial number of those who had technical problems were also dissatisfied (36%) or were very dissatisfied (10%) with the response time to resolve the problem. Both technical difficulties and outages resulted in calls to Comcast, adding call volume and likely contributing to the problems with telephone response times described below. Improvements to technical operations to address the problems indicated would, again, improve subscriber satisfaction, as well as reduce call volume.
- Sixty-four percent (64%) called the Comcast Customer Service operation in the last year. The primary reason was related to billing questions (28%). Of these, 15% had received a busy signal when calling the company which is substantially greater than the 3% level specified by the FCC and Philadelphia's Franchise Customer Service Standards

requirements. Additionally, 61% indicated that their call had not been answered within 30 seconds, including the time left on hold, which is also far greater than the tolerance allowed (10%) under the Franchise and FCC Customer Service Standards.

- More than one in three (34%) were dissatisfied (11% very dissatisfied) with Comcast's billing practices, of those who called Customer Service related to billing questions and issues (28%). Again, working to resolve the issues that are creating dissatisfaction with billing and billing-related calls would not only improve customer satisfaction, but would also likely reduce the call volume related to billing and help to address Comcast's non-compliance with FCC Customer Service Standards.
- Thirty-four percent (34%) of subscriber respondents indicated that they were dissatisfied (23%) or very dissatisfied (11%) with Comcast's communications related to rate and programming changes. Accordingly, Comcast should review and improve how changes in programming rates and services are communicated to Comcast cable subscribers and the means it uses to communicate these changes.

We recommend each of the above problem areas be a focus in franchise renewal negotiations to secure improvements responsive to the concerns reported in the Survey.

- A significant portion of responding subscribers who were aware of the local Access Channels (68%) reported regular viewership of Philadelphia's local Public, Educational and Governmental (PEG) Access Channels. Specifically, 14%-20% of such subscribers reported watching the Channels on a weekly basis, including 3%-6% who watched more than five (5) hours a week. These percentages are significant when considering that cable television's business model revolves around niche channels rather than mass appeal channels.
- Subscribers also indicated a strong level of importance that these local PEG Channels be available on the system. The wide majority (84%) thought that these Channels were important, including 34% who indicated that they were very important and 26% that indicated important, regardless of how often they watch these Channels.
- Those subscribers also indicated a strong willingness to support PEG Channels as part of their monthly payment. Specifically, 37% of respondents indicated a specific amount that they would be willing to pay monthly to support local Access programming, with the average amount being \$3.16 per month. Including those not willing to pay anything (46%) in the calculation, the average amount subscribers were willing to pay to support PEG channels was still high at \$1.41 per month.

A number of these themes were also echoed in the online non-scientific survey.

PEG Access Needs Assessment

- The present PEG Access Channels and related channel positions need to be preserved and their capacity expanded to carry the High Definition (HD) programming cable TV viewers now expect. This includes continued delivery of:
 - Four (4) channels for Philadelphia City Government, including one channel that focuses on public meetings and hearings of the Philadelphia City Council and other governmental bodies, one channel that focuses on information about City Government and the work of City departments, one closed circuit channel for internal use by the Police Department, and one closed circuit channel for internal use by the Fire Department. The first two Governmental Access Channels must also be in HD.
 - One Educational Access Channel for the School District of Philadelphia's (SDP) Public School TV channel (currently Channel 52) to continue PSTV's focus on School Reform Commission proceedings, communication of information to students and their families, activities and events in the schools, and programming produced by students, faculty and staff. This Channel should also be provided in HD upon full conversion of SDP's production and master control equipment to HD.
 - Five Public Access Channels for PhillyCAM. This includes the existing flagship Community Channel 66 as well as the Live Culture Channel scheduled for the second quarter of 2015 and the forthcoming Sustainability, Heritage and Youth Channels now in development. These channels should all be provided in HD.
 - Four (4) discrete channels for the existing programmers of Higher Educational Access: Temple University for TUTV; Drexel University for DUTV; Community College of Philadelphia for CCPTV; and La Salle University for La Salle TV. All four of these Higher Educational Access channels must be provided in HD.
- All of these channels must be provided in an SD version until the entire system is converted to HD so that every subscriber, regardless of their tier of cable service, will always be able to receive all of the Access Channels.
- Because time shifted viewing continues to increase, it will be necessary to ensure that enough cable-based video on demand capacity is available for PEG Access Channel programming.
- New, upgraded and replacement equipment for the Government, Educational and Public Access Channels must be provided consistent with the needs and interests demonstrated in the study. This includes:¹⁰

¹⁰ Equipment needs are projected over a 10 year timeframe; for a 15 year franchise term, the equipment projections increase by 50%. Facility projections do not increase for a 15 year term.

- PhillyCAM Public Access -- \$3,480,000 to facilitate Public Access programming produced in the PhillyCAM Media Center, as well as in the field through single camera and other portable and mobile remote operations.
- City of Philadelphia Governmental Access -- \$3,057,480 to produce programming in the Council Chambers, City Hall studio facilities and in offsite meeting and conference room locations by both portable and mobile remote operations.
- School District of Philadelphia K-12 Educational Access -- \$1,945,680 for new, upgraded and replacement equipment necessary to support video production at SDP's Central Facility (including the Board Room and SDP's Central Studio facilities) as well as in the schools throughout the District.
- Regarding Higher Educational Access -- The Higher Educational Access Channels operated by Temple, Drexel and La Salle are funded by their Universities and through grants and donations from foundations and other funders. Accordingly, we have not projected specific capital equipment or facility needs for these channels. The Community College of Philadelphia is in a different situation, however, and may require capital equipment and facility funding for a production studio which it does not now have.
- PEG Access Facility funding -- Three specific needs were determined for facility space development and potential redevelopment concerning the Philadelphia PEG Access Channels:
 - For Governmental Access -- \$840,000 is forecast to develop a larger studio space as well as new post production, office, storage and related space in City Hall.
 - For PhillyCAM -- Two facility space related needs are evident. First, \$525,000 is needed to remodel 2100 square feet to develop a full Youth production and post production space. Then, there is a significant possibility that PhillyCAM may need to move its operation in 2021 when its current lease expires. At that time, it will need an estimated \$2,500,000 to make leasehold improvements in another leased space encompassing 10,000 square feet for current and new operations developed between now and 2021.
- Taken together, over a ten year period this equates to a total of \$11,868,640 needed for PEG Access capital facilities and equipment.
- Currently PhillyCAM relies significantly on operating support that comes from the cable franchises, augmented by member fees, grants and donations. Projections indicate that in order to both continue to maintain its current level of operations, as well as increase its content development and distribution consistent with the needs assessed, PhillyCAM will need to increase operational funding to an average annual amount of \$1,467,013 over the 10 year projected time frame. Consistent with the existing franchise, such funding should continue to be provided as an operating contribution from the cable service providers.

- Similarly, Governmental Access Operating costs will increase as additional staff is hired to produce more programming to distribute over two discreetly branded channels. These costs are forecast to average \$612,510 annually over 10-years.
- Comcast subscribers in the Philadelphia area are currently providing \$0.26 per subscriber, per month to support public access channels only. Over a 10-year period, if subscribership holds steady, and all subscribers in all four franchise areas are factored in, the amount projected to be generated is approximately \$8,580,000. This falls substantially short of the projected cost to meet all PEG access needs described in the Report, which total \$32,662,870 over 10-years and require an increase in the amount of funding currently provided.
- This rise in funding, however, is only to a level consistent with or well below the support provided in other large jurisdictions around the country (ranging up to 2% of gross revenues, or approximately \$2.04 per subscriber, per month).

Institutional Network Needs Assessment

- The services and applications running on the City's data networks continue to increase in number, capabilities and users, as the City implements technology initiatives necessary for efficient and cost effective delivery of government services. The City's need for additional network capacity, both speed and circuits, is accordingly increasing at a rapid pace.
- Networks used by the City must be highly flexible, permitting quick and cost-effective addition of new locations served, quick and cost-effective capacity expansion, and to protect network resources, quick and inexpensive termination and reduction of services for locations no longer needed.
- The City has stringent requirements for network availability, and minimal tolerance for network outages. Network security is a high priority.
- City Information Technology budgets remain tight, notwithstanding the increasing demands of City Departments for applications and network capacity. This means that the City's network must be able to increase in capability, while continuing to be cost-effective.
- Based on all of the above, CBG recommends development of a new dark fiber optic network to meet the City's data transport needs, both now and into the future, with the City responsible for acquiring and maintaining the equipment necessary to activate the network. This dark fiber network should be provided as part of an Institutional Network. In CBG's opinion, only a stand-alone dark fiber network that is wholly under City control can fully meet the above City requirements. CBG estimates the cost to build a new, stand alone dark fiber network serving the City's 208 sites (encompassing 338 communications circuits) is approximately \$11.2 million, including building entry cost.
- This cost could be considerably lower if all or part of the dark fiber for the I-Net were provided by Comcast on its system, as separate fibers for the City in Comcast's sheath or otherwise dedicated to City use. Although CBG believes that only a stand-alone network

that is fully controlled by the City can fully meet City needs, CBG believes the City should consider such an I-Net on the Comcast system, as long as the fiber is dedicated to City use and City use survives termination of a renewed franchise for any reason.

- CBG evaluated the alternative of a “managed network services” arrangement, under which a provider furnishes data transport service on its infrastructure, which is used for multiple customers and is wholly under the provider’s control with respect to maintenance, network availability, security and flexibility in the addition or termination of locations. Given the City’s stringent requirements described above and detailed in the Report, it is CBG’s opinion that “managed services” will not meet the City’s network needs.

Cable System Technical Review

- CBG conducted a technical review of Comcast’s cable system that included document review, system physical plant (infrastructure) audit, driveout and inspection, facility tours, and discussions with Comcast staff to determine the condition of Comcast’s subscriber network in the four franchise areas.
- CBG inspected randomly selected addresses throughout the City to evaluate the compliance of Comcast’s cable television system with the National Electrical Safety Code (NESC) and National Electrical Code (NEC) as required by the current franchise. CBG found substantial maintenance and code compliance failures. Based on the random sample and using standard statistical methods, CBG projects that as many as 256,750 addresses City-wide have a service drop that violates the NESC or NEC, and that as many as 13,738 addresses City-wide have a pole or pedestal with an NESC or NEC code violation.
- Based on these projections, CBG recommends that the City require Comcast to develop and implement an inspection program and correct all code violations in the short term, under the current Franchise, and that the requirement for this program be included in a renewal franchise. The program should require regular inspection of the infrastructure and timely repairs with accurate documentation provided by Comcast to the City on a regular basis.
- The City should perform a triennial system design and bandwidth review. As subscribers’ desires and needs for cable services increase over time, and given the increased capacity demands on the system for non-cable services such as Internet access and commercial data transportation, the system’s capacity may need to be increased. Possible methods of minimizing the impact of additional bandwidth needs include upgrading the system to 1000 megahertz (1 gigahertz), upgrading the system to Fiber-To-The-Premises (FTTP) architecture and deployment of Switched Digital Video (SDV) technology. These and other options should be reviewed and considered as part of franchise renewal, at a minimum during a required triennial technical review.
- The City should require Comcast to test the system on a regular basis, with documentation, to show compliance with FCC regulations. Tests should be performed at a minimum of eight (8) locations in the City. This testing should be required under a renewed franchise.

- The City should perform additional testing of picture quality. The City should review CBG's findings related to SD channel picture quality with Comcast and perform additional subjective testing on a regular basis in cooperation with Comcast.

The findings, conclusions and recommendations summarized above and fully detailed in the Report, provide a strong and sound basis for the City to go forward in the franchise renewal process and to ensure that the needs and interests of residents, organizations and other diverse communities of interest in the City of Philadelphia are met in any renewed franchise.

SECTION A



SECTION A

REVIEW OF CABLE-RELATED RESIDENTIAL COMMUNITY NEEDS AND INTERESTS

RESIDENTIAL COMMUNITY NEEDS **ASSESSMENT**

RESIDENTIAL TELEPHONE SURVEY

Introduction

As part of cable television franchise renewal proceedings for the City of Philadelphia (“City” or “Philadelphia”) franchise areas, the City’s Office of Innovation and Technology conducted a random telephone survey of Philadelphia residents, both Comcast cable television subscribers and non-subscribers to document needs and interests related to Comcast cable service. The following narrative summary reports on the findings and conclusions of that field research.

The findings are based on telephone interviews conducted with a random sampling of 800¹¹ franchise area residents during October and November of 2013. Of those interviewed, 400 were Comcast cable television subscribers and 400 were not. Statisticians have created a confidence rating in field survey research based on sample size. A sample size of 800 randomly sampled residents provides for a margin of error of ± 3.4 percent. In other words, if this study were to be replicated among another random sample of Philadelphia franchise area residents, one can feel confident that these same findings would be repeated within ± 3.4 percentage points of the scores reported in this study.

Also important to note during the reading of this narrative is that numbers were rounded off to the nearest whole number at the 0.5 level. As a result, when considering the total percentages related to any given response the numbers reported will fall between 99-101%.

Interviews with Comcast cable subscribers lasted, on average, fourteen minutes. The instruments used during field research were specifically designed to examine several areas of Comcast cable television service. These included, but are not limited to:

- Respondents’ familiarity and experiences with Comcast.
- Reasons non-subscribers do not subscribe to Comcast cable service or stopped subscribing to Comcast.
- Amount of the average monthly cable bill (all services and fees).
- Type of cable package subscribed to by respondents.
- Other services subscribed to with Comcast (telephone and Xfinity broadband).
- General level of satisfaction with Comcast.
- Suggestions on how to improve the services provided by Comcast.
- Quality of specific service features provided by Comcast.
- List of specific channels with poor picture quality or poor audio quality.
- Ratings of communication and installation experiences with Comcast, including telephone-based customer service provided by the company.

¹¹ A symbol of N will be used periodically throughout this report to denote total responses.

- The number of cable outages and subscriber experiences with restoration of services.
- Awareness and opinions of government, education and public access programming currently offered and future interest in local programming. Non-subscribers were also asked about their interest in receiving local access programming.
- Quality of the picture and sound of local access programming and evaluation of the programming's informational and entertainment value.
- Interest in receiving local access programming in HD and via the On Demand feature of the Comcast cable television system.
- The presence of broadband in the home in Philadelphia and current levels of online activity.
- Interest in interactive government services from the City.

Research Methodology

A contracted telephone research firm, Issues and Answers, Inc., conducted telephone interviews using randomly drawn landline telephone numbers identified by using random digital dialing (RDD) and a random sample process for selecting cell phone telephone numbers. Issues and Answers has more than 40 years of combined experience in social science research using telephone survey methodology and operates four call centers around the country. Calls were placed during a variety of times of day, during weekdays and on weekends, to ensure that all sets of lifestyles were represented in the data collected. Issues and Answers utilized trained interviewers and a continuous call back procedure to ensure the reliability and validity of the data collected. Specifically, continuous callbacks were made to numbers without answers and to numbers with answering machines or voice mail so that these numbers were not removed from the pool of potential respondents, ensuring the greatest randomization throughout the study.

The survey instrument was designed by CBG Communications and Dr. Constance Book with consultation, assistance and approval of representatives of the Office of Innovation and Technology.¹²

¹² See Cable Television Residential Subscriber/Non-Subscriber Random Sample Telephone Survey Markup (herein after known as "Exhibit A.1") for individual question construction and interviewer instructions.

FINDINGS –TELEPHONE SURVEY

Sample Description

The responding sample consisted of 800 randomly selected residents in the combined four Philadelphia franchise areas served by Comcast. A screening question was used to ensure that respondents only included those who made the decision as to whether the household subscribed to cable television service or shared equally in that decision. All respondents were also required to be 18 years or older. The average age of the respondent was 53 years old and the range of ages responding to the survey was 18 years old to 93 years old.

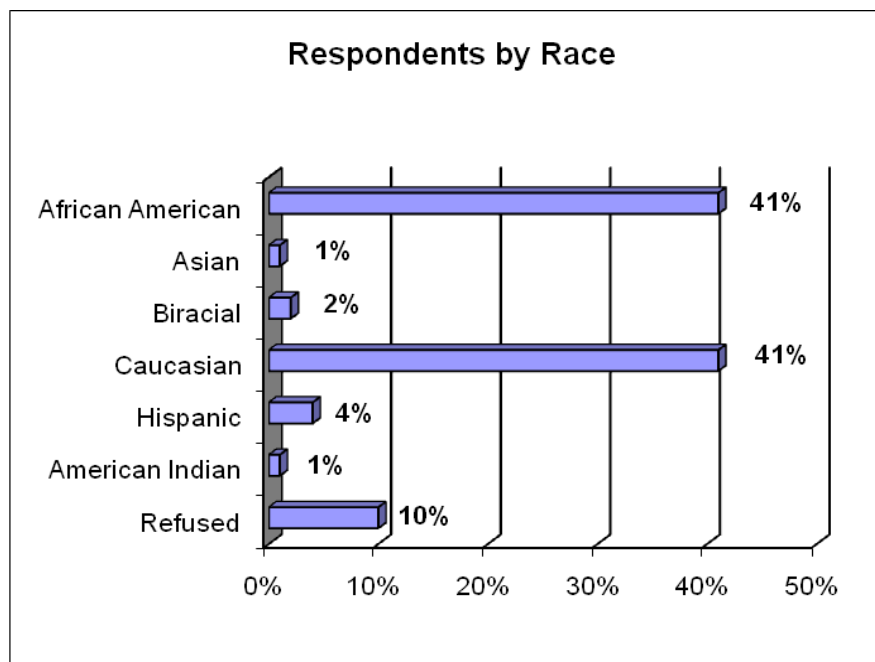
This telephone study utilized an effective, random sample of landline and cell telephone numbers. In today's mobile telephone environment, the number of cell-phone-only and cell-phone-mostly households continues to grow. In order for telephone surveys to continue collecting reliable and valid data, it is critical that respondents from cell-phone-only environments be included in the random sampling process. The Philadelphia cable television study did this by working with Issues and Answers to ensure the random digital dialing included landline numbers, and a separate sample of cell phone numbers, conforming with industry standards. Of the responding sample, 32% were from cell phone numbers and 68% from landlines. This included a high percentage of cell-phone-only (50% of the cell phone sample) and cell-phone-mostly respondents (27% of the landline sample); and 50% of the cell phone sample reported also having a landline phone.

The sample was not specifically controlled for gender, and the final results were slightly weighted toward women. Sixty percent (60%) of the responding sample was female and forty percent (40%) was male.¹³ The 2010 Census in Philadelphia reports the female adult population in Philadelphia as 53%.

¹³ Telephone response rates have been found over time to be generally higher among women and older populations. Sellers, R. "Mail v. Phone Studies," Non-Profit Times, March 15, 2000.

The majority of the respondents reported they were African American (41%) or White (41%) in the sample. Four percent (4%) reported that they were Hispanic. Asians and American Indian each accounted for one percent (1%), and two percent (2%) described themselves as biracial. Ten percent (10%) opted not to respond to the question. These demographic numbers are consistent with the Census 2010 findings in Philadelphia.¹⁴

Chart 1.



To further ensure that the study captured a random representation of homes in Philadelphia, the zip code was obtained from the respondent.¹⁵

A majority of Philadelphia respondents owned their home (63%) and roughly one in three (32%) reported renting. This is consistent with the 2010 Census, which reported that 33% of residents live in multi-unit dwellings.

Additionally, roughly one in four respondents (28%) have children under the age of 18 living in their home. This is also consistent with the 2010 Census.

The sample represented a diverse range of annual income levels. Nineteen percent (19%) indicated earning an annual income of \$25,000 or less, whereas at the high end of the range eight percent (8%) of the sample had an income above \$100,000. Between, ten percent (10%) reported an annual income between \$25,000 and less than \$35,000. Eleven percent (11%) had an income between \$35,000 and less than \$50,000. Eleven percent (11%) reported an annual income between \$50,000

¹⁴ The 2010 Census in Philadelphia found that 43% of the population was African American and 41% White. Retrieved from <http://quickfacts.census.gov/qfd/states/42/4260000.html>.

¹⁵ See Exhibit A.1 for the list of zip codes.

and less than \$75,000. Five percent (5%) indicated an income between \$75,000 and less than \$100,000. Thirty-six percent (36%) of respondents refused to report their income.

We also queried the sample about their employment status. Forty-eight percent (48%) indicated they were employed and eight percent (8%) indicated they were “seeking employment.” Additionally, six percent (6%) indicated they were not able to work because of a disability, and the remaining were either retired, in school, or reported another issue that prevented employment.¹⁶

Non-subscribers to Comcast Cable Television Service

Non-subscribers (N=400) were divided into those who had never subscribed to Comcast cable television services and those who had subscribed at one time, but no longer subscribed.

Thirty-six percent (36%/N=144) of non-subscribers said they had never subscribed to Comcast cable television services in the community.

When asked in an open ended question¹⁷, respondents who had **never subscribed** to Comcast cable television (N=144) in the community indicated the primary reason for never subscribing (first response) was because of cost (35%) and 21% indicated that they were satellite subscribers. Another 15% said that they don’t watch or didn’t have the time to watch television. Six percent (6%) preferred to watch over-the-air television. Five percent (5%) indicated an unfavorable view of the Comcast cable television company as the reason for not subscribing.

Those who had **previously subscribed** to Comcast cable television services (N=256), but were not currently subscribing were most likely to say (top six first responses) that they discontinued service because of “cost” (58%), followed by billing issue/problem (7%) or had moved (7%). Another five percent (5%) indicated that they went to another provider and another five percent (5%) stated that they had stopped subscribing due to service issues. Two percent (2%) indicated poor customer service/difficult to deal with as the reason for no longer subscribing. Although cost was the number one reason for leaving, it is notable that many chose to unsubscribe for other reasons including the 14% of subscribers who chose to unsubscribe due to billing, service and customer service issues.

When testing potential services other than cable television that residents might receive from Comcast, three percent (3%) of non-cable television subscribers indicated that they subscribed to Comcast telephone service and seven percent (7%) subscribed to Xfinity Broadband (two percent of those non-cable television subscribers that responded to this question indicated subscribing to both Xfinity Broadband and Comcast telephone service).

Subscribers to Comcast Cable Television Service

Comcast subscribers (N=400) were asked how long they had been Comcast cable television subscribers at their current address. The range of responses was from one to 54 years. The average

¹⁶ The 2010 Census did not collect employment data in the same fashion for a comparative analysis to be developed.

¹⁷ Categories were not provided. Telephone interviewers coded the open ended comments into common response types. See Exhibit A.1 for more detail on question construction and interviewer instructions.

response was 8.7 years and the most common response was one year. The average respondent, then, demonstrates a substantial amount of experience with Comcast as their cable service provider.

Twenty percent (20%) of subscribers have a basic cable television service that has the broadcast networks and a few cable channels.¹⁸ Additionally, nine percent (9%) have “Digital Economy” which includes the broadcast networks and also a subset of digital cable channels. Thirteen percent (13%) indicated they subscribed to the “Digital Starter” package, which has the broadcast networks and a larger menu of digital cable channels. The most common Comcast cable service package subscribed to by respondents was a digital package greater than the “Digital Starter” (55%).¹⁹

Additionally, 70% of all subscribers indicated subscribing to Comcast Xfinity broadband/cable modem services.²⁰ The remaining 30% indicated they chose to go with another provider due to cost, speed, because the other provider was the most reliable in the area, or said they chose not to have internet access at home because they don’t have a computer or because the cost is too high. Among the remaining cable television subscriber respondents who do not have high speed Internet service from Comcast (N=121), 45% have such service with an alternative provider. The remaining 55% (17% of cable television subscribers or N=68) report not having Internet access at home. This compares to 33% or N=132 of all non-subscribers reporting that they do not have any Internet access at home.

Among all respondents to the survey, 25% (N=197) of those surveyed reported not having Internet services in the home. This finding is consistent with the most recent Pew Internet and American Life national adoption tracking data²¹ which was last updated in September, 2013, and showed 28% of Americans had not adopted Internet service at home.

Additionally, the City of Philadelphia is being studied by another division of Pew Charitable Trusts and in August 2013 reported 82% of residents had “personal Internet access” versus our measure of “home access.” These gains in Internet adoption are largely due to advances in and adoption of smart phone technologies which are frequently replacing demand for home based broadband adoption.²²

¹⁸ This is higher than the national average of 16% reported by the NCTA. Retrieved from <http://www.ncta.com/industry-data> as reported by SNL Kagan.

¹⁹ The National Cable Telecommunications Association current reports that 84% of all subscribers are digital subscribers. In Philadelphia this number is 77%, although an additional 4% weren’t sure of the name of their package. Retrieved from <http://www.ncta.com/industry-data>.

²⁰ A 70% penetration on cable modem services is approximately 19% lower than the national average (89% of cable television subscribers) reported by the National Cable Telecommunications Association at <http://www.ncta.com/Stats/High-Speed-Internet-Customers.aspx>. The cable industry as a whole reports that 46.8 million homes of the 56.4 million that subscribe to cable television also have broadband services.

²¹ <http://pewinternet.org/Infographics/2013/How-Americans-go-online.aspx>.

²² A full summary of the Pew Charitable Trusts Philadelphia study can be found at <http://www.pewtrusts.org/pt/research-and-analysis/reports/2013/11/12/ten-facts-about-internet-access-in-philadelphia>.

Two in three Philadelphia cable television subscribers (64%) also subscribe to telephone service from Comcast. This is higher than the national average, which is approximately 47% according to the National Cable Telecommunications Association.²³

The average monthly Comcast bill self-reported by Comcast cable television subscribers surveyed is \$154.86 (including all services and fees). The most commonly self-reported Comcast bill (the mode) among subscribers was \$200 a month, with Comcast bills ranging from \$16 to \$790 a month.²⁴ Regarding the bill for those who did not subscribe to Comcast cable television services but do purchase cable modem and/or telephone service from Comcast, the most common response (mode) was \$80.00, but this is based on only 22 non-subscribers reporting what they pay for these non-cable television services from Comcast.

| |
|---|
| <p>Average Monthly Cable Television Subscriber Bill, including all services and fees (cable television, cable modem and cable telephone) =</p> <p>\$154.86 per customer</p> |
|---|

²³Approximately 47% of cable television subscribers also subscribe to telephone service from the cable company. Retrieved from <http://www.ncta.com/industry-data>.

²⁴ This figure includes all services: cable television, cable modem and cable telephone.

Subscribers in Philadelphia report that on average their total monthly cable television bill is higher than in a sample of other Comcast franchise areas where the authors of this study conducted research regarding cable television service in the past five years. This is in part due to the higher-than-average subscription to telephone service from Comcast and a relatively high video-only average revenue. The national average for subscription to telephone service is 47%, and in Philadelphia the number reported was 64%.

Table 1.

| Subscriber Self-Reported Average Bill for Comcast Services | Philadelphia Franchise Area ²⁵ | Denver Franchise Area ²⁶ | MACC Franchise Area ²⁷ | Vancouver/Clark County Franchise Area ²⁸ |
|--|---|-------------------------------------|-----------------------------------|---|
| Total Average Cost Reported by Comcast Subscribers (including all services subscribed to) | \$154.86 | \$117.06 | \$139.44 | \$134.90 |
| Comcast Cable TV Only | \$96.75 | \$63.12 | \$64.53 | \$61.05 |
| Comcast Cable TV & Broadband | \$130.09 | \$130.43 | \$111.85 | \$108.35 |
| Comcast Cable TV & Telephone (Percentage of Telephone Penetration reported by Subscribers) | \$147.53 (64%) | \$129.77 (35%) | \$116.60 (67%) | \$116.67 (38%) |

The comparisons offered here are based on respondents' prompted recall of their "cable bill." Because of the phenomenon of bundling, discounts, multi-year contracts, individual equipment and service charges that create a complex cable television bill at best, it is impossible to create an apples to apples comparison and informed understanding of cable television charges consumers pay in Philadelphia when compared to other communities. What can be offered to the reader, is when this same question was posed in other randomly sampled Comcast communities around the United States in recent years, these were the amounts reported.

²⁵ The City and County of Philadelphia four Comcast Franchise Areas combined, Residential Telephone Survey performed in October and November of 2013

²⁶ The City and County of Denver Comcast Franchise Area, Residential Telephone Survey performed in January of 2011

²⁷ The combined Metropolitan Area Communications Commission (MACC) Franchise Area encompassing 15 Portland Oregon Metropolitan Area Communities in Washington County, OR, Residential Telephone Survey performed in October/November of 2012.

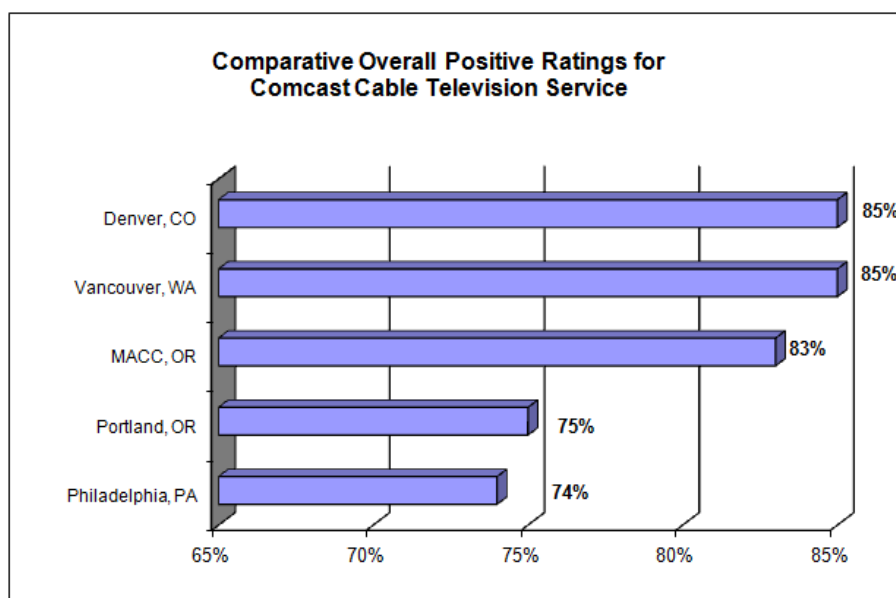
²⁸ City of Vancouver and Clark County, Washington Franchise Areas combined, Residential Telephone Survey performed in April and May of 2011.

Overall Satisfaction

A majority, or fifty-one percent (51%), of subscriber respondents reported they are “satisfied” with Comcast cable television service, and twenty-three percent (23%) of subscribers described themselves as “very satisfied”, for a total of 74% reporting they were either “satisfied” or “very satisfied”. Seventeen percent (17%) said they were “dissatisfied” and nine percent (9%) said they were “very dissatisfied”, for a total of 26% reporting they were either “dissatisfied” or “very dissatisfied”.

To provide a comparison of the Philadelphia ratings with other communities, the following chart demonstrates findings among selected communities²⁹ in community needs assessments conducted in the last several years. As one can see, Philadelphia’s cable television subscribers reported lower levels of satisfaction than other Comcast franchise areas in selected markets where studies were completed in the last six years.

Chart 2.



Responding cable television subscribers who did not indicate being “very satisfied” or “satisfied” with Comcast cable service (N=102) were asked if there was anything the company could do to improve their rating. Most often, dissatisfied subscribers said the company's overall rating could be improved if **rates were lowered** (45%). They also suggested that the company **offer more programming choices** (12%) and have **fewer outages and breaks in service** (8%). Also mentioned by cable customers, but less frequently, were specific interactions with the cable company where they were dissatisfied with the level of customer service provided, or issues experienced with installation and picture quality.

²⁹ The comparative data in this chart is from other geographically diverse communities where the authors of this study conducted survey research regarding cable television service (2009-2013). The chart compares positive ratings.

The above data were further explored to determine what significant relationships existed between reported satisfaction levels with Comcast cable service and other areas tested in the study.³⁰ The study showed several positive relationships between overall satisfaction and tested attributes. Respondents who were more satisfied with Comcast cable television were also significantly more likely to:

- View PhillyCAM channels 66 and 966.
- Report positive perceptions of picture quality on PhillyCAM channels 66 and 966.
- Subscribe to Comcast Xfinity Broadband (High-Speed Internet) services and report going online outside the home at their workplace
- Report an interest in receiving government online interactive services.
- Report their race as Caucasian
- Earn more per household.

Service Features

Subscribers were asked to rate specific features of Comcast’s cable television service. They were asked about the picture and sound quality, billing practices, and communications regarding rates and programming changes.

The following table details their responses to each of these questions on a scale from “very satisfied” to “very dissatisfied”:

Table 2.

| Service Characteristic | Very Satisfied | Satisfied | Dissatisfied | Very Dissatisfied | Don’t Know |
|--|----------------|-----------|--------------|-------------------|------------|
| The picture quality | 40% | 57% | 3% | 0% | 0% |
| The sound level consistency across channels | 27% | 62% | 8% | 2% | 1% |
| Billing practices | 14% | 48% | 23% | 11% | 4% |
| Communications regarding rates and programming changes | 11% | 50% | 23% | 11% | 5% |

Ninety-seven percent (97%) of interviewed cable subscribers indicated that they were “very satisfied” or “satisfied” with picture quality. Additionally, 89% were satisfied with the sound level consistency across channels on the Comcast cable television service.

Billing practices and communications with subscribers regarding rates and programming changes earned much higher dissatisfaction scores. One in three (34%) subscribers are dissatisfied with these service characteristics, including 11% that indicated being “very dissatisfied.”

³⁰ To test for significant relationships, an analysis of variance (ANOVA) was used. Relationships that tested at .05 significance or greater are presented.

When comparing Philadelphia and other Comcast franchise areas on tested service characteristics, one finds Comcast's Philadelphia franchises enjoy a similar customer satisfaction ranking for picture quality, and a higher ranking for sound level consistency.

Table 2a. Satisfaction with Service Characteristics among Comcast Franchise Areas

| Tested Cable Television Characteristic | Philadelphia Franchise Area ³¹ | Denver Franchise Area ³² | MACC Franchise Area ³³ | Vancouver/Clark County Franchise Area ³⁴ |
|---|---|-------------------------------------|-----------------------------------|---|
| Picture Quality | 97% | 96% | 97% | 94% |
| Sound Level Consistency Across Channels | 89% | 78% | 83% | 72% |

Service Calls with Comcast

Customers were then asked if they had experienced a service call with Comcast in the past year. Forty-six percent (46%) said they had a service call. Two items were tested to determine satisfaction levels with the service call: available times for service and the arrival time of the technician. Seventy-eight percent (78%) were satisfied (20% very satisfied) with the available times for the service call. Additionally, 78% were satisfied (22% very satisfied) with the arrival time of the service technician. It is important to note that one in five cable subscribers were dissatisfied with both of these aspects of service calls.

Table 3.

| | Very Satisfied | Satisfied | Dissatisfied | Very Dissatisfied | Don't Know/ Not Applicable |
|---|----------------|-----------|--------------|-------------------|----------------------------|
| <u>Service Calls</u> | | | | | |
| a. The available times for service | 20% | 58% | 13% | 7% | 2% |
| b. The arrival time of the service technician | 22% | 56% | 12% | 8% | 3% |

³¹ See Footnote 25

³² See Footnote 26

³³ See Footnote 27

³⁴ See Footnote 28

Customers in Philadelphia were less satisfied with the available times for service calls and the arrival time of the technician than in other markets studied. This is one of the areas driving lower overall satisfaction with Comcast.

Table 3a: Satisfaction with the Following Aspects of Comcast's Cable Television Service.³⁵

| Tested Cable Television Characteristic | Philadelphia Franchise Area ³⁶ | Denver Franchise Area ³⁷ | Vancouver/Clark County Franchise Area ³⁸ |
|--|---|-------------------------------------|---|
| Arrival time of the service technician | 78% | 83% | 93% |

Calls to Comcast

Customers were then asked if they had called Comcast in the past year for any reason other than installation. Sixty-four percent (64%) said yes.

These respondents (N=257) were asked the reason for their call. The most common reason for calling the cable company was to ask a billing question (28%). This was followed by to report a cable outage or loss of signal (16%). Another 11% called to report a problem with their cable modem.

Eighty-one percent (81%) of those who had called Comcast in the past year said they did not receive a busy signal. Fifteen percent (15%) said they had received a busy signal, and four percent (4%) said they could not remember.

The Federal Communications Commission (FCC) customer service standards related to busy signals indicate that callers should not receive a busy signal “under normal operating conditions” greater than three percent (3%) of the time.³⁹

Cable subscribers who called the Comcast call center were also asked if customer service representatives answered their calls within 30 seconds, including the time left on hold and 61% indicated that they had not.

According to the data collected in this study, Comcast scores below the FCC benchmark in regard to hold and transfer time which stipulates a less than 30 second hold time and an additional 30 second transfer time be met with 90% efficiency.⁴⁰

³⁵ Comparisons with the MACC Franchise Area are not presented here because these particular characteristics were not tested in the MACC study

³⁶ See Footnote 25

³⁷ See Footnote 26

³⁸ See Footnote 28

³⁹ The Federal Communications Commission (FCC) customer service standards for cable television can be found at <http://www.fcc.gov/guides/customer-service-standards>. FCC standards are incorporated into Comcast's Philadelphia franchises.

⁴⁰ Ibid.

Survey respondents were asked how soon after they called to report the problem did Comcast begin to correct that problem. Forty-two percent (42%) of respondents said the cable company began working on their problem “the same day it was reported.” Sixteen percent (16%) said the cable company began working on the problem “the next business day.” Fourteen percent (14%) reported that the cable company began working on the problem “days later.” Seven percent (7%) indicated it was “about a week” and three percent (3%) said it was “about a month.” Ten percent (10%) said the problem was “never resolved.”

The FCC benchmarks for customer service stipulate that the cable company must begin working on outages within 24 hours of problem notification and must begin working on resolution of other problems “the next business day after learning of them.”⁴¹ Based on our findings, 24% of cable subscribers in Philadelphia that called to report a problem reported that Comcast did not meet this FCC benchmark on customer service. Additionally, another ten percent (10%) of customers report that the problem continues. These findings suggest customer care staffing that is substantially falling short of meeting the FCC’s minimum standard.

While all scores in comparison franchises fall short of the FCC benchmark standards for telephone response, Philadelphia customers report a more problematic experience than customers reported in other markets surveyed.

Table 4: Satisfaction with the Following Aspects of Comcast’s Cable Television Service.⁴²

| Tested Cable Television Characteristic | Philadelphia Franchise Area ⁴³ | Denver Franchise Area ⁴⁴ | Vancouver/Clark County Franchise Area ⁴⁵ |
|--|---|-------------------------------------|---|
| Got a busy signal? (3% is Maximum Benchmark) | 15% | 10% | 6% |
| Call NOT answered within 30 seconds by a customer service representative (including hold time, 10% is Maximum Benchmark) | 61% | 42% | 39% |

Cable Signal Outages

Comcast cable television subscribers were asked if they had experienced cable signal outages in the last two years that lasted for a period greater than 24-hours. Seventeen percent (17%) indicated that they had.

These subscribers were asked a question regarding credits received on the bill for the time Comcast cable television service was out. Subscribers whose outages exceed 24 hours are required by the Comcast franchise agreements to receive a credit on their bill. However, only 22% of subscribers

⁴¹ Ibid.

⁴² See Footnote 35

⁴³ See Footnote 25

⁴⁴ See Footnote 26

⁴⁵ See Footnote 28

who reported an outage longer than 24 hours indicated that they had received a credit on their bill for the period of the outage.

Picture Quality

Cable subscribers were asked if they had experienced significant picture clarity or reception difficulty in the past year. Nineteen percent (19%) responded “yes” (N=76). These individuals were asked about the frequency of picture clarity problems. Fifty-three percent (53%) described the problem as “rarely” and 26% described it as “a few times a month.” Eleven percent (11%) described the picture clarity and reception problems as “constant” and nine percent (9%) indicated it was “every few days.”

Cable subscribers were asked to describe the specific channels where they experienced picture clarity or reception problems. Seventy-six subscribers (N=76) provided a descriptive response. While most described “all channels/any channels” (22 mentions), when subscribers mentioned a specific channel, they were most likely to mention Channel 3/CBS (7 mentions). This was followed by several channels mentioned more than once, such as channel 6/ABC, channel 10/NBC, channel 2, channel 12 and channel 805/FOX. Also mentioned, but less frequently were ESPN and video on demand channels.

A full list of channels where respondents experienced picture clarity and reception problems can be found in Exhibit A.1, along with a full summary of the results of the residential survey by question (Survey Instrument Markup).

Philadelphia customers report a similar experience to that which customers report in other markets related to picture quality problems.

Table 5: Satisfaction with the Following Aspects of Comcast’s Cable Television Service.

| Tested Cable Television Characteristic | Philadelphia Franchise Area ⁴⁶ | Denver Franchise Area ⁴⁷ | MACC Franchise Area ⁴⁸ | Vancouver/Clark County Franchise Area ⁴⁹ |
|---|---|-------------------------------------|-----------------------------------|---|
| Problems with Picture Clarity OR Reception over the last year | 19% | 18% | 20% | 15% |

⁴⁶ See Footnote 25

⁴⁷ See Footnote 26

⁴⁸ See Footnote 27

⁴⁹ See Footnote 28

Problem Resolution Satisfaction

Cable subscribers were asked how satisfied they were with the length of time it took Comcast to resolve the reception or outage problem. More than half (52%) were satisfied (16% very satisfied) and 36% were dissatisfied (10% very dissatisfied).

Philadelphia subscribers report a higher degree of dissatisfaction than those in other tested markets with the length of time that it took to resolve reception and outage problems.

Table 6: Satisfaction with the Following Aspects of Comcast's Cable Television Service.⁵⁰

| Tested Cable Television Dissatisfaction | Philadelphia Franchise Area ⁵¹ | Denver Franchise Area ⁵² | Vancouver/Clark County Franchise Area ⁵³ |
|---|---|-------------------------------------|---|
| Dissatisfaction with length of time to resolve reception problem or restore service | 36% | 25% | 22% |

Public, Educational and Governmental Access Programming (PEG)

All respondents were asked about their awareness of local community access programming appearing on the cable system in Philadelphia.

Non-cable Subscribers

To isolate non-subscribers who had experience with public, educational, and governmental access (PEG) programming, non-subscribers were screened for awareness of the PEG channels. Forty-eight percent (48%) of non-subscribers reported being aware of these channels, 52% unaware. Awareness was followed by asking non-subscribers if they would be interested in being able to receive local governmental, educational, and public access programming. Thirty-eight percent (38%) indicated that they would.

⁵⁰ See Footnote 35

⁵¹ See Footnote 25

⁵² See Footnote 26

⁵³ See Footnote 28

Awareness Comparison

The City of Philadelphia enjoys strong awareness of its public, educational, and governmental channels consistent with other tested franchise areas.

Table 7: Satisfaction with the Following Aspects of Comcast's Cable Television Service.

| Awareness of PEG channels | Philadelphia Franchise Area ⁵⁴ | Denver Franchise Area ⁵⁵ | MACC Franchise Area ⁵⁶ | Vancouver/Clark County Franchise Area ⁵⁷ |
|---------------------------|---|-------------------------------------|-----------------------------------|---|
| All Respondents | 58% | 52% | 63% | 69% |
| Subscribers | 68% | 56% | 71% | 77% |
| Non-Subscribers | 48% | 48% | 55% | 61% |

Cable Subscribers

Two out of three cable subscribers were aware of the PEG channels, 68% (N=272), were asked a series of questions about their experiences with the channels. The percentages discussed in the following Governmental, Educational, and Public Access sections are based on the total number (N=272) of subscribers that reported awareness of them. These subscribers were asked a series of questions related to the programming that appears on the channels in each PEG category.

Governmental Access

Local governmental access programming appears on local channel 64 and is regularly viewed by 39% of cable subscribers aware of the channel in Philadelphia on at least a monthly basis. When measuring how frequently the programming is viewed, six percent (6%) of respondents reported that they watched more than five hours a week, and another 14% described themselves as weekly viewers who watched less than five hours a week. Nineteen percent (19%) reported watching the channel a couple of times a month. An additional 15% indicated that they watched the channel a couple of times a year. Forty-five percent (45%) of responding subscribers reported that they never watched governmental access programming.

These numbers indicate a significant level of viewership for governmental access programming. For example, by comparison, during one of the weeks that this study was conducted in October, 2013, the top three viewed cable programs were on the networks ESPN (NFL, Sunday night football), AMC (Walking Dead), and A&E (Duck Dynasty). The ratings for these three shows, the top 3 cable programs in the United States, were 12%, 11% and seven percent (7%) of the total audience surveyed, respectively.⁵⁸

⁵⁴ See Footnote 25

⁵⁵ See Footnote 26

⁵⁶ See Footnote 27

⁵⁷ See Footnote 28

⁵⁸ Cable ratings for the week ending October 29, 2013 retrieved from:

<http://tvbythenumbers.zap2it.com/2013/10/29/cable-top-25-monday-night-football-tops-cable-viewership-for-the->

As another way of comparing and considering the viewership of the access channels, it is useful to apply some other standard principles of viewing audience measurement. The Nielsen Company is the primary measurer of media engagement in the United States. Nielsen reports that the Philadelphia area is the 4th largest television market in the United States, with 2.9 million television households. This comprises 2.6% of the total US television households. When considering cable penetration, 79% of the market subscribes to cable (primarily Comcast and Verizon) service. Additionally 16% subscribe to satellite services, leaving six percent (6%) to rely on over-the air-television services.⁵⁹

One of the numbers generated by Nielsen is referred to as CUME, an acronym for “cumulative audience.” It is defined by the television industry as the total, non-duplicated audience for a program or channel over a given time period. CUME is expressed as a percentage of the total television household universe. Important to note is that cable television networks are only available to households that have multichannel video subscriptions (such as cable or satellite service), which, according to Nielsen, make up 92% of all households.

In Philadelphia, the weekly CUMEs reported by cable subscribers in our study of the public, educational, and governmental access channels varies from 14% to 20%, as further detailed below. In other words, 14 to 20% of cable subscribers aware of access channels report at least viewing one of the channels at some point in a given week. Comparison with the weekly CUME of many well-known cable networks shows that, in a universe of more than 300 channels, 14% to 20% of viewers watching at least once per week is a substantial audience share.

These percentages, coupled with the niche-audience nature of cable television programming, where the vast majority of cable networks have small weekly CUMEs, and the top networks have CUMEs of approximately 20% to 33%, demonstrate strong viewership by even a commercial cable channel standard, including the Comcast owned channels on the cable system.

To offer additional perspective about cable ratings, the chart below illustrates the weekly cumulative audience of several Comcast-owned or partially-owned networks. When considering PEG viewership in Philadelphia, it is helpful to consider that viewership against these other channels. This data, highly proprietary, is often difficult to acquire as public knowledge. Advertising sales are based on these numbers across key demographic groups. Industry trade magazines, Nielsen data, and cable network press releases were used to compile the data shown in the chart below. The chart provides comparative weekly viewing figures for each of the cable networks indicated.

[week-ending-october-27-2013/211938/](http://www.tvb.org/markets_stations#!id=219&type=market). This cable television study happened to coincide with the federal government shutdown of 2013 in which all television networks also experienced an uptick in viewership.

⁵⁹ Television Bureau of Advertising (www.tvb.org) tracks market profiles using Nielsen data at http://www.tvb.org/markets_stations#!id=219&type=market. This data is for the Philadelphia Designated Map Area (DMA) which includes the City and surrounding metropolitan area.

Table 8: Average Viewership of Comcast Owned/Partially Owned Cable Networks

| Comcast Owned/Partially Owned Cable Networks | Daily Average Viewership When Reported* | Weekly Average Viewership Estimate | # of Homes Available ⁶⁰ | Cable Network Weekly Rating ⁶¹ |
|--|---|------------------------------------|------------------------------------|---|
| CNBC | 196,000 | 1.3 million | 96.2 million | 1.3% |
| Golf Channel | 120,000 | 840,000 | 82.0 million | 1.0% |
| MSNBC | 1.9 million | 13.3 million | 94.5 million | 14.1% |
| NBCSN | 75,000 | 525,000 | 77.7 million | .7% |
| Sprout | 122,000 | 8.5 million | 55.2 million | 1.5% |
| The Weather Channel | 284,000 | 2.0 million | 99.9 million | 2.0% |
| USA Network | 2.9 million | 20.3 million | 98.6 million | 21% |

*Nielsen numbers based on a minimum of one minute of network viewing.

For example, Comcast owns the Bravo Network. In January, 2014, the Bravo Network issued a press release when it hit a record high in the network's 33-year history with the viewership of the show *Desperate Housewives of Atlanta*. That show's rating was reported as 4.5 million, or a rating of five percent (5%) of the potential audience.⁶² The press release didn't state the average weekly viewership of the network, but since the five percent (5%) was a 33-year record high, it is likely that the weekly average is much lower.

The majority of Comcast's networks have a weekly average viewership rating of less than two percent (2%). Considering that one of Comcast's most popular cable networks on television, USA Network, has a weekly average CUME of 21%, it would be rare that one of the 300 niche commercial cable networks will have a majority of the viewers. In fact, in cable television's history, the industry has never had a majority of American television households watching one of its networks. In fact, the industry's strength is its ability to tailor to niche interests like golf or business/market information as one can see below.⁶³

The percentages above show that even the most popular commercial channels will not garner a majority of viewing households in a large multichannel environment. Accordingly, local access

⁶⁰ Nielsen's cable network universe estimates can be retrieved from <http://tvbythenumbers.zap2it.com/2013/08/23/list-of-how-many-homes-each-cable-networks-is-in-cable-network-coverage-estimates-as-of-august-2013/199072/>

⁶¹ This is computed based on household CUME (viewing of 1 minute or more per week) as a percentage of the total number of potential households.

⁶² Coverage of the press release can be found at <http://tvbythenumbers.zap2it.com/2014/01/07/bravo-media-shatters-ratings-records-sunday-with-its-best-night-in-network-history/227413/>

⁶³ NBCSN, September 20, 2013 at 75,000 a day. <http://www.multichannel.com/content/nbcnsn-scoring-big-total-day-gains-premier-league/145588>. Golf Channel, 120,000 day. <http://www.broadwayworld.com/bwwtv/article/Golf-Channel-Reigns-as-Fastest-Growing-Network-on-Television-20121004>. USA Network, August 24, daily viewership of 2.91 million <http://tvbythenumbers.zap2it.com/2013/08/21/usa-is-the-1-cable-network-for-the-8th-consecutive-summer/198761/>. CNBC, <http://variety.com/2013/tv/news/cnbcs-the-profit-in-the-red-after-week-two-ratings-tumble-1200575819/>. MSNBC, <http://stateofthemediamedia.org/2013/cable-a-growing-medium-reaching-its-ceiling/cable-by-the-numbers/>.

Weather Channel, <http://www.buzzfeed.com/passantino/storm-breeds-as-the-weather-channel-launches-campaign-against> Sprout Network, <http://www.cynopsis.com/files/4113/4624/5396/SPROUT.pdf>

programming in Philadelphia can be seen as attracting a healthy number of viewers, with 14 to 20% of the responding cable households in the tested franchise areas watching daily or weekly—higher than the majority of the channels in our comparison.

Compared with commercial cable networks, including Comcast networks, governmental access programming in Philadelphia attracts a high number of viewers with 20% of the respondents watching weekly, including six percent (6%) watching more than five hours a week.

Those subscribers who watched Philadelphia’s governmental access programming on Channel 64 were also asked a series of questions related to picture, sound and informational value of the programming.

The informational value of government access programming received the highest scores with 73% rating it “excellent” or “good”, 18% describing it as “fair” and one percent (1%) as “poor.”

Sixty-seven percent (67%) described picture quality as “excellent” or “good” with 28% describing it as “fair” or “poor.” This is a significantly less positive characterization of government access picture quality than was given for the Comcast system picture quality as a whole. Regarding overall levels of satisfaction with picture quality, 97% reported they were “satisfied”, including 40% “very satisfied.” This finding suggests that there is a notable difference in picture quality on the governmental access channel as compared to the other channels on the system. This is important to note considering that 47% of subscribers also indicated that they primarily watch HD channels, and suggests that the perception of PEG channel signal quality and any attendant effect on viewership will continue to be less positive until the picture quality is improved by Comcast.

The sound quality scored similarly, with 68% describing it as “excellent” or “good” and 28% describing it as “fair” or “poor.”

Public Access

The local community and public access organization, PhillyCAM (standing for Philadelphia Community Access Media), manages and supports programming that appears on Channels 66 and 966. This programming is viewed by 28% of cable subscribers who are aware of the local access channels in Philadelphia on at least a monthly basis. When measuring more specifically how frequently the programming is viewed, three percent (3%) of respondents reported that they watched more than five hours a week, and another 11% described themselves as weekly viewers who watched less than five hours a week. Fourteen percent (14%) reported watching the channel a couple of times a month and 11% indicated that they watched the channel a couple of times a year. Fifty-eight percent (58%) of subscribers reported that they never watched public access programming

Again, these numbers show viewership for public access programming in Philadelphia that is comparable to many popular channels on cable television. As described in examples reviewed above, even the most popular cable networks rarely receive more than a small minority of the total viewing audience. In one of the weeks during which the Philadelphia residential study was being conducted, well-known channels like Food Network, TLC, and HGTV had less than one percent

(1%) average daily viewership.⁶⁴ The number one cable network for that month was Nickelodeon with 1.8 million viewers daily—roughly 1.5% of the potential viewing audience.⁶⁵

Local public access programming in Philadelphia, by comparison, is attracting a significant number of potential cable viewers with 14% of the responding households watching weekly, including three percent (3%) watching more than five hours a week. This finding, coupled with the important role of providing residents an outlet to increase the marketplace of ideas, shows a successful and important public access program in Philadelphia.

Those subscribers who watched PhillyCAM programming on a daily, weekly, or monthly basis were asked a series of questions related to picture, sound, and programming quality (N=77).

The overall value of PhillyCAM programming received high scores with 80% rating it “excellent” or “good”, 17% describing it as “fair” and 0% as “poor.”

Sixty-five percent (65%) described picture quality as “excellent” or “good” with 27% describing it as “fair” and seven percent (7%) said it was “poor.” Again, this is a significantly less positive characterization of picture quality than was given by subscribers when asked about the overall picture quality on the Comcast system and their level of satisfaction. In responding to that question, 97% were satisfied with picture quality, 40% very satisfied. This finding suggests that, like the government access channel, there is a notable difference between picture quality on the public access channel and that on the other channels on the system. Perception of public access signal quality and any attendant impact on viewership will be less positive until improvements are made.

The sound quality scored similarly with 72% describing it as “excellent” or “good”, 21% describing it as “fair” and seven percent (7%) indicating “poor.”

Educational Access

Local educational access programming produced by the Philadelphia K-12 Public Schools appears on Channel 52 and is viewed by 23% of cable subscribers who are aware of the local access channels in Philadelphia on at least a monthly basis. When measuring more specifically how frequently the programming is viewed, five percent (5%) of respondents reported that they watched more than five hours a week, and another nine percent (9%) described themselves as weekly viewers who watched less than five hours a week. Nine percent (9%) reported watching the channel a couple of times a month and ten percent (10%) indicated that they watched the channel a couple of times a year. Sixty-five percent (65%) of subscribers reported that they never watched K-12 educational access programming.

Additionally, the City of Philadelphia has a series of channels dedicated to higher education. These are operated by the Universities of Drexel, Temple, and La Salle, and the Community College of Philadelphia. Four percent (4%) of subscribers indicated they watch these channels more than five hours a week, ten percent (10%) watch for less than five hours, but on a weekly basis, another 12%

⁶⁴ Cable network ratings can be retrieved from <http://www.medialifemagazine.com/shutdown-bad-u-s-good-cable/>.

⁶⁵ Ibid.

watch once or twice a month, and ten percent (10%) watched once or twice a year. Sixty-two percent (62%) indicated that they never watch the higher education local access channels.

Access Programming in HD and On Demand

Philadelphia Comcast cable television subscribers who watched local access programming at least once or twice a month were asked how valuable it would be to see these programs in high definition. Sixty-seven percent (67%), or two in three subscribers, indicated it would be valuable at some level, including 18% that indicated it would be “very valuable” and 20% that indicated “valuable.” Thirty-one percent (31%) indicated it would be “not at all valuable.” A cross-tabulation finds that subscribers who indicated they primarily watch HD channels (47%) were also most likely to find it “very valuable” to have access channels available in high definition.

Subscribers that reported watching access channels were asked about the value of having local access programming available via the cable system on-demand. Again, the majority indicated that it would be valuable at some level (73%), including one in three (32%) who said it would be “very valuable” and 24% who said it would be “valuable.” Twenty-two percent (22%) indicated it would be “not at all valuable.”

Future Access Programming

Subscribers who did not watch any of the access channels regularly or were not aware of the access channels were asked if there was any local programming that they would find valuable on the cable system, including anything they would like to see added to the cable system.

Several different categories of programs were mentioned and a full list is at the end of the Survey Mark-up in Exhibit A.1. Four categories are worth noting here. Subscribers who were not aware of the access channels or who didn’t watch access regularly indicated an interest in arts and entertainment programming, retirement topics, historical programming about Philadelphia and live monitoring of traffic cameras.

Importance of Access Programming

All cable subscribers, regardless of whether they watched access or not, were asked how important it was that the local community access channels were available on the cable system. The large majority, 84%, thought that these channels were important, including 34%, or one in three cable subscribers, who indicated they were “very important” and 26% who indicated “important.” Thirteen percent (13%) indicated not at all important. Table 9 summarizes these results.

Table 9. How important is it that local community channels are available to cable subscribers?

| Importance | Percentage |
|----------------------|-------------------|
| Very Important | 34% |
| Important | 26% |
| Somewhat Important | 24% |
| Not at all Important | 13% |
| Don't Know | 2% |

Funding Access Programming

A question was posed to all cable subscribers (N=400) related to funding for access channels. Subscribers were provided the proportion of their cable bill that currently goes to ESPN and TNT to provide some perspective on per-channel costs, and then asked how much they would be willing to pay per month to support local programming.

The response was positive with 37% of residents indicating a specific amount they would be willing to pay monthly to support local access programming. The range was \$.01 to \$25 per month. The average amount was \$3.16 among those willing to pay (the average is \$1.41 per month if you include those not willing to pay anything for access channels [46%]). Another 14% said they didn't know or were unsure of the amount they'd be willing to pay.

Further analysis of the responses indicates that of those who were aware of the local access channels, 42% were willing to pay and specified an amount and 42% were not willing to pay. Among subscribers not aware of the local access channels, 55% were not willing to pay and 27% were willing and provided a specific amount.

When looking at both the importance of local access and willingness to pay, we find that even subscribers who were not willing to pay still indicated a high level of importance for the local access channels; 71% for those unaware and 76% for those that are aware. Similarly, those subscribers who were unsure of an amount to pay for local access channels also indicate high levels of importance for the access channels: 91% for those unaware and 94% for those aware. These high percentages of importance, even among those unwilling to pay or unsure what they would consider paying, demonstrate that the local access channels are important to most Philadelphia cable subscribers.

Online Access in Philadelphia

A series of questions related to online access and interactivity were posed to Comcast subscribers and non-subscribers in Philadelphia. Among all respondents (N=800), 38% subscribe to Comcast's Xfinity broadband or high-speed Internet services. Among Comcast subscribers (N=400) that number is 70% and among non-subscribers (N=400) that number is seven percent (7%).

All residents that did not report having Comcast's Xfinity service were asked if they had Internet service at home. Of the 62% who did not have service with Xfinity, 40% *reported not having Internet service at home* (N=197, or 25% of all Philadelphia residents). In other words, one in four Philadelphia residents report not having Internet service at home. This finding is consistent with two recent reports published by the Pew Internet American Life project on Internet access at home in urban areas.⁶⁶ The national tracking data finds that "No Internet access at home" is currently at 28%. Additionally, another Pew Charitable Trusts study focused on Internet access in Philadelphia, found in August 2013 that "personal access to the Internet" was at 82%. In other words, 18% of Philadelphia residents in that study reported not having "personal Internet access."

Of those that do have Internet access at home, but not with Comcast (37% of Philadelphia residents), the majority indicated that they subscribe to Verizon Internet Service (N=223 of 297). Of those subscribing to Verizon, seven percent (7%) reported being on dial-up (N=13), 52% had DSL (N=104) and 41% had FiOS Internet service (N=106).

All respondents who did not have service with Comcast were asked what their primary reasons were for going with a different service provider and "cost" was the most often mentioned response (42%). This was followed by "most reliable service in my area" (14%) and speed (6%). Another six percent (6%) also indicated that this was the "only available service" in their area. It is important to note that 32% indicated other reasons, such as the service being recommended by friends, the subscriber wanting everything to come from the same provider, or Internet service being part of a bundled package deal offered.

Respondents *without* Internet Service at Home

To better understand the environment for Philadelphia residents without Internet access at home, a series of questions was posed (N=197, or 25%). First, these residents were asked why they had chosen not to subscribe to Internet service at home. Up to three reasons were coded for each respondent. The most frequent response was that they didn't own a computer (31%); this was followed by the cost of Internet service (25%), "nothing on the Internet I need" (5%), and "don't know how to use the Internet" (4%). Three percent (3%) of those without Internet service at home indicated that they use their mobile phone to access the Internet.

⁶⁶ A full report on the latest Pew Internet and American Life data can be retrieved at <http://pewinternet.org/Infographics/2013/How-Americans-go-online.aspx>. The Internet tracking study being conducted by Pew Charitable Trusts in Philadelphia can be retrieved at <http://www.pewtrusts.org/pt/research-and-analysis/reports/2013/11/12/ten-facts-about-internet-access-in-philadelphia>.

Those respondents who reported that they didn't have a computer in the home (N=68), which was nine percent (9%) of all Philadelphia respondents tested and 34% of residents without Internet access at home, were asked why they hadn't purchased a computer. The most often cited reasons were "cost" (28%) and "don't want one" (28%). This was followed by "don't know how to use a computer (16%), "don't need one" (7%), and don't have time to learn how to use one (4%).

To further illustrate the population of Philadelphia respondents that do not have Internet service at home, an analysis with the reported demographics was reviewed.⁶⁷ Those without Internet service at home are significantly more likely to report renting their home and less likely to have children in the home. Additionally, this group of respondents was significantly less likely to have a mobile phone, three times as likely to report not completing high school, twice as likely to report not going on to college, and twice as likely to report not being employed. This group is also significantly older and more likely to report being retired. While not as significant as the other factors, this group is more likely to be female and more likely to report earning under \$25,000 annually.

Online Activity among Philadelphia Residents

Half of Philadelphia respondents indicated that they access the Internet away from home. Those that do were asked where they access the Internet and the first responses recorded. These first responses included that they access the Internet at work (42%), followed by "everywhere on my mobile/smart phone" (25%). Nine percent (9%) access the Internet at the public library. Eight percent (8%) indicated they access the Internet at a public computing center like a community center or recreation center.

Of particular interest is where those without Internet access at home are accessing the Internet. A cross tabulation finds that those without Internet access at home are most likely to report accessing the Internet at work if they are employed, or using the public library. Those with mobile phones also indicated using mobile phones to access the Internet "everywhere."

⁶⁷ To test for significant relationships, an analysis of variance (ANOVA) between reporting Internet access at home and the reported demographics was conducted. Relationships were significant at the .05 level and a crosstab was reviewed to illustrate the differences.

All respondents that have Internet access at home or access the Internet via mobile phone or elsewhere were asked a series of questions about what they mostly use the Internet to do (74% of the responding sample). The top ten Internet activities reported by Philadelphia respondents included in their first responses included the following:

Top 10 Internet Activities Reported by Philadelphia Respondents (N=589)

| | |
|---|-----|
| 1. Buy something online | 12% |
| 2. Use an online social networking site like Facebook or LinkedIn | 11% |
| 3. Keep in touch with family and friends | 9% |
| 4. Looking for information about a service/product thinking of buying | 7% |
| 5. Online banking | 6% |
| 6. Work from home (telecommuting) | 5% |
| 7. Take a class or do homework | 5% |
| 8. Watch television or other videos | 4% |
| 9. Play online video games | 4% |
| 10. Look online for news and information | 4% |

One can see from these responses the significant economic activity happening online in Philadelphia. Economists describe this level of online banking, product research, telecommuting and education obtainment as tertiary and quaternary economic activity in the Philadelphia market. As the United States economy has moved from agricultural and industrial, it has become increasingly an information and retail based economy, leading the world in this activity. Evidence of these activities in the City are indicators of the new world economies at work and demonstrate the critical need for continued robust broadband availability at affordable rates for the future of Philadelphia⁶⁸.

Additionally, respondents online in Philadelphia were asked about future and current interest in interacting with the City of Philadelphia online. The majority indicated that this was desirable (55%). When asked what type of online activities/services they would like to engage in with the City, the following were the top five first mentioned responses:

Top 5 Desired Internet Activities/Services with the City of Philadelphia

| | |
|-----------------------------------|-----|
| 1. Pay my water bills/local taxes | 17% |
| 2. Request City services | 14% |
| 3. Emergency Information | 12% |
| 4. Traffic Updates | 10% |
| 5. City Job Searches | 7% |

⁶⁸ For a discussion of economic sectors and the future economy, see Zoltan Kenessey, U.S. [Federal Reserve Board](http://www.federalreserve.gov). "THE PRIMARY, SECONDARY, TERTIARY AND QUATERNARY SECTORS OF THE ECONOMY." Review of Income and Wealth. Retrieved from <http://www.roiw.org/1987/359.pdf>.

Final Comments

When all respondents, subscribers and non-subscribers, were given a final opportunity to add any additional thoughts about their Comcast cable television service, a majority indicated that there was “nothing” else to add (58%). Among those who did respond (42%), the most frequent responses included: comments again emphasizing that cable costs too much (18%); they thought that Comcast was doing a good job (7%); Comcast had poor customer service (7%); and encouraging more cable competition in the marketplace (3%).

RESIDENTIAL TELEPHONE SURVEY CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on themes and concerns that emerged from the residential telephone survey. Several of these themes were echoed in the online non-scientific survey as well, as discussed in the next section.

- 1. Subscriber Satisfaction** – Seventy-four percent (74%) of Comcast cable subscribers are satisfied overall with their cable service, with 51% indicating "satisfied" and 23% indicating "very satisfied." The other 26% trend negative, with 17% indicating "dissatisfied" and nine percent (9%) indicating "very dissatisfied." As described throughout this section, the positive score is between one percent (1%) and ten percent (10%) lower than other Comcast franchises tested in the last several years in other needs assessments conducted by CBG.

Those that rated cable service more negatively indicated that the rating could be improved if rates were lowered (45%). They also suggested that if Comcast offered more programming choices (12%) it would increase their satisfaction level and eight percent (8%) said that if there were fewer outages and breaks in service it would improve their satisfaction. Similar to the above, working to rein in the cost of cable service, as well as developing more affordable packages, would improve the satisfaction of existing subscribers and help with retention. Additionally, as noted below, addressing technical issues related to signal outages and other reception problems would drive higher customer satisfaction with Comcast cable television service.

- 2. Reasons for Non-Subscribership** – Thirty-six percent (36%) of non-Comcast cable television subscribers indicated that they had never subscribed to Comcast cable television services in Philadelphia. The primary reason cited is the cost of service (35%), followed by 21% who indicated that they were satellite subscribers and another 15% who don't watch or don't have time to watch television. Cost was also the primary reason (58%) cited for no longer subscribing to Comcast cable television service by respondents that had previously subscribed. This was followed by those that had billing issues/problems (7%), those they had moved (7%), those that had experienced service problems (5%), and those that experienced poor customer service (2%).

Cost is also an issue cited for non-subscribership nationally.⁶⁹ Specifically, the increasing cost for commercial cable services, especially sports services, with their high fees for coverage and carriage rights, which result in high per subscriber fees that are passed through to subscribers by cable providers. This is often identified as the reason for rate increases that continue to outpace the rate of inflation.

⁶⁹ Dissatisfaction with the cost of cable television can be found in numerous customer studies. A recent study is available online from the Consumers Union annual telecommunications report at <https://consumersunion.org/news/comcast-and-time-warner-cable-score-low-on-latest-consumer-reports-customer-satisfaction-survey/>.

Overall, the findings suggest that Comcast will need to work to rein in the cost of commercial cable programming services (it is notable that Comcast owns or has part ownership in a number of cable channels) to lower the pace of its cost increases, and may need to offer new/alternative programming package options at a variety of more affordable rates. This would help address concerns about cost and rate increases, which in turn should help retain subscribers and attract those that have never subscribed.

3. **Technical Issues** – While the vast majority of Comcast cable subscribers indicated they were satisfied **overall** with picture quality, problems were noted with both signal outages and picture clarity or reception problems. Specifically, lengthy cable signal outages of periods greater than 24 hours were noted by (17%) of subscribers. This was also the second highest reason for calling Comcast telephone customer service (16%). Nineteen percent (19%) of Comcast cable subscribers reported problems with significant picture clarity or reception difficulty, including 11% of those that indicated the picture clarity problem was constant and nine percent (9%) indicated that it occurred every few days. The most often cited problems were with retransmission of local broadcast affiliates signals or with all of the channels rather than specific channels.

Regarding the response time for Comcast to resolve the reception or outage problem, while more than half (52%) were satisfied (16% very satisfied), a substantial number (36%) were dissatisfied and a significant number (10%) very dissatisfied.

Both technical difficulties and outages resulted in calls to Comcast, adding call volume and as a result putting pressure on telephone response time which likely contributed to Comcast's failure to meet FCC customer service standards. Improvements to technical operations in the areas discussed will likely reduce call volume and could reduce the substantial number (61%) of cable subscribers who called Comcast customer service and reported hold times in excess of the FCC standard of 30 seconds.

4. **Customer Service** – While the majority of Comcast cable subscribers are generally satisfied with Comcast's customer service, there are certain areas where subscribers' responses indicate non-compliance with FCC Customer Service Standards (compliance with these standards is required by the Comcast franchises as well as by FCC regulation). These are:

- a. Telephone Answering Standards – Sixty-four percent (64%) of Comcast cable subscribers had called Comcast's customer service operation in the last year and the primary reason (as further discussed below) was related to billing questions (28%). Of these, 15% had received a busy signal when calling the company, which is 400% greater than the (3%) level specified by the FCC and Philadelphia's franchise customer service standard requirements. Additionally, 61% indicated that their call had not been answered within thirty (30) seconds, including the time left on hold, which is 500% greater than the tolerance allowed (10%) under the Franchise and FCC Customer Service Standards. As noted below, resolving the issues that are driving the calls to customer service will likely help reduce the non-compliance situation.

- b. Billing - As noted above, the most common reason for calling Comcast customer service was to ask a billing question (28%). More than one in three (34%) were dissatisfied (11% very dissatisfied) with Comcast's billing practices. Working to resolve the issues that are creating dissatisfaction with billing and billing related calls to Comcast customer service would not only improve customer satisfaction with billing, but will also likely reduce the call volume related to billing and help to address Comcast's violation of FCC customer service standards.
- c. Picture Quality, Outages and Restoration of Service – Approximately one out of every six cable subscribers (17%) indicated that they had experienced a lengthy cable outage lasting more than 24 hours. Only 22% of these subscribers indicated that they had received a credit on their bill for the period of the outage. Comcast is required in their franchises to credit all such customers. Calls to report an outage or loss of signal was the second most common reason (16%) for calling Comcast. Additionally, 19% of Comcast cable subscribers (approximately one out of every five) had experienced significant picture clarity or reception problems. Further, more than one in three (36%) were dissatisfied with the length of time it took Comcast to resolve the outage or reception problem. Taken all together, this makes it clear that improving the quality of customer service should be addressed in franchise renewal. Specifically, improvements need to be made in responsiveness to service calls and the time it takes to make repairs and restore service. There also needs to be improvement in the telephone response time to handle the call volume related to the problems.
- d. Communicating with Comcast Cable Subscribers – Thirty-four percent (34%) of subscriber respondents indicated they were “dissatisfied” (23%) or “very dissatisfied” (11%) with Comcast's communications related to rate and programming changes. Accordingly, Comcast should review and improve how changes in programming, rates and services are communicated to Comcast cable subscribers and the means they use to communicate these changes. For example, the company should consider launching a broad television-based information campaign when channel realignments or rate increases are announced. This would likely reduce the number of the subscriber respondents who called Comcast about a billing question and improve the telephone response times that do not comply with FCC and Franchise customer service standards.

Each of these is an area that we recommend be a focus in franchise renewal negotiations to secure improvements responsive to the concerns reported in the survey. Improvements should include enhanced means of monitoring and responding to these issues by Comcast under a renewed franchise.

- 5. Access Channels and Viewership** – A significant portion of responding subscribers who were aware of the local access channels (68%) reported regular viewership of

Philadelphia's local community/public, educational and governmental (PEG) access channels. Specifically, 14% to 20% of subscribers aware of the access channels reported watching the channels on a weekly basis, including three percent (3%) to six percent (6%) that watch more than five hours a week.

These percentages are significant when considering that cable television's business model is rooted in niche channels rather than mass appeal channels. As an example, the vast majority of cable networks have relatively small weekly cumulative audience (CUME) ratings where even the top networks gain only approximately 1/5 to 1/3 of the total viewing audience on a weekly basis. Moreover, many of cable networks owned or partially owned by Comcast have weekly average viewership ratings of less than two percent (2%). In fact, its USA Network, one of the most popular cable networks on television, garners a weekly cumulative audience of 21% of all television households.

The 14-20% of Philadelphia subscribers who are aware of the local access channels that report watching each local access channel on a weekly basis, then, should be seen as viable and healthy cable television viewership and a valuable part of Comcast's cable service.

Subscribers also indicated a strong level of importance that these local PEG channels be available on the system. The wide majority, 84%, thought that these channels were important, including 34% (or one in three Comcast cable subscribers) who indicated that they were "very important" and 26% indicated "important".

Additionally, especially considering the niche nature of cable programming services, nearly four in ten (37%) of respondents indicated a specific amount that they would be willing to pay monthly to support local access programming. The range was \$0.01 to \$25.00 per month, with the average amount being \$3.16 per month. The average was still high at \$1.41 per month even if you include those not willing to pay anything for access channels (46%). Further, for subscribers who watched local access programming at least once or twice a month, the majority of them (67%), found that it would be valuable to have local access programming in High Definition (HD) and also available On Demand (73% very valuable, valuable or somewhat valuable).

Overall, the results from the telephone survey show a high level of interest in local PEG access programming, indicating that a renewed franchise should have strong support for continuation and enhancement of access programming and distribution. Such enhancements should occur in a variety of ways, most specifically appropriate funding and ensuring that the channels are integrated into the system in a way that it puts them on a level playing field with other channels and cable programming.

These concluding remarks and recommendations are not meant to be a comprehensive summary of the needs assessment findings as a whole, but rather are one part of the analysis, focusing on the issues identified by survey respondents in a randomly sampled telephone study. Other data presented in this narrative and in other sections of the report, should also be considered by the City as it moves forward with the franchise renewal process with Comcast. An understanding of the

needs and interests in the community can serve to continue to improve cable service in Philadelphia.

RESIDENTIAL ONLINE SURVEY⁷⁰

Introduction

In a further effort to extend the opportunity to all citizens to provide feedback about cable television needs and interests, the City of Philadelphia (City) launched an online version of the residential community survey after completing the statistically valid randomly sampled telephone study. The survey was made available on the City website and links to the survey were made available by the local media from their corresponding websites. Participation was encouraged and promoted in press releases by the City and picked up by several media outlets. In other words, the online survey created a digital town hall environment where residents could provide feedback about their residential cable television service. Recent studies demonstrate that citizens want to share and provide feedback using digital technologies and that making these types of digital feedback mechanisms available increases citizen participation in government.⁷¹

The online assessment of Comcast cable television does not represent a random sample of Philadelphia residents and was not a scientific survey. The online survey does provide another consumer perspective, but has limitations that should be kept in mind when interpreting the results. The online survey acted much like a public town hall in that everyone was encouraged to respond and the survey was made available through public computer kiosks, such as the open use computers in Philadelphia's public libraries. For this reason, no restrictions were placed on the number of responses a single computer could submit. If one person wanted to complete the survey several times, they could. This would be the equivalent of someone standing at the podium of a public hearing for a little longer than someone else. In all 21% of responses were from the same IP address, i.e. the same computer terminal.

FINDINGS –ONLINE SURVEY

Sample Description

More than three thousand Philadelphia residents shared their cable television experience through the online survey (N=3,211). Additionally, the survey was made available in hard copy form in local libraries and at KEYSLOT (the City's Internet access initiative) locations throughout the City⁷². Residents were also able to take the survey online at these locations through public access computers and workstations. One (1) resident completed a handwritten version of the survey. Their responses were entered into the online database for online survey responses and are presented here.

⁷⁰ See Cable Television Residential Subscriber/Non-Subscriber Online Survey Markup (hereinafter known as "Exhibit A.2), for individual question construction and instructions to the online respondents.

⁷¹ See Smith, Aaron (2010). Government Online. Retrieved from <http://www.pewinternet.org/2010/04/27/government-online/>. Also see, Lazer, D. (2009). Online Town Hall Meetings: Exploring Democracy in the 21st Century. Retrieved from http://www.congressfoundation.org/storage/documents/CMF_Pubs/online-town-hall-meetings.pdf.

⁷² KEYSLOT represents a citywide coalition of community-based groups committed to bringing Internet access, training and technology to all Philadelphia communities. The KEYSLOT Network is managed by The Mayor's Commission on Literacy, on behalf of the City of Philadelphia in partnership with Drexel University. There are 79 KEYSLOTS, offering a total of 847 workstations across Philadelphia.

The self-reported demographics of the online survey respondents indicate significant diversity. Thirty-four percent (34%) indicated they were female, 66% male⁷³ (N=2,563). Fifty-three percent (53%) indicated they owned their own home, while 47% rent. Nineteen percent (19%) reported having children in the home under 18 years old. By race, 79% were Caucasian, 3% Hispanic and 7% African American. Three percent (3%) were bi-racial, <0.5% were American Indian and 3% Asian.⁷⁴

Seventeen percent (17%) had some college, 46% held college degrees and 32% had an advanced or graduate degree. Five percent (5%) were high school graduates.

Seventy-nine percent (79%) were employed and 5% were looking for employment. Six percent (6%) were retired, 7% were full-time students and 1% were unable to work because of a disability.

By income, 26% were in households that earned \$100,000 or more annually, 16% were between \$75,000 and less than \$100,000, 22% were between \$50,000 and less than \$75,000, 15% were between \$35,000 and less than \$50,000, 10% were between \$25,000 and less than \$35,000 and 11% were less than \$25,000. Six percent (6%) of respondents, who completed the survey, skipped this question.

Of interest is the number of respondents who reported having a Comcast broadband connection in the home (73%/N=1,978 out of 2,721 who answered the question).

A follow up question was posed to those that did not receive broadband or high-speed internet from Comcast, but did report having internet access in the home, to determine the provider of that service. The vast majority indicated some form of Verizon service (77%/N=546 out of 710). Of those that did not have Verizon, most reported Clear as their provider (6%/N=43).

Regarding where respondents lived in the Philadelphia area, 2,499 respondents provided their zip code (22% of the total sample did not provide a home zip code in the online survey). Twenty-two percent (22%) of the zip codes for the total survey sample (N=3,212) derived from four areas, 19146 (7%), 19147 (6%), 19130 (5%), and 19104 (4%).

Sixty-six percent (66%) of respondents reported they subscribed to Comcast cable and 34% did not. Of those that didn't subscribe, 70% said they had subscribed at one time.

A number of non-subscribers to cable television service did have telephone or cable modem service from Comcast (discussed further below), and as a result, Comcast billing amounts reported varied greatly among respondents, ranging between \$5 and \$758. The most common Comcast billing amount reported was \$200 and the average Comcast bill, **including all services**, was \$130.05 (Average cable television Subscriber bill was \$146.58; and average non-subscriber cable television bill was \$70.33)

⁷³ Percentages throughout the online survey report section are based on those citizens that responded to the specific question. Some respondents did not choose to answer specific questions that pertained to them.

⁷⁴ Percentages are expressed in whole numbers, rounded up at the .5 level. The net effect is that totals will fall between 99% and 101%, except in cases where multiple answers ("Mark all that Apply") were allowed.

Non-Subscribers to Comcast Cable Service

For those that had never subscribed to Comcast cable television (N=322), they were asked to identify *all the reasons* for never having subscribed⁷⁵. The major barrier to adoption indicated by respondents was the cost of the service (63%). This was followed by “I use the Internet instead of watching cable television” (62%), and those indicating that they had an unfavorable view of Comcast (50%). Additionally, 27% indicated they didn’t want or didn’t watch television, 10% had no time to watch TV, 4% were satellite television subscribers and 3% said it was not available. “Other”⁷⁶ reasons for not subscribing (N=36) included comments such as: “I’m satisfied with free over-the-air programming”; “Comcast blocks Phillies games to other providers”; “no a la carte option”; “too expensive”; “horrible customer service experience”; “Customer service is terrible”; “Billing is very confusing”; “technical service and support are horrible”; and generally negative opinions of the company.⁷⁷

Non-subscribers that were previous Comcast subscribers (N=764) were asked to identify all the reasons they had stopped subscribing to Comcast cable television. Cost was the primary reason at 87%. This was followed by service issues (48%) and “I started using the Internet to watch TV” (38%). Twenty-one percent (21%) indicated that they rely on free, over the air television and 17% said that programming issues were also a reason that they stopped subscribing. Five percent (5%) are now satellite subscribers and 9% moved. “Other”⁷⁸ reasons for no longer subscribing included comments such as: “They have the worst customer service”; “Mostly because of their awful customer service”; “Their customer service is horrible to deal with”; “Poor customer service”; “grossly expensive prices”; “Basic cable is extremely expensive”; “Comcast service bundle is too expensive”; “Random pricing that increases arbitrarily”; “Too expensive”; “absurdly expensive technology from a company that has horrible customer service”. Some comments expressed a general negative opinion of Comcast. Some examples include: “I found them to be totally dishonest”; “Rude customer service, price gauging, monopoly, could care less about the people”; “Absolutely the most unprofessional company I have ever had to deal with”; “Cable TV problems with no real-time solutions; ignorant customer service reps that barely speak English and know nothing about real/true problem resolution”; “Comcast only cared about getting paid and not myself, the customer”.⁷⁹

Non-subscribers were asked if they currently subscribed to Comcast Xfinity broadband services or telephone services from Comcast. Forty-four percent (44%/N=472) of non-subscribers said

⁷⁵ Respondents were instructed to “Mark all that Apply” to various questions throughout the online survey. Percentages reported for each category within a particular question are out of the total number of respondents answering that question.

⁷⁶ Respondents were provided with a text box to add “other” reasons, not found in the check list, for not subscribing to Comcast.

⁷⁷ All “Other” comments can be found in Exhibit A.2 (not all open coded responses can be found in the Online Survey Markup because of the number of comments provided). A full list of responses not provided can be made available at CBG.

⁷⁸ Respondents were provided with a text box to add “other” reasons, not found in the check list, for no longer subscribing to Comcast.

⁷⁹ See Footnote 77.

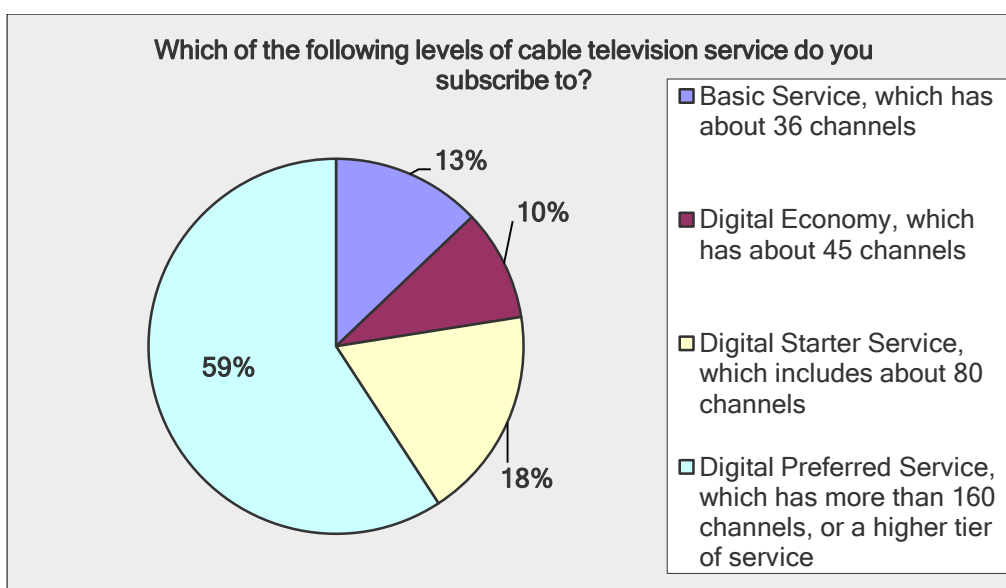
they subscribed to Comcast's broadband or high-speed internet services and 1% (N=15) indicated they subscribe to Comcast's phone service.

Comcast Cable Television Subscribers

Cable television subscribers were asked how many years they had Comcast cable television service at their current address. The range reported was from less than one year up to 40 years. The most common response, the mode, was 1 year (17%/N=329) while the average number of years overall was 6 years.

The following chart illustrates the level of cable television service subscribers reported. Slightly more than half reported subscribing to a digital tier of service beyond the 'starter' package (59%). Thirteen (13%) reported having the most basic level of service.

Chart 3.



Cable subscribers were also asked if they subscribed to Xfinity Broadband or telephone services offered by Comcast. Ninety-one percent (91%/N=1,506) indicated they had Comcast Xfinity broadband or high-speed internet service and 33%/N=540 indicated they had Comcast phone service.

Overall Satisfaction

When asked about how satisfied they were with cable television service, a significant number of online survey respondents indicated they were "dissatisfied" (31%) or "very dissatisfied" (38%). The remaining indicated "very satisfied" (5%) or "satisfied" (24%). Two percent "didn't know." (N=1,960).

Common themes in open coded comments were identified and collapsed into several categories. The top categories for respondents being less than satisfied were reviewed. The following top five (5) categories or most common words/phrases (representing 78% of the respondents) were provided in the responses to this open ended question (examples of comments from some of these categories can be found below). Additional comments can be found in the Exhibit A.2.⁸⁰

Top five (5) common words used by respondents:

1. *Customer Service (432)*

- a. The most common words found within this group were terrible (68), better (64), poor (61), horrible (48), awful (32), lacking (20), bad (15), horrendous (6), and represented 73% of the respondents in this group.

2. *Words/Phrases related to Cost categories (418)*

- a. The most common words found within this group were expensive (182), Lower prices (55), prices are too high (44), raising rates (33), cost is too high (22), reasonable price (22), lower rates (18), lower cost (18), getting higher (13), price gouging (10), exorbitant (9), hidden fees (8), and represented 100% of the respondents in this group.

3. *Channels (249)*

- a. The most common words found within this group were: package (49), offer (33), never watch (18), premium (16), demand (13), better pricing (13), and overpriced (7), and represented 60% of this group. For further clarification of how “channels” was used by respondents, some examples of comments included:
“Channels that are available in other areas on basic or starter packages are not available here.”
“We get a package of 40 channels but half of them are full of programs that we have no desire to watch.”
“The packages cost too much for channels I don't want.”
“Offer a la carte channel choices.”

⁸⁰ A full list of responses can be made available at CBG.

4. *Internet Service and/or Internet Speeds (187)*

- a. The most common issues reported by almost 52% of this group of respondents (N=98) were related to speed issues with the internet, including words like speeds (70), slow (39), and faster (8). Examples of some clarifying comments include:
“High cost with very slow internet service”
“The only reason we have Comcast is that it is the only option for reasonably fast internet in our neighborhood.”
- b. The second most common issue reported by almost 25% of this group of respondents (N=48) was related to internet service. Some examples of comments included:
“I just want an internet service but I have to pay for cable television too.”
“Our internet service doesn't meet the upload/download speeds the majority of the time and now they are increasing prices. If there was another service available in my area then I would have switched by now.”
“Generally internet service is slow, making it difficult to download or stream video content, however (finally something positive!), the service rarely does shut off completely. It also has terrible range and gets very slow when two or more machines are being used.”

5. *Monopoly and/or Competition (N=162)*

- a. Examples of some clarifying comments include:
“Comcast is a monopoly that has doubled our rates in three years, to pay for sports television rights. Their rates need to be government regulated just like any other monopoly. Consumers are getting screwed by this monopoly.”
“Comcast has realized that they have a monopoly over a large majority of Philadelphia and have treated their customers in the exact manner that makes people dislike monopolies”
“Literally the only reason I use them is because the city has granted them a monopoly. Any competition would vastly improve the current situation.”
“Service is substandard. I do not feel valued as a customer and feel that the monopoly Comcast has in this market is reflected in their customer service.”

Service Features

Subscribers were asked about their satisfaction with specific picture and sound characteristics. The sound level consistency across channels earned substantial dissatisfaction (10% very dissatisfied, 22% dissatisfied) among online respondents, while they were generally more satisfied with picture quality (23% very satisfied, 61% satisfied).

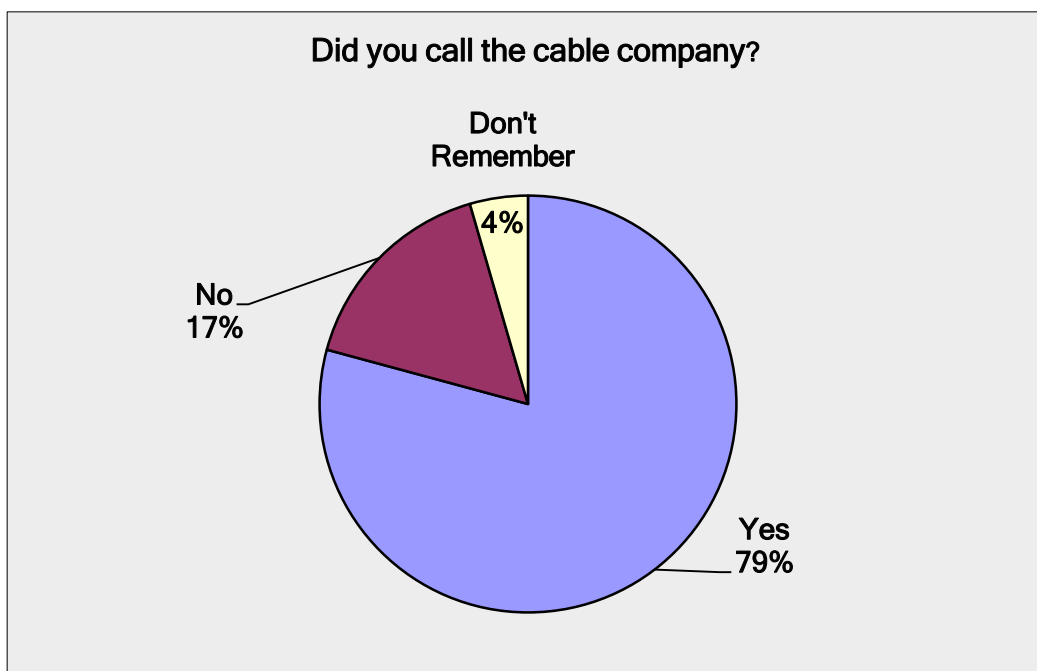
Subscribers were also asked about several characteristics of cable TV service in the online survey and about half of respondents rated them negatively. Specifically, respondents reported dissatisfaction with the available times offered for service (25% very dissatisfied and 27% dissatisfied), and the arrival time of the service technician also received high dissatisfaction rates (24% very dissatisfied and 24% dissatisfied).

Subscribers were also asked about Comcast communications with them. Dissatisfaction was high regarding Comcast's billing practices (53% very dissatisfied, 26% dissatisfied). Communications related to rate and programming changes also showed poor satisfaction ratings (49% very dissatisfied, 28% dissatisfied).

Calls to Comcast

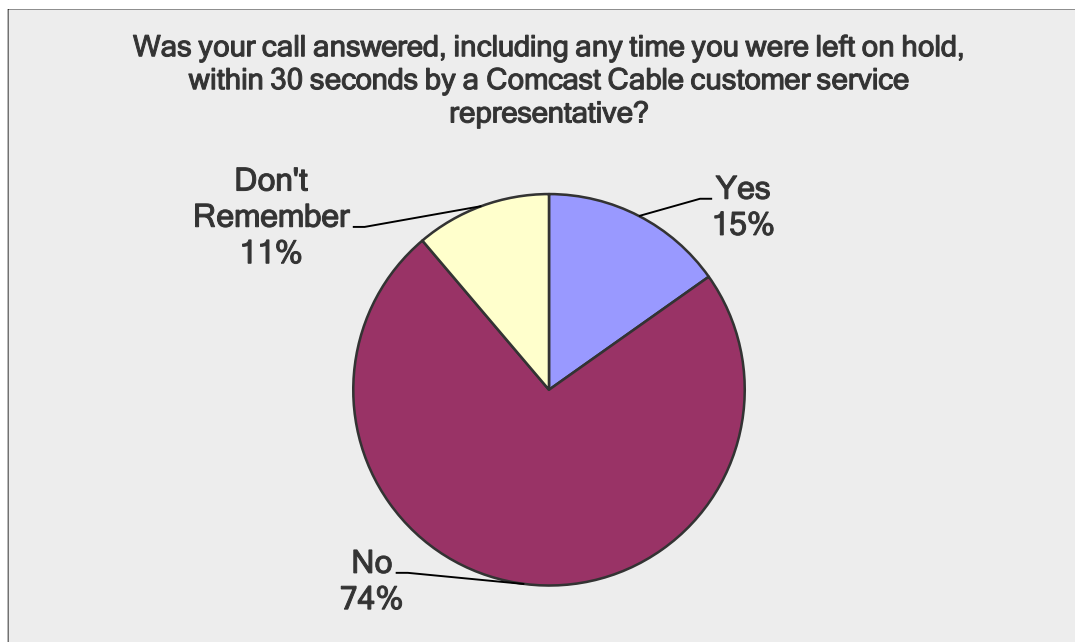
Subscribers were asked whether they had called the Comcast Cable office for any reason other than installation in the past year. Seventy-nine percent (79%/N=1,400) of respondents indicated they had called the cable company.

Chart 4.



When calling, 21% indicated they received a busy signal. Seventy-four percent (74%/N=1,015) indicated that they were on hold for more than 30 seconds.

Chart 5.



The primary reason respondents indicated for calling Comcast within the past year was billing questions (71%), with outages (59%) as the next highest reason reported. Additional reasons for calling included: to change the type of service subscribed to (47%), problems with their cable modem service (47%) and signal quality problems (36%). While outages may or may not be considered “normal” operating conditions, based on the particular circumstance or cause, certainly billing problems, changing the type of service and signal quality issues are controllable variables for Comcast and phone lines should be staffed adequately to meet demand.

For those calling to report a problem or request service, one out of four online respondents indicated that the follow-up occurred the same day (27%) and 12% indicated the next business day. Many reported it was days later (20%) or about a week (13%), and 12% indicated the problem “was never resolved.”

Cable Signal Outages and Technical Problems

Cable subscribers were asked several questions about cable outages and other technical problems. Of those that responded (N=1,744), 28% (N=481) reported having outages lasting longer than 24 hours in the last two years while they still had electricity.

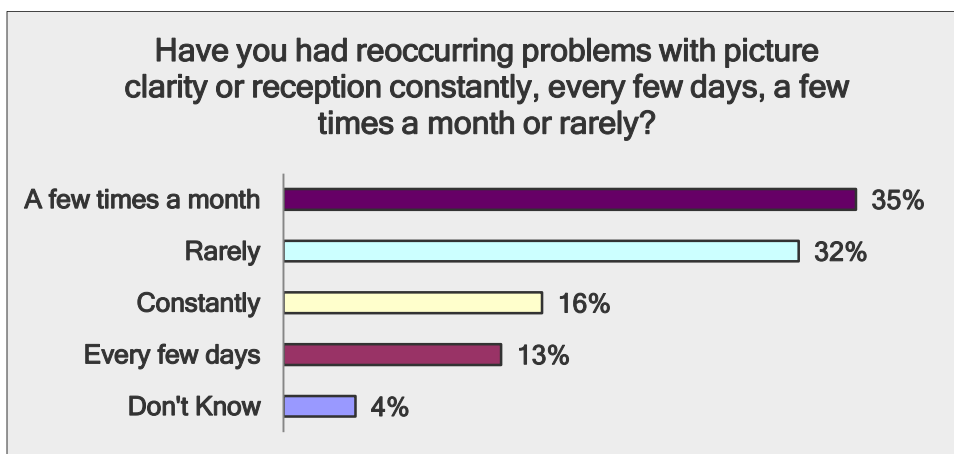
Of those that reported such an outage, only 20%/N=98 indicated that they had received a credit from Comcast for the amount of time they went without cable television service.

Satisfaction was generally low for the amount of time it took to restore service, with 43% dissatisfied and 41% very dissatisfied. Fourteen percent (14%) were satisfied and less than 1% very satisfied.

Picture Quality

Additionally, problems with picture clarity or reception in the past year were reported by 32%/N=557 of subscribers, with “a few times a month” given as the number one response for how often the problem reoccurred (35%). This was followed by “rarely” (32%), “constantly” (16%) and “every few days” (13%).

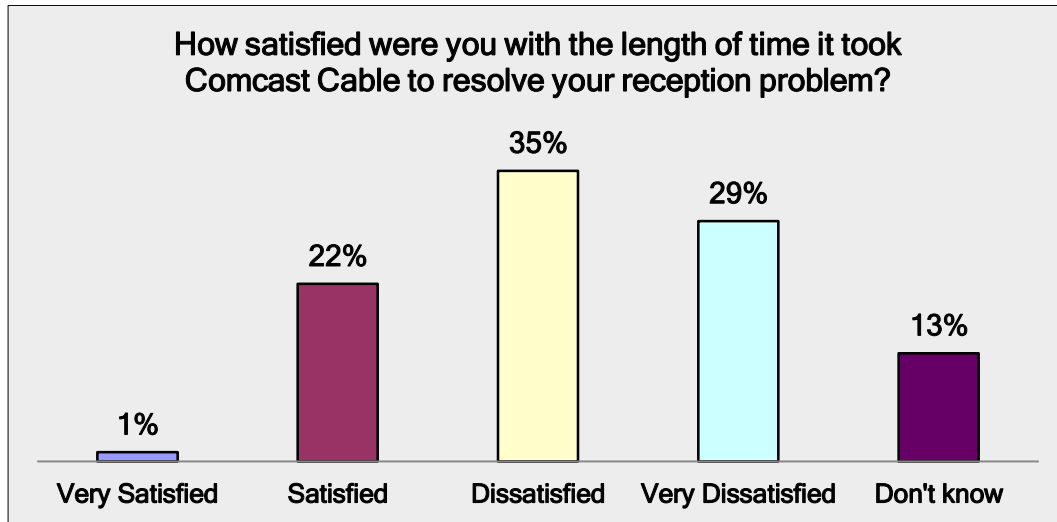
Chart 6.



Problem Resolution Satisfaction

Dissatisfaction was generally high for the amount of time it took to resolve the reception problem, with 35% dissatisfied and 29% very dissatisfied. Twenty-two percent (22%) were satisfied and 1% very satisfied.

Chart 7.

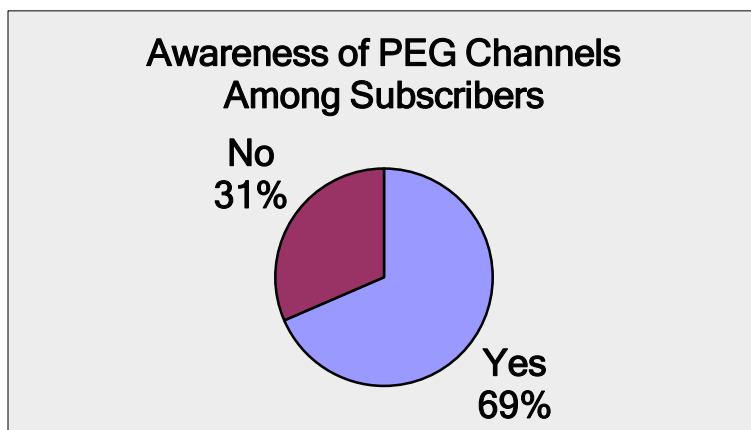


Respondents were asked in an open ended question to indicate the channels where they experienced the most technical difficulty, 262 respondents provided their top responses with the most frequent responses categorized in descending order, as follows: all channels, On Demand, ABC, FOX, CBS, ESPN, HBO, PBS, Comedy Central, NBC, Sports Network, Discovery and Showtime. The randomly sampled telephone survey respondents indicated the same channels as well.

Public, Educational and Governmental (PEG) Access Channels

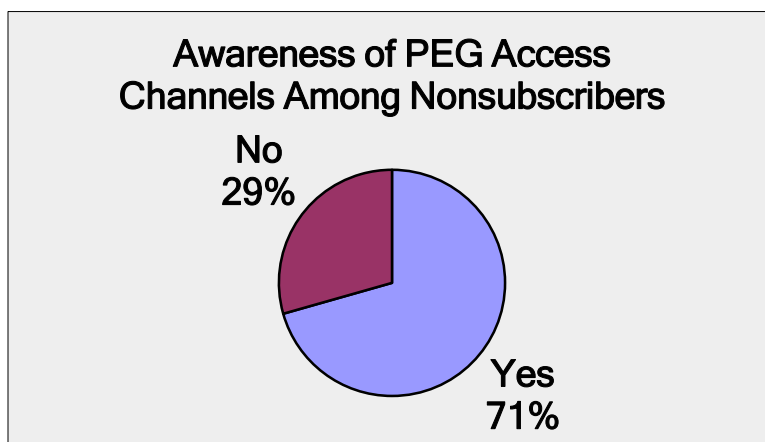
Sixty-nine percent (69%/N=1,166) of Comcast cable subscribers responding to the survey were aware of the PEG channels in Philadelphia. This is similar to what was reported in the telephone survey.

Chart 8.



Non-subscribers reported their awareness of the PEG channels similarly, with 71% being aware (N=757).

Chart 9.



Non-subscribers were also asked whether they had an interest in receiving local community government, education and public access programming. Almost three in four (74%/N=790) indicated that they had an interest.

Subscribers who were aware of the access channels were asked about their viewership and satisfaction levels with the quality of local PEG programming on the access channels in Philadelphia. Responses are described below by type of PEG Access.

Governmental Access

The first channel explored was the City's local governmental access channel, Channel 64. Considering the niche nature of cable television channel viewers (see discussion above), Philadelphia's local governmental access channel enjoys a significant level of viewership and satisfaction with the value of its programming. Two percent (2%) of responding subscribers reported watching the channel for more than 5 hours a week and 6% watch less than 5 hours a week, but on a weekly basis. Another 13% watch once or twice a month and another 23% watch once or twice a year. Fifty-four percent (54%) reported "never" watching the channel.

Table 10.

| Question: How often do you watch local government programming that appears that appears on local channel 64, the government television channel? (N=1,159) | |
|--|-------------------------|
| Answer Options | Response Percent |
| More than 5 hours per week | 2% |
| Less than 5 hours per week, but on a weekly basis | 6% |
| Once or twice per month | 13% |
| Once or twice a year | 23% |
| Never | 54% |
| Don't Know | 2% |

Informational value of the programming on the local government channel received the most positive marks (57% Excellent and Good). The "picture" and "sound" quality of the programming had two in five respondents describing it as "fair" (39%), with a similar number describing it as "excellent" or "good".

Table 11. Government Access Channel Characteristics

| | Excellent | Good | Fair | Poor | Don't Know | N= |
|--|------------------|-------------|-------------|-------------|-------------------|-----------|
| Government Access' picture quality | 5% | 38% | 39% | 13% | 5% | 234 |
| Government Access' sound quality | 5% | 33% | 39% | 18% | 5% | 233 |
| Government Access programming's informational value | 14% | 43% | 29% | 9% | 5% | 233 |

Public Access

PhillyCAM (Channels 66 and 966) had nearly the same viewership, but still strong numbers with 2% watching more than 5 hours a week, 6% watching less than 5 hours per week, but watching weekly; 12% watching a few times a month and 19% watching a few times a year. Fifty-nine percent (59%) reported “never” watching PhillyCAM.

Table 12.

| Question: How often do you watch locally produced, community and public access programming that appears on PhillyCAM's Channels 66 and 966? (N=1,149) | |
|--|-------------------------|
| Answer Options | Response Percent |
| More than 5 hours per week | 2% |
| Less than 5 hours per week, but on a weekly basis | 6% |
| Once or twice per month | 12% |
| Once or twice a year | 19% |
| Never | 59% |
| Don't Know | 2% |

Respondents also rated the quality of signal and programs that appear on PhillyCAM, similarly to the government access channel, with the overall programming value receiving primarily "excellent and good" marks (56%). Sound quality received a fair rating of 34% of respondents and picture quality received a fair rating of 31%.

Educational Access

Viewership of the educational access programming that appears on the School District of Philadelphia's K-12 Educational Access channel, Channel 52, was also measured by the online survey. Viewership in this category of educational access programming was lower than for governmental and public access programming, but still healthy. One percent (1%) reported watching more than 5 hours a week, 3% watched less than 5 hours a week, but on a weekly basis, 6% watched once or twice a month and 11% watched once or twice a year.

Table 13.

| Question: How often do you watch locally produced K-12 public schools education access programming that appears on Channel 52? (N=1,136) | |
|---|-------------------------|
| Answer Options | Response Percent |
| More than 5 hours per week | 1% |
| Less than 5 hours per week, but on a weekly basis | 3% |
| Once or twice per month | 6% |
| Once or twice a year | 11% |
| Never | 76% |
| Don't Know | 3% |

For households with children under 18 years old (15%/N=311 of subscribers), the viewership of K-12 educational access is higher: 3% report watching educational access more than 5 hours a week, 5% less than 5 hours a week but on a weekly basis, 11% watching a few times each month and 20% watching a few times a year. Moreover, 81% of subscribers with children under 18 years of age indicate some level of importance for having local community channels available to subscribers.

The online survey also measured viewership of the programming appearing on the local higher educational access channels operated by Drexel, Temple and La Salle Universities and the Community College of Philadelphia. Viewership in this category was similar to viewership for the City's local government access channel. Two percent (2%) reported watching more than 5 hours a week, 6% watched less than 5 hours a week, but on a weekly basis, 12% watched once or twice a month and 21% watched once or twice a year.

Table 14.

| Question: How often do you watch locally produced higher educational access programming from Drexel, Temple, La Salle and Community College of Philadelphia? (N=1,137) | |
|---|-------------------------|
| Answer Options | Response Percent |
| More than 5 hours per week | 2% |
| Less than 5 hours per week, but on a weekly basis | 6% |
| Once or twice per month | 12% |
| Once or twice a year | 21% |
| Never | 56% |
| Don't Know | 3% |

Local Access Programming in HD and "On Demand"

Comcast Cable television subscribers who were aware of local access programming (N=311) responded to a question concerning how valuable it would be to see local access programming in high definition (HD). Seventy-one percent (71%) or 7 out of 10 of responding subscribers indicated it would be valuable at some level (27% "Very Valuable", 21% "Valuable" and 23% "Somewhat Valuable").

These same subscribers also responded concerning how valuable it would be to have local access programming available via the cable system "On-Demand". The majority (83%) indicated that it would be of value at some level (36% "Very Valuable", 29% "Valuable" and 18% "Somewhat Valuable").

Future Access Programming

Subscribers who did not watch any of the access channels regularly or were not aware of the access channels were asked in an open ended question if there was any local programming that they would find valuable on the cable system, including anything they would like to have added to the cable system.

Several different categories of local programs were mentioned by cable subscribers who were not regular viewers (N=411). The six local program types most frequently cited were local news/events/people/sports; local and educational programming; school sports/school Board meetings/school information; restaurants in Philadelphia; local traffic and traffic cams; and City Council programs.

Another theme commonly mentioned by these viewers is that they wanted to see local programming on the HD channels and local programming information on their cable menu/guide.

Similar categories of local programs were mentioned by cable subscribers who weren't aware of the local access channels (N=232)⁸¹. The five program types these subscribers most often said they would find of value on the cable system were local news/events/people/sports; local and educational programming; school sports/school Board meetings/school information; city council programs and government programming.

Importance of Access Programming

All cable subscribers, whether they reported watching access channels or not, were asked how important it was that the local community access channels were available on the cable system. For those that responded (N=1,637), the large majority, 80%, thought that these channels being on the cable system was important, including 30% who indicated it was “very important”, 25% who indicated “important” and another 25% who indicated it was “somewhat important”.

Table 15.

| Question: How important is it that local community channels are available to cable subscribers? (N=1,637) | |
|--|-------------------|
| Importance | Percentage |
| Very Important | 30% |
| Important | 25% |
| Somewhat Important | 25% |
| Not at all Important | 16% |
| Don't Know | 4% |

Funding Access Programming

All cable subscribers were asked an open ended question related to funding for access channels. Subscribers were provided the portion of their cable bill that currently goes to ESPN and TNT to provide some perspective on per channel costs, then asked how much they would be willing to pay per month to support local programming.

The response was positive with 57%/N=802 of responding subscribers (N=1,397) indicating a specific amount they would be willing to pay monthly to support local access programming. The range was \$0.01 to \$250 per month. The most common amount given was \$1.00 (N=247); with 225 subscribers indicating that they would pay an amount between \$0.01 and \$0.99; another 303 subscribers indicated they would be willing to pay between \$1.01 and \$5 (with 84 of those indicating \$5 a month specifically). Another 27 subscribers gave amounts in excess of \$5.

⁸¹ This question was an open ended question with a text box for respondents to describe the local programming they were interested in.

Further analysis of the responses indicate that of those who were aware of the local access channels, 49% (N=568) were willing to pay and specified an amount. Among subscribers not aware of the local access channels, 44% (N=234) were willing to pay and specified an amount.

Additionally, subscribers who did not mention a specific amount (N=221), provided clarifying comments regarding their willingness or non-willingness to pay monthly to support local programming. The respondents' clarifying comments were reviewed and the following top six (6) most common words (representing 73% of the respondents) were mentioned (examples of comments for each word group have also been provided).⁸²

Top six (6) common words used by respondents:

1. Pay (98)

"Can't afford to pay anymore because my Comcast bill is too high!!!"

"I do not pay for anything extra - it should be taken out of the friggin huge profit that Comcast makes."

"Not interested - would not pay anything for them."

"Nothing! Comcast gets millions of dollars in tax breaks...I get none and live on Social Security! Comcast owes Philadelphia and its citizens. Let them pay for it! I think it's obscene to even consider putting more on the backs of the people that fund Comcast CEOs outrageous salary! (And probably line the pockets of our city officials as well!)"

"Comcast takes enough of my money, why should I have to pay extra for local stations? Take it out of the payments I already make. They should support the community that they are based in."

"I pay enough for my cable bill. Please do not add anything more to my cable bill."

2. Channel (47)

"Nothing! Comcast gets millions of dollars in tax breaks, makes millions in profits, fights the organization of unions that protect workers, pays their officers ungodly salaries, and then asks if we would be willing to pay for our local access channels? Seriously? That is sickening."

"If my rates were lowered, because I am already paying way more than I can afford each month for Comcast, I'd pay \$5/month for local channels."

"However much was needed to ensure public channels are available. However, I think public channels should be available to the public for free."

"Government should pay for the government access channel. These should be optional for those customers who want them, just like premium services. Customers who don't view these shouldn't have to pay for them."

⁸² See Exhibit A.2 for full list of comments.

3. Programming (41)

"The amount I pay for cable should already go to local programming. I pay \$190 a month including several taxes and fees!"

"I would not be willing to pay because this should be a public service - especially for government/info programming - subsidized by Comcast in exchange for its enormous market share and high cost. My unwillingness to pay is not about an unwillingness to support this programming; rather I think that cost should be borne by Comcast."

"The price is irrelevant - I am sure it is sensible. If the need for community programming is the deal Philadelphia has made to grant Comcast monopoly status I for one will pay whatever is necessary to support community programming if the Philly government opens the cable market to competition."

"Local community programming should be paid for by Comcast as a condition of them getting their license!"

4. Bill (41)

"If my bill per month was vastly cheaper, I would be willing to support local educational, community and governmental channels."

"I don't watch any of these channels and if it were up to me I would want that specific channel removed to pay less on my bill considering no one in the household watches sports."

"Trick question, I don't think my bill should be lower and Comcast should have to pay more of its profits to provide these services"

"Let me choose the channels I want to lower my bill. Then I'd consider it."

5. Watch (33)

"Shouldn't Comcast pay for this? I watch all of the community stations frequently"

"Sure. As long as the city forces a la carte pricing on Comcast so that I don't have to pay for any channel I don't watch, the local community channels included."

"If I could pay for channels separately (i.e. only pay for 5 channels that I actually watch instead of 90 that I don't) I would be willing to pay equal to the highest channel cost."

"I would rather support local programming than pay for commercial channels I don't watch."

6. ESPN and/or TNT (32)

"Take the \$5.00 I pay for a useless ESPN and apply it to educational/community channels"

"I would much rather support local programming than ESPN";

"I never watch ESPN. Use this five dollars for local, community and governmental programming."

"I don't watch "traditional" cable channels like ESPN or TNT, so channel my funds to local programming."

Online Access in Philadelphia

A series of questions related to Internet access and interactivity were posed to all respondents of the online survey (N=3,212). Among all respondents responding to the question (N=2,721), 73%/N=1,978 subscribe to Comcast's Xfinity broadband or high-speed Internet services. Among Comcast cable television subscribers that number is 91%/N=1,506, and among non-Comcast Cable TV subscribers that number is 44%/N=472.

All residents that did not report having Comcast's Xfinity Broadband service were asked if they had Internet service at home. Of the 27% who reported not having service with Xfinity, 5% *reported not having Internet service at home (N=39/1% of all respondents)*.

This low number may be because the survey was online, hence requiring Internet access and use to take the survey. Residents were given an option of completing the survey via a written instrument, but only one written survey was received.

Of those that do have Internet access at home, but not with Comcast (22%/N=710), the majority indicated that they subscribe to Verizon Internet Service (71%/N=507). Of those that did not have Verizon or Comcast, most reported Clear as their provider (6%/N=43).

All respondents who did not have Internet service with Comcast were asked what their primary reasons were for using a different service provider⁸³ and "Cost" was the most frequent response (68%). This was followed by speed (40%) and "most reliable service in my area" (29%). Another 8% indicated that the service they had was the "only available service" in their area. It is important to note that 37%/N=258 indicated "Other reasons".

Specific reasons for choosing an Internet provider other than Comcast included: not wanting Comcast, not trusting Comcast, poor customer service and constant problems with Comcast service. Other popular comments were that Internet service was part of a bundled package deal with their current phone service and they wanted only one provider.

Respondents *without* Internet Service at Home

A series of questions were asked to better understand the circumstances of Philadelphia residents without Internet access at home (N=39/1%). First, these residents were asked why they had chosen not to subscribe to Internet service at home⁸⁴. The most frequent response was that the Internet service was too expensive (76%/N=29), followed by "I get the internet on my mobile phone" (52%/N=20), "I plan to establish internet service within the next year" (24%/N=9), "I don't have a computer" (18%/N=7) and "I have sufficient access elsewhere" (13%/N=5).⁸⁵

⁸³ Respondents were instructed to Mark all that Apply and a list of reasons was provided, along with a text box for the respondent to define any "other" reasons they chose another provider.

⁸⁴ Respondents were instructed to Mark all that Apply and a list of reasons was provided, along with a text box for the respondent to define any "other" reasons they have chosen not to subscribe to Internet service at home.

⁸⁵ Multiple answers were allowed for this question.

A crosstabulation finds that those without Internet access at home (N=39) are most likely to report accessing the Internet at work if they are employed, or using a relative's or friend's home. Those with mobile phones also indicated using mobile phones to access the Internet “everywhere.”

Online Activity among Philadelphia Residents

Almost 9 out of 10 online respondents indicated that they access the Internet away from home.

Those online respondents that do access the Internet away from home (89%/N=2,390) were asked where they access the Internet (multiple responses allowed). The most frequent response was work (88%/N=2,073), followed by everywhere (mobile internet) (70%/N=1,665). Fifty-seven percent (57%/N=1,350) access the Internet at a relatives or friend's house or some other home in the community. Forty-eight percent (48%/N=1,132) indicated they access the Internet at a retail store with wireless Internet service. These were then followed by school (26%/N=625) and at a public library (17%/N=404).

All respondents that use the Internet were asked a series of questions about what they mostly use the Internet to do (N=2,622). The chart below details the Internet activities reported by Philadelphia online respondents based on categories provided in the survey (multiple answers allowed):

Table 16.

| Question: What do you mostly use the Internet for? (Mark all that Apply) | | |
|--|-------------------------|-----------------------|
| Answer Options | Response Percent | Response Count |
| Keep in touch with family and friends | 88% | 2,293 |
| Look for information about a service or product you are thinking of buying | 84% | 2,204 |
| Do any online banking | 82% | 2,160 |
| Buy something online | 82% | 2,141 |
| Use an online social networking site like Facebook or LinkedIn | 80% | 2,109 |
| Look online for news or information about politics | 77% | 2,014 |
| Watch television or other videos | 72% | 1,899 |
| Look for health or medical information | 68% | 1,784 |
| Work from home (telecommuting) | 56% | 1,465 |
| Look online for information about a job | 50% | 1,307 |
| Look for information about a place to live | 49% | 1,283 |
| Contribute to a website, blog or other online forum | 49% | 1,271 |
| Visit a government website like the federal government, Pennsylvania's or the City of Philadelphia's website | 48% | 1,250 |
| Share something online that you created yourself | 38% | 1,003 |
| Take a class or do homework | 37% | 977 |
| Play online video games | 37% | 972 |
| Sell something online | 27% | 708 |
| Operate or support a home-based business | 14% | 355 |
| Communicate with child's school as parent or caregiver | 12% | 325 |

Online respondents also took the opportunity to indicate "Other" (open ended text box provided) things that they mostly do on the Internet. Of those respondents, N=129 provided other activities.⁸⁶

⁸⁶ Top mentions can be found in Exhibit A.2.

Respondents to the online survey were asked about future and current interest in using the Internet to access services from the City of Philadelphia or interact with the City in other ways. The majority indicated that this was desirable (82%/N=2,177). Respondents were asked what kinds of online services or information they would like to engage in with the City, with the following responses based on categories provided in the survey:

Table 17.

| Question: What services or information are you interested in obtaining from the City of Philadelphia? (Mark all that Apply) | | |
|--|-------------------------|-----------------------|
| Answer Options | Response Percent | Response Count |
| Emergency information | 86% | 1,839 |
| Pay my water bills, taxes, etc. on line | 78% | 1,655 |
| Traffic updates | 70% | 1,487 |
| Request City services | 66% | 1,412 |
| Ask questions via chat or e-mail with 311. | 54% | 1,148 |
| Get a city permit on line | 52% | 1,118 |
| City Job searches | 41% | 872 |
| Register to participate in a class or event. | 37% | 793 |
| Get employment information/help | 34% | 717 |
| Computer training | 16% | 337 |

Respondents were given the opportunity to indicate “Other” (open ended text box provided) types of information and/or services that they would like to access from the City. Of those respondents (N=110) who identified other information and/or services, the most often mentioned were: information on permits and licenses; paying bills and taxes; government news; accessing city data; trash pickup and recycling information; restaurant health ratings; etc. A full list can be found in Exhibit A.2.

Final Comments

Online respondents were asked in an open ended question if there was anything additional to their response to the survey questions they would like to say about cable television service in the City.⁸⁷ This question was posed to all subscribers and non-subscribers; 1,759 respondents provided additional comments. The respondents’ volunteered final comments were reviewed and 4% of respondents provided favorable comments (some of these also provided negative comments) regarding the company, its employees or its service⁸⁸. However, 99% of respondents also provided unfavorable comments. The list below represents the top nine (9) most common words/phrases (representing 69% of the respondents) related to the respondents unfavorable comments.

⁸⁷ A full list of final responses can be made available at CBG.

⁸⁸ Sixty-five percent (65%) of these respondents also provided unfavorable comments related to Comcast services.

Top 9 Most Common Words/Phrases used by respondents

1. *Prices (N=375)* – Respondents generally described “Price” using some of the following words and phrases: Overpriced, Price Gouging, Prices are too High, Ridiculous amount, exorbitant price, High prices, quarterly price increases, Prices are outrageous, need affordable prices, prices arbitrary, stop price hikes, unfair pricing, need lower Prices, etc.
2. *Customer Service (N=316)* – Respondents generally described Customer Service using some of the following phrases and words: needs improvement, poor, bad, terrible, awful, lousy, horrible, not kind, frustrating, nonexistent, etc.
3. *Internet Services (N=312)* – Respondents generally described Internet Service using some of the following phrases and words: intermittent issues, poor, need better prices, no other options for provider, quite slow, service not worth the cost, not reliable, need free internet service for low income and senior citizens, etc.
4. *Pay (N=300)* – Respondents generally described Pay using some of the following phrases and words: They should pay their fair share of taxes, they should pay taxes, wish we could pay per channel; we pay high prices for slow internet, I pay for channels I don’t want; They don’t pay taxes, I pay a low introductory rate and then have to pay a huge rate for same service in 6 months; etc.
5. *Monopoly (N=297)* - Respondents generally described Monopoly using some of the following phrases and words: Comcast has a monopoly, Comcast is a monopoly, horrible monopoly, Comcast’s Monopoly is ridiculous; the City should break this monopoly; unfair monopoly; etc
6. *Competition (N=217)* - Respondents generally described Competition using some of the following phrases and words: need competition, the City should promote competition, Comcast has no Competition, the City should make sure there is competition; there is no competition, there is zero competition, etc.
7. *Channels (N=174)* - Respondents generally described Channels using some of the following phrases and words: Let customers select their channels, pay for channels they want, a la carte ordering for channels, I don’t like paying for channels I never watch; etc.
8. *Expensive (N=168)* - Respondents generally described Expensive using some of the following phrases and words: too expensive, keep getting more expensive; extremely expensive, very expensive, crazy expensive, etc.
9. *Internet Speeds (N=152)* - Respondents generally described Internet Speeds using some of the following phrases and words: not getting the speed I pay for; internet speed sucks, is slow, is the speed of the 90’s, speed pales in comparison to others around the country; Internet speeds are not the speeds of the advertised speeds; since there is no competition they offer slow speeds at high rates; average internet speeds, inconsistent internet speeds, etc.

SECTION B



SECTION B

REVIEW OF CABLE-RELATED PUBLIC, EDUCATIONAL AND GOVERNMENTAL (PEG) ACCESS NEEDS AND INTERESTS

PUBLIC, EDUCATIONAL AND GOVERNMENTAL ACCESS NEEDS ASSESSMENT

Introduction and Methodology

As part of its overall assessment of the cable television related needs and interests of the Philadelphia community, CBG Communications, Inc. and its Team Partners Dr. Constance Book (President, Telecommunications Research Corp.) and Carson Hamlin (Media Integration Specialist) (collectively referred to in this section as CBG), conducted an assessment of the Philadelphia community's needs and interests regarding Public, Educational and Governmental (PEG) Access channels and programming (PEG Needs Assessment).

Individual residents of the City and key stakeholders in Philadelphia's PEG community were contacted for the PEG Needs Assessment, via telephone and online surveys, focused discussions (including large and small group settings)⁸⁹, in-person interviews, and physical site surveys of facilities and equipment. Information and opinions about PEG needs and interests were obtained from: a random sample of City residents who participated in a telephone survey of the community's cable-related needs and interests (see Section A of this Report), more than 3,200 City residents who participated in an online survey of cable-related needs and interests, and PEG staff and other stakeholders in both the City's Cable Office and Office of Innovation and Technology, which operate the City's Governmental Access studio and channels, and other City departments and agencies; the School District of Philadelphia (SDP), Philadelphia's public access corporation, PhillyCAM; and the four higher educational institutions that operate educational access channels, which include Temple University Television (TUTV), La Salle University Television (La Salle TV), Drexel University Television (DUTV), and Community College of Philadelphia Television (CCPTV). The PEG Needs Assessment included a request for, and reviews of, documentation from the operators of PEG channels referenced above. Such documentation included:

- Annual production and programming statistics.
- Technology and business plans for future development.
- Facilities layout.
- Master control signal flow diagrams.
- Programming signal origination transport information.
- Equipment inventories.
- Operating rules and procedures.
- Operating and capital budgets.
- Staffing levels.
- Channel programming schedules.

⁸⁹ As used herein, the term "focused discussion" means a discussion group that's been developed to obtain information on an established set of PEG Access related topics from participants that represent a particular targeted portion of the population (such as public access program producers). The term is overarching and includes smaller groups of approximately 6 to 12 participants ("focus groups") and larger gatherings of approximately 13 or more participants ("workshops").

- Programming samples.
- Website usage statistics.
- Other documentation depicting current and planned operations.

Along with analysis of this information, CBG conducted facilities surveys, focused discussions and interviews with management and production personnel, and surveys of Access program providers and producers and Access facility users.

Specifically regarding Governmental Access, CBG toured the production areas at City Hall and in nearby government buildings such as the Municipal Services Building (MSB) and the One Parkway building. Facilities and equipment were reviewed and current needs, as well as needs that will arise in the next 10-15 years⁹⁰, were identified and documented during these site visits. Additionally, a focused discussion was held with Governmental Access television staff for their perspectives on the state of current City video production facilities, equipment and programming and their projected equipment and studio facilities needs. A survey was conducted of City stakeholders involved in program content development, production and distribution. Stakeholders surveyed included City department and agency employees, as well as a Community Development Corporation (CDC) director and an advocate, involved in Governmental Access program development and production. Both the focused discussion and the survey addressed facilities and equipment, program content for Philadelphia City Council and other public meetings, such as Planning Commission and special meetings, and program content covering the work of City agencies.

CBG toured the School District of Philadelphia's central studio and production facilities located in Center City, and held interviews with SDP staff responsible for their channel. These site visits and discussions, as well as a review of equipment inventories and information about video production and channel operations were used to develop facilities and equipment projections to meet current and future SDP needs. In the interviews, SDP representatives were asked questions concerning current and projected facilities and equipment both for SDP's central production studio and for use by faculty and students in schools throughout the district. Questions focused on current educational programming and on SDP's plans for developing programming over the next 10-15 years.

Regarding Public Access, CBG conducted site visits at PhillyCAM's facilities in Center City Philadelphia to review the current state of production facilities and equipment and to analyze needs going forward. CBG conducted multiple focused discussions with PhillyCAM Board Members, staff, volunteers, program providers and producers who are members of PhillyCAM, and independent producers who occasionally utilize PhillyCAM's facilities under agreement with PhillyCAM and provide training, education and other benefits to PhillyCAM and its members. CBG conducted further interviews with specific PhillyCAM staff members to focus on management, technical operations, program content development, and program distribution. Additionally, CBG conducted an online survey of PhillyCAM Access program providers and

⁹⁰ Equipment projections were made based on the needs expressed and analyzed for a 10 year period. With the rapid pace in the evolution of technology, 10 years is recommended by CBG as the appropriate planning horizon. The cost of meeting needs for a 15 year duration can be extrapolated as discussed later herein.

producers and PhillyCAM facility users to obtain information and views on all of these topics from the stakeholders listed.

CBG met with production and management staff for each of the four higher educational institutions described above to assess channel capacity and utilization, program content development and distribution. Specific needs and recommendations are discussed below.

As indicated, findings concerning the PEG operators and stakeholders were used to develop facility, equipment, capacity, and distribution needs projections and associated funding projections. These are described in the Conclusions and Recommendations at the end of this Section. They are the basis for phasings and priorities for equipment and facility upgrades and further replacement that PEG operators will need over a projected 10 year timeframe.⁹¹ Detailed discussion of the PEG Needs Assessment and CBG's findings follows.

FINDINGS – PHILLYCAM/PUBLIC ACCESS

Overview of PhillyCAM's Public Access Channels

Philadelphia's public access channels are operated by the Philadelphia Public Access Corporation, a Pennsylvania nonprofit corporation that the Internal Revenue Service has determined to be a charitable organization under Section 501(c)(3) of the Internal Revenue Code. The corporation was created in 2007 to provide public/community access programming and educational and video production opportunities to residents of the City of Philadelphia, and operates under the name Philly Community Access Media, or PhillyCAM. PhillyCAM currently cablecasts on Comcast Channels 66 and 966 and Verizon FiOS Channels 29 and 30. PhillyCAM began cablecasting on October 23, 2009, using recorded programming, and began field, video production and post-production operations in May, 2010. In 2010, PhillyCAM began assisting groups and individuals in creating and submitting programming for cablecast, and also started programs for training PhillyCAM members⁹² in video production techniques.

In February 2012, PhillyCAM completed its move into its current facility at 7th and Ranstead Streets. This facility includes a production studio, a communal space for video producers to collaborate and learn from each other, offices, field production equipment, post-production equipment, and master control facilities for distribution of content over the Comcast and Verizon cable systems and for streaming over the Internet.

In its most recent full year of operation, FY2014 (PhillyCAM's fiscal year is July 1 – June 30), PhillyCAM presented 915 hours of original, non-repetitive programming.⁹³ This included: 485 hours of original, non-repetitive, locally produced programs; and 430 hours of original, non-

⁹¹ Ibid.

⁹² PhillyCAM membership includes both individual and organizational members, some of which complete a variety of training programs and become certified producers, others who are supporters of the organization and others who are involved in content development without hands-on use of the PhillyCAM equipment.

⁹³ See PhillyCAM Fiscal Year 2014 Annual Report, dated November 10, 2014 (hereinafter known as "Exhibit B.4"), p. 7.

repetitive programming from non-local sources; there was another 6,877 hours of repeated playbacks of this programming including 4,241 hours of locally produced programming, and 2,636 hours of non-locally produced programming. There was also 968 hours of community bulletin board and text and graphics. This equated to 8,760 total hours of programming.

Regarding program detail, this included a variety of different types of programming. For example, 600 of the original hours were series programs which are regular programs that air weekly, bimonthly or monthly. This includes programming such as “The Praise Report,” which is a spiritually inspired gospel-based music magazine showcase which includes interviews and live performances of gospel artists; Philly 311 which is a talk show highlighting City government and the organizations that comprise it; and Go Philly Service (GPS) which is a 30 minute interview-based programming focusing on local nonprofit organizations.

Beyond this, it includes 315 hours of original airings of individual programs which aren’t series but are standalone programs such as documentaries and short films. This includes programs like the PhillyCAM Video Voter Guide which provided Philadelphians the opportunity to learn more information about the candidates running in the May 2014 primaries; music, arts and cultural programs such as “Tenor Madness Pop-Up Concert”, produced by the Philadelphia Jazz Project; and a number of short films such as those provided by the Short Circuit Film Festival, 7th Seed Productions, and Indie Thrills. All-in-all, when reviewing the original airings of the local programming discussed above⁹⁴, this averaged 9.3 hours per week of original, non-repetitive, locally produced programming (485 hours over the fiscal year divided by 52 = 9.3).

PhillyCAM’s mission is to be “a community media center that brings together the people of Philadelphia to make and share media that promotes creative expression, democratic values and civic participation.”⁹⁵ Its vision is that it “will become more than a television station -- a vibrant community center that connects, meets unique interests and needs and teaches people to become creators, not just consumers, of high quality media.” It wants to be a “leading advocate in discussing issues that are absent from public dialogue” and be “an organization that is indispensable to local community, educational and government institutions.” It also “desires to be a resource for Philadelphia and to build digital literacy skills.”⁹⁶ As CBG reviewed and analyzed PhillyCAM cable-related needs, in the ensuing sections of this report, part of our analysis looked at how PhillyCAM is meeting its mission and aspiring to its vision.

PhillyCAM’s Business Plan⁹⁷, Annual Report⁹⁸ and analysis of the information obtained in focused discussions⁹⁹ and surveys¹⁰⁰ indicate that it continues to grow and expand rapidly. For example, PhillyCAM is continuing to increase from the FY2014 level of 9.3 hours of original, locally

⁹⁴ See Exhibit B.4, pp. 3-6.

⁹⁵ Taken from the PhillyCAM Business Plan, FY2014-2016, dated January 17, 2014 and amended August 1, 2014 (hereinafter known as “Exhibit B.5”), p. 3.

⁹⁶ All quotes from the Vision Statement are taken from Exhibit B.5, p 3.

⁹⁷ See generally Exhibit B.5.

⁹⁸ See generally Exhibit B.4.

⁹⁹ See generally Summary Narrative of PhillyCAM Focused Discussion and Interviews (hereinafter known as “Exhibit B.1”)

¹⁰⁰ See generally Summary Narrative of PhillyCAM Public Access Program Providers/Producers/Users Online Survey (hereinafter known as “Exhibit B.2”)

produced, non-repetitive content per week towards a total of 20 hours a week¹⁰¹, continuing a trend of an expanded number of original programs produced every year. This is occurring, based on four expanding programming development areas:

- **Live Programming** - An increase in the amount of live programming coming out of the newly upgraded Express studio. This includes, for example, programming described on Page 8 of the January 2014 (Amended August 2014) PhillyCAM Business Plan such as “Around the Corner” which is focused on interviews with PhillyCAM non-profit and community-based organization members; “Street Beat” which includes interviews with writers and reporters from local print and online news outlets to discuss recent stories; and “Senior Moments,” developed as a lighthearted and informative biweekly conversation with people over 65. All told, the new programming coming out of the Express Studio will add 3.5 hours per week of locally produced, non-repetitive, original programming. **City Event Coverage** - An increase in citywide event and community forum coverage. This includes expanded coverage of events such as Philly Tech Week and the Black Star Film Festival and planned coverage of events such as the Flower Show, Fashion Week, the Fringe Arts Festival, Science Fest and the One Book, One Philadelphia event. Enhanced mobile and portable production capabilities, as recommended later in this Report, would continue to support an expansion in event coverage throughout the City and would substantially increase the hours of locally produced, non-repetitive, original programming.
- **Non-Profits** - An increase in the number of Non-profit and community organizations that are working with PhillyCAM to produce content. Recently added staff and a more robust group of skilled volunteers are helping increase the number of non-profit and community organizations-produced programs similar to the current Go Philly Service (GPS) show, and recent expansion in programming produced in concert with Moonstone Arts and the Philadelphia Jazz Project, will result in another 2.5 hours of content per month. Beyond this, anticipated collaboration with organizations such as the Philadelphia Association of Community Development Corporation will provide an additional 1.5 hours of programming production per week.
- **Youth (23 years old and under) Programming** - PhillyCAM has continued to build on and foster its role as a hub of youth media production and will launch its own youth media program this fiscal year. Development of youth producers has already resulted in the programming produced for Philly Tech Week during FY2013. Building on this and additional regular training designed specifically for young people age 14-23, PhillyCAM projects an additional 2 hours per month of new programming will be created by such young people. Based on the launch of dedicated youth media production space, as discussed below, PhillyCAM projects enough youth-produced programming in the future to launch a specific Youth channel, as detailed further below.

Early in 2015, PhillyCAM will migrate from one channel that is simulcast on both Channel 66 and 966, to different programming offerings and different branding for these existing two (2) channels,

¹⁰¹ PhillyCAM reports an average of 10 hours per week of original, local produced, non-repetitive programming for the period of July 1 to December 31, 2014 and expects to reach 15 hours per week as of Summer 2015. This trend indicates that it will achieve the 20 hours per week benchmark by the end of 2015.

making necessary the addition of a third channel by the end of 2015 (the Comcast franchises provide that when a threshold of 20 hours of original, non-repetitive, locally-produced programming have been cablecast for a period of 60 continuous calendar days, Comcast must provide a third public access channel¹⁰².) According to discussions with PhillyCAM staff and its Board of Directors, as well as PhillyCAM's Business Plan (dated January, 2014 and amended August 2014), Channel 66 will continue to be PhillyCAM's flagship channel, focusing on program content produced by PhillyCAM members and by independent video producers in Philadelphia. The channel will be branded as the PhillyCAM Community Channel. An increased amount of arts and cultural programming will be spun off Channel 66 to Channel 967 or an adjacent channel,¹⁰³ which will become the PhillyCAM "Live Culture" Channel. It will feature programs that celebrate the vibrant cultural scene in Philadelphia. Programming on this Channel will focus on videos featuring dance, music, theater, visual and literary arts produced by local arts organizations, including a number of organizations that already provide a significant amount of programming for PhillyCAM. At the writing of this report, PhillyCAM is awaiting transport equipment and engineering from Comcast to be able to discretely transport the signals of Channel 66 and the separate Live Culture channel.

The new third channel will be developed as PhillyCAM's "Sustainability Channel." The Business Plan indicates this channel will include programming focusing on human services such as workforce development and financial planning, personal health (nutrition, exercise, and other wellness topics), and the environment. It will also focus on equity and engagement,¹⁰⁴ and will include faith-based programming produced by local churches, synagogues, and related organizations.

As discussed in its Business Plan¹⁰⁵, PhillyCAM's plans include high definition cablecasting on at least one channel, now expected in early 2015. (Under the Comcast franchises, Comcast is obligated to cablecast one channel in high definition once PhillyCAM has the necessary HD equipment installed and ready to provide HD programming for transport to Comcast, and the City has so notified Comcast, designating Channel 966 as the HD channel.) See Exhibit A, Appendix E, Section 5 of the Amendment¹⁰⁶. PhillyCAM, during the summer of 2014, completed the installation of HD servers. PhillyCAM plans to use Channel 966 to cablecast the programming of its flagship Channel 66 in HD.

¹⁰² See amendment to Franchise Agreement between the City of Philadelphia and Comcast Philadelphia, Inc. November 19, 2007. Comcast is obligated to provide a fourth public access channel when a threshold of 15 hours of original, non-repetitive, locally-produced programming have been cablecast for a period of 60 continuous calendar days on the third channel while maintaining the threshold for the third channel. When a similar 15 hour threshold is met for the fourth channel, Comcast must provide the fifth public access channel.

¹⁰³ The Franchise designates Channel 66 and Channels 866-69 as public access channels. Channels 866-69 were subsequently moved to 966-69.

¹⁰⁴ As used here, equity means programming that focuses on equal access by all Philadelphians to basic core needs such as food, shelter and education. It will explore the role of all residents in influencing policy and supporting initiatives that support such equal access. In this way, the programming on this Channel will also serve to foster engagement in the efforts and issues surrounding equity, by showing how Philadelphians can be contributors, and be invested and involved in the push for equity.

¹⁰⁵ See Exhibit B.5, p. 16.

¹⁰⁶ See Footnote 102.

There are two remaining issues related to activating the HD Channel. The first one is that Comcast must provide PhillyCAM with high quality HD capacity transport from the PhillyCAM master control location to Comcast's headend. This potentially could be accomplished at the same time that new transport is being provisioned for the separated PhillyCAM Community Channel (66) and the new PhillyCAM Live Culture Channel. More detailed discussion on the transport equipment needed can be found later in this section under the subsection entitled "PEG Access Channel Signal Transport."

The second issue is related to the continuing evolution and the amount of HD programming that PhillyCAM has archived and is currently producing. According to PhillyCAM, more than 50% of its available current production and archived programming is in HD. By January, it should be at 85%, with everything produced in the PhillyCAM facility or with PhillyCAM equipment being produced in HD and 95% of productions from outside producers being in HD. This will continue to increase over 2015 such that by October of 2015, the only remaining SD programs (similar to commercial HD channels) will be legacy SD programs. The franchises do not require a threshold level of HD programming as a condition of Comcast furnishing the HD channel. However, a review of commercial HD channels indicates that PhillyCAM's ratio of HD to SD content in 2015 would be consistent with a number of commercial channels carried on the HD tier. PhillyCAM indicated that any remaining SD programs would be slated for off-peak hours, so that the primetime evening viewing hours would all be HD shows as on commercial HD channels. In the Fall of 2016, PhillyCAM anticipates that it will request a fourth channel that it will brand as the PhillyCAM Heritage Channel, because it anticipates meeting the threshold for this additional channel indicated in the Amendment.¹⁰⁷ The PhillyCAM Heritage Channel will focus on providing an outlet to new immigrants and non-English speaking citizens. It will include training programs and other content focused on engaging the numerous immigrant populations in Philadelphia.

Regarding the fifth channel to be developed, PhillyCAM notes in its Business Plan (pg. 11), that it has "emerged as a hub of activity celebrating the accomplishment of youth media makers in all forms." They note that there is already a solid block of youth-produced programming that runs every afternoon from a variety of youth-related member organizations. Starting this fiscal year, PhillyCAM will be starting its own youth media training core as part of its expanded youth media program. Additionally, PhillyCAM will be exercising its option to lease an additional 2,100 square feet at the current location to outfit as a youth media production space. The combination of these various efforts will result in a significant expansion of youth-oriented and youth-produced content. By 2017, it is anticipated that PhillyCAM will launch a dedicated youth channel for this significantly expanded programming. The design of the channel is to "provide an important voice to young people and help inform the broader public, elected officials, non-profit leaders, parents and educators what is on the minds of Philadelphia's youngest generation."¹⁰⁸ The new youth production space, as profiled in more detail below, will provide different tools targeted at youth producers to provide a creative environment for them. The Youth Media Coordinator will be responsible for overseeing the daily operations of the youth media programs including production equipment, computer stations and other associated resources designed to support an expanded level of youth participation in PhillyCAM.

¹⁰⁷ See Footnote 102.

¹⁰⁸ See Exhibit B.5, p. 11.

This constitutes PhillyCAM's plan for programming all five channels provided in the Comcast franchises for Public Access and, in CBG's opinion, it is well supported by PhillyCAM's Business Plan and PhillyCAM's continued, demonstrated achievement of the content development objectives required to support channel expansion.

In addition to its focus on expanded programming requiring additional channels, PhillyCAM is also focusing on expanding participation in the use of PhillyCAM's facilities. This includes growing the youth media program as described above and is related to the facility expansion further discussed below. This includes increasing branding efforts by continuing to craft new marketing, communication and membership initiatives. These initiatives will capitalize on the brand identity that has been created with PhillyCAM's development of a logo carrying the tagline "People Powered Media." This logo has been used on a variety of printed materials as well as marketing materials such as postcards, business cards, stickers, buttons and t-shirts. This branding initiative includes providing marketing and outreach to both specific interest groups (such as youth, non-profit organizations and arts and cultural organizations), and to the residents of Philadelphia generally.

PhillyCAM plans to continue developing a multiplatform strategy that will enable it to reach more Philadelphians with an invitation to participate in PhillyCAM training and other activities, and an invitation to the TV viewing public to experience PhillyCAM programming. The multiplatform strategy is designed to ensure that while PhillyCAM has a solid anchor in both linear (real time) and on-demand distribution over the cable systems, it also, like nearly every other video programmer, has the ability to provide its content over portable and mobile devices so that PhillyCAM can be accessed anywhere. This means there has to be a focus on Internet streaming as well as cable distribution (Comcast, for example, through its Xfinity TV has developed a broad multiplatform strategy for much of its content, especially content owned by Comcast/NBC Universal). This is complemented by the integrated use of social networking sites and mobile apps.

PhillyCAM's programming plans emphasize placing more content on the Comcast cable-based video on demand (VOD) system. Specifically, PhillyCAM has been an active collaborator with Comcast in both "Philly in Focus" for web-based content, and its "Get Local" cable-based VOD. Since some segments of the population are more likely to seek on demand content on the cable system than online, it is important that PhillyCAM continue to enhance its cable-based on demand presence.¹⁰⁹

PhillyCAM indicates in its business plan and emphasized in the focused discussions described in the Exhibits, that it intends to expand available resources and resource development opportunities. Specifically, PhillyCAM indicates a focus on increasing foundation support, membership, equipment/space rental and production services and the contributions of individual donors. As an example, recently PhillyCAM received \$31,000 for a planning grant, for planning and designing the new youth media space, from the Barra Foundation.¹¹⁰ PhillyCAM is in the process of applying to The Philadelphia Foundation for a capacity building grant, and has applied for a PEW Center for Art and Heritage grant. The organization also continues to focus on pursuit of funding from

¹⁰⁹ See Exhibit B.5, p.17.

¹¹⁰ See Exhibit B.4, p. 35.

other foundations such as the Knight Foundation and the William Penn Foundation. PhillyCAM is working on developing collaborative efforts with other institutions, such as an initiative together with the Philadelphia Jazz Project to augment the acoustics in the main studio through a grant from the Wyncote Foundation. This will help improve the sound of joint program efforts such as those recently produced and broadcast by PhillyCAM.¹¹¹ In this fiscal year, PhillyCAM has set the goal of reaching 650 members (it now has 509 individual and organizational members) by stressing the value of being a supporter of PhillyCAM though not necessarily actively involved in production. It is also reviewing the potential for on-air telethons, as well as an annual awards ceremony that will also be a fundraiser.

PhillyCAM is working with non-profit organizations to produce video content for broadcasting by PhillyCAM and for use by the nonprofits as educational and outreach materials, whereby PhillyCAM would generate revenues to support its mission. PhillyCAM continues to pursue rental of its facilities to independent producers working on video projects when not in use for member productions. PhillyCAM has seen individual donations increase by 700% from FY2012 to FY2014, and its goal is to obtain \$5,500 in individual donations during this Fiscal Year 2015.¹¹²

Expanded resources are needed, including both expanded operational support and expanded capital funding for facilities and equipment. As an example, PhillyCAM's operating expenditures increased from a FY2014 level of \$874,299 to a budget of \$1,184,633 in FY2015, or over 35%. Going forward, PhillyCAM anticipates expanding its total operating budget again by nearly 3% to an anticipated expenditure in the 2015/2016 budget year of \$1,219,799. In tandem with this, a substantial increase in Capital expenditures consistent with the projections discussed below in this Section's Conclusions and Recommendations¹¹³ is anticipated, to a level of \$450,000 this Fiscal year and \$1,360,200 next fiscal year.¹¹⁴

The largest part of the operating budget increase over the past year (approximately 27%, or \$130,544) is for additional staffing (salaries and benefits), necessary to support the new programming and channel launches discussed above. The projected 2015/2016 budget's modest increase of approximately 3% again is reflected largely in increased payroll expenses. After that point, PhillyCAM projects continuing operating increases in the 5% to 10% range to reflect cost of living adjustments and maintain its multiple channel production and distribution environment.

In CBG's experience, including our review of a number of public/community access channels and centers across the country, it is common to have in the budget these types and amounts of operating expenses, and the capital expenditures that we discuss in greater detail below, to support an operation that is substantially expanding its production and distribution of programming, and that continues to diversify its services to meet the range of needs of public/community access programmers and viewers in a city the size of Philadelphia. As indicated in the PhillyCAM Business Plan on Page 23, the funding increases are required by increases in the areas of staffing, facilities and equipment, and support, for both new channel launches and to ensure the continued operation of those channels. These expenditures, however, will enable PhillyCAM to better serve

¹¹¹ See Exhibit B.4, p. 35.

¹¹² See Exhibit B.5, p. 22.

¹¹³ See also Exhibit B.5 and the Philadelphia Public, Educational and Governmental (PEG) Access Equipment Upgrade and Replacement Spreadsheets (hereinafter known as "Exhibit B.11").

¹¹⁴ See Exhibit B.5, pp. 24-25.

existing members and develop opportunities that will encourage involvement of new individual and organizational members (such as the youth media program, already in full development).

PhillyCAM is also expanding its capabilities to better serve users with diverse needs, which will result in an expansion in the type and amount of content, consistent with the targeted offerings described for each of the new channels above. For example, one of the member needs expressed in focused discussions is for additional evening and weekend hours to accommodate job schedules.¹¹⁵ That will require increased staffing, utilities and related operational costs. In our experience, though, weekend and evening hours will generate new members who have available time to produce programming and become involved in content development only during those hours. PhillyCAM's mission is to develop and broadcast programming that meets the community's needs, as do the programming initiatives described above, and to maximize community involvement in video production through its membership and training opportunities. In CBG's judgment, PhillyCAM's plans support the reasonableness of the past and projected budget increases described above and in more detail in the PhillyCAM Business Plan¹¹⁶.

Operating expenses are currently largely supported by grants from Comcast and Verizon pursuant to their respective franchises, and must increase somewhat from current levels in order to sustain PhillyCAM's operations at the projected levels described above. In CBG's judgment, these programming, membership and other goals must be substantially achieved in order to meet the City's public access needs assessed in CBG's study. Verizon's public access grant obligations are in the same total amount over the 15 year term of its cable franchise, which expires in 2024. Given the need for additional funding to meet public access needs identified in this report, CBG recommends that the City seek additional support from Comcast in renewal negotiations, and that it require substantially the same level of overall support from Verizon in negotiations for renewal of that franchise. The operating grant from Comcast under its current franchises is \$500,000 per year and is currently being passed through to subscribers by a fee of \$0.26 per month per subscriber, shown as a line item on subscriber bills.¹¹⁷

CBG's findings as to the community's public access needs are described in detail in the next Sections of this report.

Focused Discussions with PhillyCAM

As part of the study, CBG held focused discussions and interviews with PhillyCAM's staff, Board of Directors, independent producers, volunteers, program providers, program distributors and other PhillyCAM members.¹¹⁸ In each case, the focused discussion participants were queried on a set of cable-related topics that were selected to address the principal areas of PhillyCAM operations and its needs over the next 10-15 years.¹¹⁹ These topics included participants'

¹¹⁵ See Exhibit B.1, pp. 11 and 14.

¹¹⁶ See Exhibit B.5, pp. 23-25.

¹¹⁷ Based on the current subscribership, at \$0.26 per month, per subscriber, the amount generated annually is well beyond the \$500,000 a year PhillyCAM funding commitment, so it is likely that other access-related funding such as initial capital grants are also being recovered by this fee. CBG recommends that the City obtain from Comcast a full accounting of what is being reimbursed by this fee.

¹¹⁸ Key information obtained from each focused discussion is presented in Exhibit B.1.

¹¹⁹ Ibid. See also Footnote 90.

perspectives on the value of Public Access, PhillyCAM especially; their experiences using PhillyCAM facilities and equipment, focusing on their sufficiency for the PhillyCAM programming and educational activities they were familiar with; and the facility, equipment and operational enhancements they view as necessary for PhillyCAM to meet their needs and interests in the near and longer term future. A total of 4 focused discussions, with over 80 PhillyCAM stakeholders, were conducted over a one-week period in 2013, with updated information gathered in the weeks leading up to this report.

Online Survey of PhillyCAM Producers, Programmers and Facility Users

CBG developed an online survey for PhillyCAM individual and organizational member producers, PhillyCAM member providers of program content and individuals and organizations that use PhillyCAM facilities and equipment to produce programs for their own distribution.¹²⁰ The purpose of the survey was to obtain additional information about both current operations and needs for the future.

Projections to Meet Facility and Equipment Needs

CBG's projected equipment and facility development needs for PhillyCAM identified in detail in Exhibit B.11, together with estimated costs for each category and cost totals. The organization of the spreadsheets is described in the next section. The projections are based partly on "baseline requirements" that CBG's assessment determines must be met by all three Philadelphia PEG Access facilities it reviewed for this report, PhillyCAM, Governmental Access, and the School District of Philadelphia's channel. These baseline requirements are described in the section "Equipment Baseline Definitions" below.

Spreadsheet Organization

Exhibit B.11 contains spreadsheets identifying the equipment acquisitions CBG recommends for each PEG Access organization, including cost estimates for each type of equipment and estimated total costs for each. The spreadsheets are divided into two parts. The first part reflects the one-time transition/upgrade/enhancement cost (baseline spreadsheet) to meet the equipment and facility needs assessed in the short term. Then, a 10-year projection (incorporating the baseline costs) was also developed, because most of the equipment initially purchased will need to be replaced in the later years of a 10-year timeframe. For a 15-year franchise term, the total cost for each entity would increase by approximately 50%. The replacement schedule was developed based on CBG's knowledge and application of industry standards for wear and tear on each type of equipment and the critical equipment needs we identified for each PEG organization.

¹²⁰ The key findings from the survey are found in Exhibit B.2, along with a detailed summary of results in the PhillyCAM Public Access Program Providers/Producers/Users Online Survey Mark-up (hereinafter known as "Exhibit B.3"), showing the frequency of various responses to each question.

Equipment Baseline Definitions

CBG's assessment established certain "baseline requirements" that apply to CBG's needs assessment and equipment projections for all PEG production facilities.¹²¹ The goal of the Baseline Definitions is to define core requirements for these organizations as they continue to transition from their current video production environments to the industry standard of high-definition and other associated digital technologies, and to successor digital technology as it becomes industry standard, in order to meet the needs assessed by this report. The spreadsheets in Exhibit B.11 include a description of the type and range of equipment needed in order to function adequately at the HD digital level. Some equipment that is not related to digital transition, but is still critical for video production, is also included in the spreadsheets. Items such as tripods, light stands, and microphones are generic to the facility, and are not format dependent. Considerations for support of legacy equipment in a phased transition are critical to ensure continued operations as the facility moves into the HD world.

All new equipment purchased by the Access organizations should be High Definition. Standard Definition (SD) equipment can either be a 4x3 or 16x9 aspect ratio (in a digital format, not analog). SD equipment can be anything from consumer grade to broadcast (professional) quality equipment, whereas HD always has a 16x9 aspect ratio and produces video with a much higher, professional level, quality than SD. As the television production world has moved over time from black and white to color, VHS to DVD and Blu-ray, and from analog to standard definition digital, it is now moving rapidly to a fully high-definition digital environment. This means that eventually little or no standard definition digital production and post-production equipment will be available in the marketplace, nor will replacement parts to repair existing SD equipment be available. Additionally, the cost for high-definition equipment continues to fall, making it available at a reasonable cost during the term of a renewed franchise. These two factors together make it far more cost effective for PEG Access organizations to acquire HD equipment in all of their new equipment purchases.

The broadcast, cable and satellite industries have moved to HDTV because of the obviously better picture quality and sound quality, which viewers now demand. As of April 2013, over 75% of US households had at least 1 HD television set, up from 23% in 2007, according to published research. Over the past 6 years, 59% of US households adopted HDTV. According to the research, the percentage of HDTV homes continues to grow. Although statistics are difficult to obtain on the exact amount of programming available in HD, it is CBG's experience that in order for television providers to remain competitive and expand viewership, they must deliver programming in HD. This applies to PEG Access organizations as much as to commercial cable channels.

Accordingly, based on the assessed needs of the PEG channel operators described in this report, CBG recommends that all new equipment purchases be HD, but in some cases still SD-compatible based on integration with existing equipment. This allows access to past programs or applications that could only be retrieved by utilizing legacy equipment.

¹²¹ As noted elsewhere in the report, CBG assessed and projects equipment needs for the video production facilities of PhillyCAM (Public Access), Governmental Access, and the School District of Philadelphia. The recommendations in this section apply to these three video production facilities.

Virtual Set Technology

CBG recommends virtual set technology be installed in the main production studios of PhillyCAM, the Governmental Access channels, and the School District. This technology uses computer generated environments to create the illusion of a physical set in which subjects perform, substantially reducing the expense and logistics of managing physical sets. Sets can be generated live or subjects can be videotaped against a “green screen” and the virtual set added in post-production. The technology permits a variety of sets for different program types, at little cost, and allows for more efficient use of PhillyCam’s limited studio space. These capabilities of the technology and its utility in PEG studios are discussed in more detail below.

PEG Access channels, like commercial channels, continue to have more and more competition from other video services while their viewership and user community demand increased program offerings. In the current environment of constrained budgets all content providers, including the Philadelphia PEG Channels, must have faster and more economical ways to deliver a greater range of programs. Virtual set technology meets this demand to produce and deliver more with less by substantially eliminating the time and cost of building, taking down and managing physical sets, with no loss in production quality. It permits use of a variety of video environments to keep programming fresh and creative, bringing viewers back to the channel, at a fraction of the cost and time required for multiple physical sets.

Virtual set technology is provided in the attached equipment spreadsheets for PhillyCAM, Governmental Access, and the School District channel. CBG recommends use of a chromakey curtain that can be pulled in place as needed, as opposed to a static green wall. This will add flexibility to sets, is easy to maneuver and use, and creates the illusion of increased depth, giving the viewer the sense of a larger space.

Ancillary Equipment

This spreadsheet category includes basic items such as microphones, teleprompter equipment, PA, miscellaneous stands, tripods, recorders, workstations, fixtures, and the like, plus their upgrades and replacements. It is necessary for any PEG production facility and must be replaced, upgraded and added to, over the term of a renewed franchise.

Three Grades of HD Camera

CBG recommends that the three (3) PEG facilities, depending on the requirements of the entity, the planned usage and the type of users that will be operating the cameras, acquire the three industry standard grades of video camera to meet the different expertise levels of their producers, generally known as consumer grade, prosumer grade and professional grade.

All three grades of cameras are capable of shooting in high definition. Differences lie in the automatic versus manual controls that regulate picture quality, special effects and sound. This includes features such as focus, iris and zoom controls, white balance and the ability to control sound quality. The quality of internal parts such as chips and lenses is higher in the non-consumer grades. Consumer grade cameras are typically fully automatic with no options for manual adjustments, hence the simplest to use, and generally do not have audio jacks or permit control of

audio from the camera. Prosumer cameras give more manual control, but have optional automatic features for less experienced users. Professional cameras offer many options for manual and automatic operation, fully integrate into the other types of equipment in the production facility such as switchers, and have options for fiber, audio and SD/SDI connections.

PHILLYCAM FACILITY AND EQUIPMENT NEEDS

Based on the information gathered from site reviews, interviews, focused discussions and surveys, an analysis was made by CBG to determine the cable-related needs of PhillyCAM and public access in Philadelphia, using our expertise, experience, comparisons with other similarly situated PEG Access operations and understanding of capital and operating funds needed to meet the needs. We then made pertinent facility and equipment projections for PhillyCAM, including specifications and costs for recommended equipment. Key projections are detailed below and are summarized in this Section's Conclusions and Recommendations.¹²²

Production Studios/Studio Control

Production studios, along with studio control (control room and equipment for the main studio), is considered the nerve center of a video production facility, typically requiring a large commitment of resources and funds. During our visits to the PhillyCAM facilities, CBG identified a number of studio needs and recommend the following to meet needs of the two studios at PhillyCAM.

Express Studio

The Express Studio is a small studio in PhillyCAM's facility that has a window fronting Seventh Street, giving it a "storefront" look and feel. This studio is designed to produce programs with minimal staff. We noted that it only takes two people to produce a program in the Express Studio, and it can either be recorded or can be routed to live broadcast on Channels. In the Business Plan, PhillyCAM notes that greater use of the Express Studio is anticipated to result in an average of 3.5 hours of new original programming per week and is a significant part of PhillyCAM's plans for implementing the third channel. Besides the programs discussed earlier in this report, PhillyCAM is looking at shows which will leverage the "storefront" nature of the studio such as a planned "Open Mike" show which will broadcast performances by local poets and musicians from the Express Studio, with passersby on 7th Street able to view the performances through the window as an audience.¹²³

The Express Studio currently has two high definition robotic cameras. We recommend a third robotic camera, to address the need to give the host/operator the flexibility for more camera angles and visual interest for the viewer.¹²⁴ We recommend increasing the power of the lighting system to address the need to react to changing outdoor light conditions to provide more uniform lighting throughout the studio over the course of the production day. We also recommend that digital audio

¹²² See also Exhibit B.11.

¹²³ See Exhibit B.5, p. 8.

¹²⁴ See Exhibit B.1, p. 6.

mixing capability be added, which will increase ease of use and flexibility in this space and give it the same audio technology available or projected as a need in the rest of the facility.

Main Studio

PhillyCAM's main studio is the heart of its current operations, producing, among others: many interview shows; documentary feature programs such as "The Spark: Stories that Change Our Times", covering people involved in human rights issues, developed by the Media Mobilizing Project; musical performances such as those recorded for "Miles of Music"; and a show featuring over 40 PhillyCAM producers called "The Producers Circle," which provides insight into how and why programs are created.

Currently, the main studio is equipped with three high definition cameras as well as a highly functional studio lighting system. Our initial review indicated a need for more lighting fixtures to provide coverage that will allow multiple sets to be staged at the same time. The studio has sufficient space for multiple sets, so additional lighting enables more efficient use by allowing back to back productions to occur. Given the increase in production hours to develop content for the multiple PhillyCAM channels described above, greater efficiency in use of the studio will be essential. PhillyCAM subsequently installed additional lighting in the Summer of 2014¹²⁵ and we have accounted for replacement of all the studio lighting in the later years of the projections in the accompanying spreadsheets.

We also recommend that the main studio continue to be equipped with cameras that are HD capable, with upgrades as the technology evolves, and that studio video monitoring equipment (used on-set for talent to note their appearance on camera and to review video inserts during the production) be upgraded with new equipment.¹²⁶

We recommend virtual set technology be installed in the main studio. As discussed earlier, this technology uses computer generated environments to create the illusion of a physical set in which subjects perform, reducing the expense and logistics of managing physical sets. Sets can be generated live or subjects can be videotaped against a "green screen" (variously, a screen, wall or curtain) and the virtual set added in post-production. The technology permits a variety of sets for different program types, at little cost, and allows for more efficient use of PhillyCam's limited studio space.

Main Studio Control

"Studio control" refers to the equipment, usually located in a separate walled area of the studio, from which camera feeds can be controlled and switched, graphics are created and mixed, and lighting, audio and other production elements are controlled. A review of the current and projected equipment in main studio control indicates how critical it is to PhillyCAM's training and program production. As noted by staff and producers in both the focused discussions and the online survey results, the user-friendly nature of the equipment, and the access to up-to-date multi-viewer storage, graphics, audio and other technology, determines how easily and effectively producers

¹²⁵ See Exhibits B.5, p. 25; and B.1, pp. 6-7.

¹²⁶ See Exhibit B.11 for detailed recommended equipment.

can be trained and made to understand the high capabilities provided by the equipment.¹²⁷ This results in programming with high production values that all agree, and we concur, are necessary for a professional level of production that is well regarded by viewers (as noted in the ratings of PhillyCAM quality on the Residential Telephone and Online Surveys)¹²⁸.

The spreadsheets include all of the crucial components that must be supported in HD, with technical comments for each. The major components that we have recommended for upgrade, replacement and enhancement to meet the current and future studio production requirements of PhillyCAM include: a production switcher, graphic unit (character generator), monitoring equipment (engineering monitor and multiviewer), Blu-Ray DVD recorder, a solid state recorder, and digital audio components. In order to stay current with technology and to be competitive with other channels on the cable system, investing over time in studio control upgrades consistent with the ones we've recommended is essential.

PhillyCAM Conference Room

Located in PhillyCAM's facility is a conference room where board meetings and training sessions are held, as well as community group meetings and events. Some of these events are video recorded and turned into television programs for broadcast or internal use. Our review indicated that a number of other of the meetings occurring in this space would provide content for the current and planned channels, because the subject matter of the event or meeting fits into the mission and focus of the various channels. However, without permanently installed production equipment, this becomes a time consuming and inefficient undertaking. Accordingly, PhillyCAM has a need to equip this space with robotic cameras which could be used to record these training sessions, meetings and other events for later playback and for other purposes such as video-on-demand and live cablecasts.¹²⁹ We have recommended the cameras be installed with audio and video cabling returning to the studio control room for final production purposes. This will substantially increase the flexibility that PhillyCAM will have to produce programming, effectively adding another production location to the two studios.

Field Acquisition – Single Camera

Field Acquisition is one of the simpler functional areas to transition to modern HD digital because it is an independent process that does not rely on the other functional areas. Current HD cameras offer many capabilities and are cost-effective, lightweight, and easy to use. Single camera field production equipment for PhillyCAM is recommended as described below.

The field cameras currently in use by PhillyCAM include small Canon cameras for general use by members, as well as professional Sony cameras used by PhillyCAM production staff. CBG's review noted that the field cameras are well utilized and support many offsite productions.¹³⁰ One hundred forty (140) members are certified to check out field equipment, which has resulted in

¹²⁷ See Exhibits B.1, pp. 1-2, 9-10, and 13; and B.2, pp. 1-5.

¹²⁸ See Exhibits A.1, p. 10 and A.2, p. 20.

¹²⁹ See Exhibit B.1, p. 7.

¹³⁰ See Exhibit B.4, p. 29. Field Equipment is the second most reserved PhillyCAM resource, after the post-production Media Lab.

documentaries on Philadelphia neighborhoods as well as coverage of local music and cultural events. Increased use of equipment is anticipated in order to support a higher level of single camera remote productions, especially for engaging and providing an outlet to new immigrants and non-English speakers through the planned PhillyCAM Heritage Channel, and for programming for the planned sustainability Channel.

Staff currently shoots HD with the Sony remote equipment. This should continue. With other upgrades that are recommended, they will be able to easily integrate this remotely produced video with other production areas. Although the equipment is sufficient for current use, technologies continue to improve and normal failures and need for replacement over the life cycle of the equipment is to be expected. We have recommended these replacements starting in Year Two of the equipment replacement spreadsheets.

For the replacements, we are recommending the two levels of field cameras. These types are listed in the accompanying spreadsheet. The first type is a high-end package which includes a higher resolution HD camera with two channels of wireless audio and accessories. This camera also includes greater image stabilization and iris control. Due to the diverse operation and camera users of PhillyCAM, it is necessary to have cameras that offer a wide variety of options. More knowledgeable camera operators will have the expertise to manually control the shots with options such as iris control and image stabilization. This type of camera is recommended for Staff and experienced producers because it allows for those manual controls generally preferred for expert users. The second “prosumer” type of camera should be more user friendly, designed to be used by the mid-level user, and is lower in cost.¹³¹

We recommend six of the high-end field packages as well as six of the prosumer packages to meet the needs assessed. This allows for a diversity of cameras to be available for all types of users. The camera field packages recommended all include one HD camera, one tripod and one complete lighting package, with two channels of wireless audio and accessories for the high-end package (as noted above), and a single channel for the prosumer packages.

Field Acquisition – Multi-Camera

Flypacks are portable units that enable the users to produce a complete multi-camera production in the field or indoors, and allow for staff and independent producers to be flexible and mobile for events from different remote locations. The location shoots are an ideal use for combining the flypack with the mobile production vehicle discussed later in this report. The price range varies greatly on flypacks depending on the flexibility needed.

PhillyCAM currently utilizes a NewTek Tricaster system capable of multi-camera production. There are two groups of producers currently that utilize this system on a “check-out” basis for their events. In the future, this equipment, as well as the new flypack system that we are recommending and the mobile vehicle, will be integral in supporting the PhillyCAM Live Culture Channel by providing live coverage of cultural events throughout the City (as well as recording them for later

¹³¹ See Exhibit B.1, p. 6.

playback). They will also permit covering a variety of neighborhood events that will provide programs for all PhillyCAM channels.¹³²

We recommend purchasing a new flypack system for PhillyCAM, as shown in the equipment projection spreadsheets. This flypack system will be capable of multi-camera live switching of three robotic PTZ cameras as well as insertion of live graphics. Other traditional field cameras can be plugged into and used with this system. The equipment purchased should be HD capable.

We are also recommending that the use of cellular transport technology be included in the flypack system. This will allow the transmission of live events from anywhere in the City back to the main facilities, enabling broadcast of live events. These locations could include community centers, street festivals and other areas of the city where fiber transport is not available or practical.¹³³

Generally, flypacks are used indoors, for coverage of public outreach events, indoor sporting events, community events and meetings. When coverage of outdoor events is needed, it is typically better to use the flypack in tandem with a mobile production vehicle for the protection of the equipment. Additionally, the temperature around the equipment can be better regulated and it provides a more ergonomic environment for the production crew. We have recommended a sprinter-type vehicle for mobile production use combined with this equipment. More details are given about the mobile production recommendation in the section below.

CBG noted that an expanding focus of PhillyCAM is to involve producers in creating both live and recorded programming in and about their neighborhoods. This was reflected as a priority across all PhillyCAM interest groups that were assessed, and is consistent with programming priorities in other large public/community access centers, such as the Manhattan Neighborhood Network (MNN) in New York and the Boston Neighborhood Network in Boston. The combination of the new flypack, cellular transport and a mobile production vehicle will, in CBG's opinion, fully meet PhillyCAM's remote production needs.¹³⁴

Post Production

Post Production lends itself to ease in transitioning to HD due to the fact that it can be done as an independent process that does not depend on the functional areas in the rest of the facility. In post-production, raw footage of video and audio are edited to create a finished program. Graphics and other creative additions can also be inserted to create a more professional product.

The major types of equipment involved in the baseline post production category are for ingestion (loading video into servers for processing), monitoring, digital audio mixing, video editing, and video recording (portable solid-state recorders for preference).

¹³² See Exhibits B.1, pp. 4-5, 11-12, and 15-16; and B.2, p. 4.

¹³³ Ibid. Additionally, it should be noted that the use of cellular technology will increase operational costs since monthly service charges will be incurred from multiple cellular carriers to support cellular-based video transport. This is projected as part of the increased operational costs discussed earlier in this Section on pp. 75-76.

¹³⁴ Ibid.

PhillyCAM currently has two stand-alone edit systems. One system is used for video editing only. The second system is used for both sound and video editing and production. CBG has determined that two new edit systems should be procured to replace the current systems, which are aging and have older technology,¹³⁵ and that three portable laptop editing systems should be added. These changes and additions will increase flexibility of the staff and member production capability, including the capacity for more producers to do post-production work on their programs concurrently.¹³⁶ In combination with the Media Lab discussed below, this equipment will make it possible for PhillyCAM to meet its program development goals described earlier.

PhillyCAM Media Lab and Editing

The PhillyCAM Media Lab is utilized on a daily basis for program editing as well as for training classes.¹³⁷ The Media Lab editing area offers a great opportunity for producers to learn and share their knowledge of software applications, as well as edit videos. PhillyCAM now has eight editing stations in the lab. We have recommended the continued upgrade and replacement of these stations throughout the projected 10-year timeframe. This is important, because as noted by many of the program producers in focus groups, and in survey results, connecting with others in this lab environment increases their capabilities and efficiencies regarding program production. In this way, more producers are capable of developing more content of a higher quality on a diversity of subjects, thus better supporting the multichannel programming activities of PhillyCAM.¹³⁸ It should also be noted that Media Labs are a staple of large access centers nationwide, and that training of this nature is seen as a benefit to workforce development in today's technology and video-intensive work environment.

Infrastructure

“Infrastructure” includes equipment necessary for all functions in a video production facility, such as encoders/decoders, optical transmitters/ receivers, routers, signal converters, and high capacity cabling throughout the facility, sufficient to produce and distribute high-quality HD signals. Audio and video routing is the ability to interconnect signals throughout the facility. This means that content from an edit suite or a studio can be routed to playback or to another production area, making it possible to share content among producers and productions with the touch of a button. Since the infrastructure is the backbone for all existing and new equipment needed to communicate throughout the facility and to transport the channels to Comcast and Verizon, it is essential that infrastructure components be upgraded to handle both the existing equipment and new equipment we have recommended. For example, it is important to have adequate infrastructure in place to support the conversion of legacy SD video to HD, which requires high bandwidth network connections. CBG has recommended infrastructure components for PhillyCAM.¹³⁹

¹³⁵ See Exhibit B.5, p. 25. PhillyCAM is in the process of upgrading the edit suites at this time. Based on this, recommended replacement is slated for Year 3 of the spreadsheet projections, contained in Exhibit B.11.

¹³⁶ See Exhibit B.1, pp. 6 and 14.

¹³⁷ See Exhibit B.4, pp. 29-31. The Media Lab is the most reserved and used area at PhillyCAM.

¹³⁸ See Exhibits B.1, pp. 1-3, 9 and 13; and B.2, pp. 2 and 8.

¹³⁹ See Exhibit B.11.

The audio/video routing system recommended for PhillyCAM's infrastructure should be capable of complete HD routing that will enable the movement of HD video and digital audio signals simultaneously through the facility. We are recommending a router with 32 inputs by 32 outputs. Currently, PhillyCAM is operating with a 16 input by 16 output routing system that is used primarily for playback purposes and is not adequate for full HD AV distribution. Increasing the size of the router will enable PhillyCAM to share and route video and audio signals throughout the facility, with simultaneous routing to all control rooms, edit systems and studios.

The number of optical transmitters and receivers recommended in the spreadsheet reflects the number of channels PhillyCAM has now and the number of remote production locations that can be supported, as well as development of the additional channels described above. Our review indicates several fixed locations where it would be beneficial for PhillyCAM to have the capability to transmit over fiber because of the number of events that could be covered live or recorded from these venues.¹⁴⁰ These include: The Painted Bride Art Center, the Penn Rotunda, Love Park, the Central Library and other sites throughout the city.¹⁴¹ We recommend Fiber Optic Transmitters and Receivers with ten channels each as necessary both to cablecast PhillyCAM programming and carry audio and video signals from such fixed remote locations.

PEG Access Channel Signal Transport

PhillyCAM is currently transported to the Comcast Headend utilizing Radiant transport equipment which takes baseband video and audio in, converts them to a digital signal and transports the channel to the headend for insertion onto the subscriber network. This current equipment is not multichannel or HD capable. To accommodate HD and the multiple channels of programming PhillyCAM plans for the near future,¹⁴² CBG recommends equipment that would simultaneously encode the signals of all PhillyCAM channels, and send them to the headend using digital, optical, high resolution, IP-based transport; Comcast would decode the signals and send them to the appropriate QAM groups at their headend.

Archival/Storage

As PhillyCAM's production facilities grow, produce and provide programming in HD requiring greater storage and archival capacity, the need for more archival/storage space will increase as well. Storage and archiving is important because it enables producers and staff to save and share their work, such as standard shots of community scenes, collaborate in projects where elements are similar in nature, and store programs that can be used in an "evergreen" fashion.¹⁴³

Archiving and storage is also used to house finished programs that can be accessed by residents for on-demand viewing of programs. Not only can programs be archived, but they can be categorized by subject, producer, event type, or date and can be stored in various file types.

¹⁴⁰ CBG anticipates that PhillyCAM could obtain capacity on existing networks such as those managed by the City, the Free Library, Comcast, Verizon and others to provide backhaul for originating video signals from a number of fixed locations and transporting them back to PhillyCAM's master control.

¹⁴¹ See Exhibits B.1, pp. 4-5, 11-12, and 15-16; B.2, p. 4; B.3, pp. 27-28; and B.5, p. 9.

¹⁴² See Exhibits B.1, pp. 11-12, and 16; B.2, p. 6; and B.5, pp. 10-11, and 16.

¹⁴³ See Exhibits B.1, pp. 5 and 15; and B.5, p. 20.

Television viewers are also demanding the ability to view programs online via computers or mobile devices. Storing categorized programs is necessary for such access to programming.¹⁴⁴

Even though PhillyCAM already has some of this technology in place, we have included costs for significant upgrades and growth throughout the 10-year projected timeframe, based on necessary increases in the amount and type of programming that is being, and will be, produced and distributed across multiple platforms. Specifically, CBG's review shows that PhillyCAM needs an additional 64 terabytes of storage per server over the 10 year equipment upgrade and replacement schedule. This has been calculated based on our estimation of the current and future programming projections against the storage requirements needed for HD content (approximately 35 gb per hour of programming). For long-term storage, we are recommending a tape backup and storage system known as an LTO system to archive and house video programs. The advantage of a system such as this is that the number of tape drives can be increased as storage needs increase. These tapes can be retrieved and input back into the shorter-term storage system when needed.

Production Servers/Playback

Production servers must have the capability for both standard and HD playback, moving to all HD in the future, must have the ability to have programs transferred to them over the network (real-time ingestion), and must have a robust scheduling capability to enable a well-rounded playback resource.

PhillyCAM has recently implemented HD playback technology in their facility that meets the above capabilities by purchasing a new complete playback system from the TelVue corporation.¹⁴⁵ In the spreadsheets we have estimated costs to upgrade the playback system in later years of the ten year timeframe.

Consistent with providing HD channels, PhillyCAM and all the PEG Access channel providers will need HD levels of service provided by the cable operators at their facilities in order to monitor how these channels are being received by subscribers.

Headend/Character Generator

A requirement we identified for the PhillyCAM's headend/playback capability is a character generator capable of 24/7 playback of on-air bulletin board information. This allows for additional programming features that are of interest to residents. The character generator will enable the playback of video sources as well as the bulletin board information required.¹⁴⁶

A separate character generator is needed at this point, because the server-based playback system only includes limited technology which will not meet the need to support the text and graphics requirements of the 5 planned channels. Going forward we forecast the need for replacing this unit when the server is also replaced in later years.

¹⁴⁴ See Exhibits B.1, pp. 5 and 16; B.2, pp. 6-7; and B.5, p. 17.

¹⁴⁵ See Exhibits B.1, p. 5; B.5, p. 16.

¹⁴⁶ See Exhibit B.4, pp. 4 and 7, describing the Community Bulletin Board.

On Demand/Streaming

Both Internet streaming and Video on Demand (VOD) streaming have become an integral part of many production facilities' outreach to the public, especially consumers without cable television services. This is true for PhillyCAM as well, as noted in their Business Plan.¹⁴⁷ With this in mind, video streaming equipment needs to be capable of handling signals within the facility, be HD compatible and in most cases, capable of running 24/7 so that the facility is running at full HD capacity and viewers can access information and programming "on demand". The equipment should also include both live streaming and VOD capability and is included in the cost for the type of playback system we are recommending this capability is included in the recently purchased TelVue video server system.

"Cloud-casting" capability fits with PhillyCAM's desire to continue to enhance and expand its critical on-line presence. PhillyCAM's pursuit in this regard is consistent with television industry as a whole, and ensures that more Philadelphians will have more ways to access PhillyCAM's programming. A greater use of the Internet for these purposes will require a much higher capacity Internet connection than the current 15 Mps downstream and 5 Mps upstream, as well as redundancy sufficient to ensure that local Internet outages do not stop production or cablecasting. (The bandwidth required to support such Internet operations would be a minimum, symmetrical 20-50 Mbps. CBG estimates the increased bandwidth and redundant Internet connections would add at least \$2,000 - \$6,000 annually to PhillyCAM's budget and would require commensurate increases in funding).

This system should be robust enough to enable the simultaneous encoding of multiple feeds for both internet and cable-based linear and VOD delivery¹⁴⁸ thus saving time and increasing efficiency for staff and the turnaround time for distribution of access programming. Based on programming projections, CBG recommends a minimum of 10 hours of on-demand capacity for each of the 5 projected channels, or 50 hours total for PhillyCAM. CBG also recommends that PhillyCAM and all the PEG Access channel providers be provided with on-demand access capabilities by the cable operators in order to monitor placement of the programming on the cable system.

Encoders are also included and recommended in the attached spreadsheets for future replacement.

¹⁴⁷ See Exhibit B.5, pp. 17-18.

¹⁴⁸ See Exhibits B.1, pp. 8, 12 and 16; B.2, pp. 6-7; and B.4, pp. 8-9.

Mobile Production Vehicles

A Mobile Production vehicle is a valuable and flexible resource for any video production staff. Because of this, it is important that the equipment be state of the art and its capabilities match the capabilities used throughout the facility. Based on our review of facilities and equipment needed to support PhillyCAM's plans to increase the nature and types of programs produced in the field, we are recommending a mobile production vehicle for PhillyCAM. For example, the mobile production van, will allow for efficient coverage of more community events. Such coverage will increase PhillyCAM's responsiveness to, and involvement with, the community at large, while also increasing PhillyCAM's visibility, thus promoting booth increased viewership and membership.¹⁴⁹ Consistent with this, we recommend that the Mobile Production vehicle be a sprinter-type van that is capable of housing and transporting the HD flypack and have patch panels and a climate control system. This enables multicamera productions to be produced in both indoor and outdoor venues, where the truck can also serve as a mobile control room when needed.

PHILLYCAM FACILITY NEEDS

PhillyCAM Youth Production

The Youth Production space specified in the accompanying spreadsheet is designed to be a creative space for young people that includes all aspects of video production as well as computers and software to enable learning of television and video production as well as audio and graphics production. This is designed to be a separate space where young people can collaborate and learn together.¹⁵⁰

CBG recommends that the equipment for this space include complete editing systems, cameras, camera field packages, a video switcher, LED lighting and digital audio mixing consoles, in order to enable those involved in the youth media program to produce content that informs viewers in Philadelphia of the perspectives of young people on the topics, issues and subject matter that viewers may only now have the benefit of an adult perspective.

CBG's review indicates that PhillyCAM needs 2100 square feet of space within their facility already identified on an upper floor that can be remodeled for Youth Production that will allow young people to explore their creativity in multiple facets of video production projects. This has been detailed in the accompanying spreadsheet projections.¹⁵¹

¹⁴⁹ See Exhibits B.1, pp. 5, 11-12 and 15-16; B.2, pp. 4 and 7; B.5, pp. 9 and 25.

¹⁵⁰ See Exhibits B.1, pp. 7 and 14; B.4, p. 18; and B.5, pp. 12-13.

¹⁵¹ See Exhibit B.11.

PhillyCAM Relocated Facility Space

PhillyCAM notes in its business plan, that once its lease is up in 2021, it may need to relocate to a new facility¹⁵². Such an undertaking will require substantial capital dollars to accomplish the fit-out of another facility to meet programmatic requirements that will be in place as of that time. We believe that this will require a minimum of 10,000 square feet to satisfy PhillyCAM's growing production needs over that time. This square footage would facilitate PhillyCAM's operations starting in 2021 and would continue to provide both a large and small studio, post production facilities, field checkout facilities, set and other storage, reception, a producers meeting area, and related production planning facilities, offices, multi-channel playback, conference and other meeting facilities and a youth production area.

¹⁵² See Exhibits B.1, p. 7; and B.5, p. 20.

FINDINGS – GOVERNMENTAL ACCESS

Overview of Philadelphia’s Governmental Access Channels

The City operates two Governmental Access channels, Comcast channels 63 and 64, and Verizon channels 40 and 41. Channel 64 (Verizon Channel 40) is currently the primary channel, with Channel 63 (Verizon channel 41) simulcasting Channel 64 programming. Programming on Channel 64 now focuses on covering public meetings, including the Philadelphia City Council’s regularly scheduled meetings to consider and pass legislation, public hearings on proposed legislation by Council committees, public hearings and public meetings of other City agencies and governmental bodies, Philadelphia City Planning Commission meetings and other public agency meetings. Channel 64 programming includes coverage of the Mayor’s press conferences and videos of presentations by major City operating departments to senior City officials. These programs are part of the PhillyStat program conducted by the Managing Director’s Office, and include reviews of department performance targets and performance data, discussions of City initiatives and programs, and discussions of service-delivery and other issues before City departments.

Many public meetings and PhillyStat activities are covered live and then recorded and rebroadcast at a later time. Shows are also produced by City departments, including the Fire Department and other public safety agencies, in collaboration with the production team in the City’s Cable Television Unit (the “Unit”), under the Office of Innovation and Technology (OIT).

The Cable Television Unit is currently staffed by the Cable Television Administrator, who directs the Unit, two Cable Television Support Technicians, and one Audio Technician. Also working with the Unit is an Assistant Managing Director under the Managing Director’s Office who performs audio and video technical work, video production and video editing tasks. Occasionally, the Unit has interns who do audio and video technical work as well.¹⁵³

The Cable Television Unit currently produces over 540 hours of local original programming annually and thus is able to provide timely and time sensitive information, as well as “evergreen”¹⁵⁴ information such as Philly311TV, produced by the City’s customer service 311 department on how resident requests are resolved by the department and other City agencies, as well as other information, on public proceedings, City services and City agencies. The large amount of video production enables video to be cablecast 24 hours a day with reader board information filling in breaks between coverage of public proceedings and prerecorded programs.

The Unit has its main video production facilities in City Hall, including a remote production installation in City Council Chambers, a small production studio, master control and playback facilities, switching capability for equipment in Council Chambers, video editing equipment, and field cameras for use in covering events remotely. The City also has a permanent production installation in the PhillyStat Room in the Municipal Services Building (MSB).

¹⁵³ See Cable TV Unit Governmental Access Channels Business Plan, dated January 1, 2014, revised December 15, 2014 (hereinafter known as either “Governmental Business Plan” or “Exhibit B.9”), pp. 5-6.

¹⁵⁴ “Evergreen” programs are those that are not time sensitive, can be broadcast at any time, and have long-lasting replay appeal to viewers.

The City's Cable TV Unit that manages the Government Access channels also has plans to increase programming. The Cable TV Unit's Governmental Business Plan details the client feedback and programming demand that it has seen and management proposed several improvements capital and operational improvements to address these needs.¹⁵⁵ One proposal mentioned in the Governmental Business Plan and the interviews/focus groups includes developing separate identities for Channel 64 and 63. Under this proposal, the two channels will be rebranded as "PHLgovTV 1" and "PHLgovTV 2"¹⁵⁶. PHLgovTV 1, current Channel 64, will focus on programming by and about the City Administration. It will carry Mayor's Press conferences, coverage of special events and festivals (e.g. the Welcome America Celebration, Parkway concerts, Parks and Recreation events); and original programming about City departments, their missions, and their delivery of the City services they are responsible for. Original programming will be produced by the Cable Television Unit in collaboration with department staff. It is anticipated that third party programming on issues and topics directly related to the missions of City departments will also be cablecast, such as emergency preparedness programming from the federal and state governments sponsored by the Office of Emergency Management, health and wellness programming sponsored by the Department of Public Health, and a tour of local businesses (for example, to learn how a Philadelphia icon, Tastycakes, are manufactured, sponsored by the Office of Economic Development).

Under this proposal, Channel 63 will become PHLgovTV 2, with a focus on expanded coverage of public meetings of governmental agencies, some of which are now carried by Channel 64. These will include, among others, the City Council's regularly scheduled meetings to consider and pass legislation (known as "Stated Meetings"), Council's annual hearings on the City budget, public hearings by Council's various committees to consider proposed legislation, and other programming developed by Council, including press conferences, interviews with Council members, and programs about issues before Council. This channel will also carry public hearings and meetings of governmental bodies that are required by the Philadelphia Home Rule Charter or The Philadelphia Code to hold public meetings or hearings (such as the City Planning Commission, the Zoning Board of Adjustment, Civil Service Commission and Registered Community Organizations). Original programs will be produced by the Cable Television Unit, working in collaboration with Council staff for Council-related programming, and it is anticipated that third-party programming on legislative affairs will also be cablecast on this channel.

Based on the scope of the City's plans for re-branding and expanded programming for Channels 63 and 64, with distinct programming on each channel, CBG finds that the City needs two cable channels, and that the channels should be at their present positions, which are well known to Philadelphia viewers.

As described above, currently there are five, mainly full-time employees that support the operation and management of the Governmental Access channels and some related operations and administrative activities. These related activities include running audio/video for events that are not recorded for later cablecast on the Governmental Access channels.¹⁵⁷ This staff complement will need to increase in order to support the increased programming that will be provided on the

¹⁵⁵ See generally Exhibit B.9.

¹⁵⁶ See Exhibit B.9, pp. 7-8.

¹⁵⁷ See Exhibit B.9, pp. 4-6.

two Governmental Access channels with separate identities; the Public Meetings channel and the Information channel.¹⁵⁸ The additional staff needed to support planned increases in programming includes: two producers/operators that will produce programming for and provide operational support for productions for the two Governmental Access channels; two support technicians that will primarily provide technical functions related to equipment, master control and post-production systems; and one Governmental Access clerk that will provide clerical and administrative support.¹⁵⁹

Outside of the two public channels, Comcast provides the City with two closed-circuit digital channels for internal-only use by the City's Police Department (Channel 971) and Fire Department (Channel 970). The Cable Television Unit does not manage Channel 970 or 971, and does not produce programming for either channel. The Police and Fire Departments are responsible for developing programming and for placing programs on the channels, and for furnishing the equipment necessary to produce programming and transmit it to the channels.

Neither the Police or Fire channel is currently in use. Both departments need two-way video capabilities for interactive communications with Police Districts and Fire Stations, but this service is not currently provided. Both departments used the channels to distribute training videos to Police Districts and Fire Stations. The Police Department also used Channel 971 to deliver messages from the Police Commissioner and senior staff to the Police Districts. Interactive communications are necessary to fully meet the needs of the departments and indicated to CBG.

The Police Department is transitioning management of Channel 971 from its Audio/Visual Unit to its Communications Unit, and plans to once again deliver training and other video programming for distribution on its channel once that transition is complete. The Fire Department will use Channel 970 as an internal training channel and is considering using FEMA programming on the Channel in the future.

Interviews and Focused Discussion with City Governmental Access Representatives

As part of determining existing Governmental Access needs and projecting future needs during a franchise renewal period, CBG conducted interviews and focused discussions with Cable Television Unit staff who have hands-on familiarity with Channel 64's operations, including personnel involved with the development, production and distribution (delivery via playback on the cable systems or through online services) of programming. Interviewees and discussion group participants focused on topics including facilities and equipment needs, in both the main production area in City Hall (studio and remote production and editing and playback by Unit staff), as well as production in the Council Chambers and Rooms 201 and 202. Production needs and interests in areas in the nearby Municipal Services Building (MSB) and the One Parkway Building (OPB) were also discussed. Needs regarding delivery formats were also addressed, including SD and HD needs, video on demand, and emerging forms such as interactive television¹⁶⁰; facilities

¹⁵⁸ See Exhibits B.9, p. 11; and the Summary Narrative of Governmental Access Focused Discussion and Interviews (hereinafter known as "Exhibit B.6"), p. 5.

¹⁵⁹ See Exhibit B.9, pp. 11-12, for additional details and position descriptions.

¹⁶⁰ Interactive television (iTV) includes the ability for cable subscribers to use their set-top units and remote controls to immediately respond to information presented in a television program, such as a poll or an invitation to obtain

and equipment for production support, including virtual sets¹⁶¹ storage systems; and video and other content distribution and signal transportation technologies¹⁶². A summary of the information reported from the interviews and focused discussions can be found in Exhibit B.6.¹⁶³

Online Survey of Government Access Producers and Programmers

To further assist in determining Governmental Access related needs, an online survey was developed for City personnel and others involved with the development of content on Channels 63 and 64 such as City departments. A link to the survey was sent to a variety of City department and agency representatives and other stakeholders that had worked with Cable TV Unit staff to develop programming, had participated in the production of programs, or who were aware of the Channels' potential and mission. Responses were received from City Department employees, a CDC director, an outside producer, a community activist and an advocate.¹⁶⁴

Facility and Equipment Recommendations for City Governmental Access

Similar to its review and analysis regarding PhillyCAM's needs, CBG reviewed and analyzed all the data it gathered through the interviews and focused discussion, the Governmental Business Plan, the online survey results and its on-site facility and equipment review to determine Governmental Access cable-related needs. Then, based on CBG's review and analysis of all the information obtained, observed, and gathered on-site, the following subsections detail CBG's assessment of the City's Government Access needs and describe CBG's recommendations for equipment and facility upgrades to meet the needs assessed.

New Government Studio Facility and Equipment

CBG's recommendation for the City of Philadelphia's Governmental Access Studio is redevelopment in another location in City Hall, to enlarge the space to 900 square feet.¹⁶⁵ By doing this, it will enable 3 or even 4 camera productions, as the current space will not accommodate more than one camera. Multi-camera productions, extremely common in the television industry, allow for subjects to be captured at various angles which creates interest with the viewers especially during interview or panel-type programs. The increased space will also enable larger sets to be used and would increase overall programming flexibility allowing the space to be better utilized for the creation of more original programming.¹⁶⁶

We are further recommending an additional 200 square feet for an adjacent control room. Such space is needed in the studio control room for equipment such as a video switcher and the audio

more information on a particular topic. The cable industry continues to explore ways to use iTV and PEG Access programmers are simultaneously exploring whether such services could enhance program content and feedback from viewers.

¹⁶¹ See above in the section concerning PhillyCAM, pp. 79 for a discussion on virtual set technology.

¹⁶² Delivery via playback on the cable systems or through online services.

¹⁶³ See Exhibit B.6

¹⁶⁴ See the Summary Narrative of Governmental Access Program Providers/Producers/Users Online Survey (hereinafter known as "Exhibit B.7") for additional survey information.

¹⁶⁵ This recommendation is consistent with Exhibit B.9, p. 8.

¹⁶⁶ See Exhibits B.6, p.3; and B.9, pp. 8-10.

console and for the additional personnel that will be working or observing in the control room.¹⁶⁷ Again, based on the need for production efficiency and other governmental programming development considerations, this space should be located in City Hall.

Further, the Governmental Access Channel needs to expand not only its studio space but also associated post-production, office, storage, and related space.¹⁶⁸ As noted in the Governmental Business Plan, the best option at this point is a combination of the existing Cable TV Unit space on the 7th Floor plus the addition of space in City Hall Room 825. Essentially, 900 square feet of the existing 1,760 square foot 7th Floor space should initially be reworked to expand the studio and control room beyond its current size. Subsequently, an additional 2,100 square feet of space on the 8th Floor would provide for the large studio, additional staff, additional postproduction and storage. Together this would provide a total of 3,860 square feet of space for governmental access television production, post production and channel distribution functions. Cost for development of this space has been provided at the end of this section and in Exhibit B.11. We believe that this will meet the central space needs for City Governmental Access based on our analysis.¹⁶⁹

Regarding production equipment, CBG recommends that the studio be equipped with cameras that are HD capable to replace the current SD cameras that are currently in use,¹⁷⁰ along with the incorporation of professional quality studio lighting and monitoring. In the spreadsheet, we are recommending that LED Lighting be installed and the amount of lighting be increased to comport with the new studio size. LED Lighting is energy efficient and lasts much longer than incandescent lights. Studio Acquisition includes other pieces of equipment used in a traditional studio environment such as confidence monitors. These will all need to be purchased to handle HD signals as the City's Government Access facilities transition to all HD technology.

Within Studio Control is equipment such as the Video Production Switcher. This is the nerve center of most studio control rooms. It is important that the switcher be reliable and state-of-the-art. If the switcher fails, all live productions will cease until the switcher can be replaced which could delay programming schedules. Currently the Studio Control area is equipped with a NewTek Tricaster which may be adequate for the City's current needs, but will need to be upgraded as other studio updates occur as it is not HD compatible. The switcher should be equipped with multiple layering and keying capability and should include chromakey and virtual set technology to allow for flexibility in video production programming.¹⁷¹

Miscellaneous distribution amplifiers and cabling are included in the attached spreadsheet to enable the interconnectivity between the studio control room and the rest of the production facility, including studio monitoring and connection to the audio/video routing system discussed below. This basic equipment is necessary to make the production facility equipment operate.

The Cable TV Unit and Comcast are currently in discussions regarding upgrade of the governmental access channels to HD under the current franchise. These discussions include both

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

¹⁶⁹ See Exhibit B.11 for further details.

¹⁷⁰ See Exhibit B.6, p. 2.

¹⁷¹ See Footnote 161.

upgrading equipment and developing a new studio space. Comcast has provided an HD counterpart to Channel 64 (Channel 1164) and an HD transmitter. Channel 64's SD signal is up-converted to HD because the Unit's video production equipment is only partly HD capable. Further equipment upgrades will be required to broadcast in commercial-quality HD.

Council Chambers

In CBG's inspection of the Council Chambers, CBG identified these key pieces of equipment for upgrade and replacement in order to implement updated technology and accommodate HD production:

- Cameras
- Microphones (Wired)
- TV Monitors

When CBG toured the City of Philadelphia Council Chambers, the staff noted the historic and ornate nature of the room and that consideration of these historical features needed to be made when recommending equipment and installation in this room. In the past, the Staff has considered these historic features when installing production equipment in this space, while also accommodating the modern technology needed to televise programs from this space. It may require specialized installation or equipment in order to preserve these features and may increase the overall cost. All cameras are mounted discretely and audio is run by an operator using a centralized console that all feed the Council Chambers Control Room.¹⁷²

Council Chamber Control Room

In CBG's review of the Council Chambers Control Room, CBG identified these key pieces of equipment for upgrade and replacement to be compatible with the equipment recommended for the Council Chambers:

Switcher
Robotic Camera Control
Character Generator¹⁷³
Digital Audio Mixing Consoles
Multiviewer Monitoring
Solid State Recorder
Engineering/Confidence Monitor
Miscellaneous D/A's and cabling

Within the Control, the major equipment identified for upgrade, implementation and replacement, is recommended to be implemented in Year One and then replaced in Year Eight of the 10 year

¹⁷² See Exhibit B.6, p. 2.

¹⁷³ It should be noted that the character generator listed in the Council Chambers Control Room may or may not be needed based on the type of switcher purchased. Many of today's switchers have built-in character generator technology and if this type of switcher is purchased, there may be a cost savings.

projected timeframe shown in the Exhibits to this Report. We have recommended this in Year One because of the priorities we have identified with a replacement in Year Eight due to industry standard replacement recommendations.

Room 201, 202 and the Courtyard

In its review, CBG identified several locations within City Hall that need the ability for cablecasting: Room 201, 202 and the City Hall Courtyard. These locations have been identified as currently being used for meetings and other events that required cablecasting.¹⁷⁴ These events include press conferences for the Mayor, official public events, dedications and special public announcements. Because of these needs, we are recommending a compact production system including a video switcher, digital audio mixing console, and engineering confidence monitor be installed in Room 202. This will give the ability of switching multiple cameras set up in Room 202. Cabling should also be included to Room 201 and the Courtyard so a mobile camera kit can be set up at these locations and be input into the main control system. This will allow for flexibility to produce events held in these rooms and in the Courtyard without requiring a mobile control room and additional remote staff.

Direct wiring also should be installed from this control system to the A/V routing system to enable the programs to be used throughout the production facility. A direct wiring connection should also be made from the Courtyard to the A/V routing system to enable another way of televising events from that location.¹⁷⁵

One Parkway Building

During CBG's tour of City Facilities, City staff identified an important building called the One Parkway Building (OPB). This building is where the recording of many meetings occurs; specifically in the Planning Commission Conference Room, Mayor's Conference Room, and the 18022 Conference Room.¹⁷⁶ Since many meetings happen in these conference rooms, CBG recommends a robotic camera system that is on stand-alone tripods that can be moved from room to room depending on what meetings are occurring and will have the ability to be plugged in to audio/visual jacks in each room to be connected to a small control room located next to the Planning Commission Conference Room. This control room is also known as the Projection Room.

Additionally, the use of a robotic camera system allows for efficient use of staff because one staff member can now operate multiple cameras, where a traditional system would require a camera operator for each camera being used.

This control room should be equipped with a small video switcher, a digital audio mixing console, engineering/confidence monitor, digital recorder and robotic pan/tilt controller able to control the cameras in whichever room they are utilized. This control room should also feed a fiber connection

¹⁷⁴ See Exhibit B.9, pp. 2-3.

¹⁷⁵ See Exhibits B.6, p. 3; and B.9, pp. 10.

¹⁷⁶ Ibid.

to go from this building to City Hall enabling it to tie into the A/V routing system. This will allow City Staff to cablecast live or record meetings from these locations.

Municipal Services Building (MSB) - PhillyStat Room/PhillyStat Room Control

Another important building where meetings are televised is the Municipal Services Building.¹⁷⁷ Within this building is the PhillyStat Room which is used for weekly staff meetings and meetings with the City's Mayor. Equipment in this room includes; robotic cameras, microphones and a small control room. There are 3 cameras in place currently; however, we are recommending a 4th camera be added for better coverage of meetings by offering multiple camera angles.

Based on CBG's review of the equipment in the room and the City's needs identified above, in the Equipment spreadsheet, CBG listed two different categories of microphones needed in the PhillyStat Room. One type is tabletop boundary microphones and the other type is gooseneck microphones. The tabletop boundary microphones are more inconspicuous and are used for more informal, round-table type meetings and are meant to capture group conversations. Gooseneck microphones are used for more formal meetings, where it is important to capture individual comments.

Within the PhillyStat control room, CBG recommends the following equipment to be upgraded and replaced to meet current technology needs and production requirements for the planned increase in meeting coverage:

- Video Switcher
- Digital Audio Mixing Console
- Miscellaneous D/A's and cabling
- Engineering Confidence Monitors
- Solid State Recorder

This control room should also feed a fiber connection to go from this building to City Hall enabling it to tie into the Unit's A/V routing system. This will allow City Staff to cablecast live or record meetings from this location by connecting to the equipment in the master control room in City Hall.

Field Acquisition – Single Camera

The three field camera packages recommended by CBG all include one HD camera, one tripod, one complete lighting package, and two channels of wireless audio and accessories. This provides a complete package of equipment needed to shoot on location outside of a studio location. This could be for shots of the community that can be used for marketing or outreach, small interviews, press conferences, and on-location segments of programs focusing on City agencies and their services. Governmental Access Staff currently produces programming in the field with HD Field Cameras.¹⁷⁸ This will need to continue and be enhanced in order to meet the production needs of

¹⁷⁷ See Exhibits B.6, pp. 2-3; and B.9, p. 2.

¹⁷⁸ See Exhibits B.6, p. 1; and B.9, p. 4.

the rebranded Channel 64 described above. Also, with other upgrades that are recommended, City staff will be able to integrate our recommended equipment with the changes in other production areas.

Field Acquisition – Multi-Camera

CBG recommends purchasing one new flypack system for Philadelphia Governmental Access, as shown in the equipment projection spreadsheets. This equipment should have the same multi-camera production capability as what has been discussed for PhillyCAM earlier in this section.¹⁷⁹

Similar to PhillyCAM, CBG is also recommending the use of cellular transport technology be included in the flypack system which negates the need for hard-wired transport to the main facility and allows for greater flexibility for different types of productions from any location in the City. This will allow the transmission of live events from anywhere within the City back to the main facilities, enabling live events to be shown on the City of Philadelphia's government channels.¹⁸⁰ These locations could include Dilworth Plaza and various other locations in the City for events such as community celebrations and meetings, public holiday events and festivals, City Council and Mayor Outreach events and events from the Academy of Natural Sciences.

Similar to PhillyCAM, we have also recommended a sprinter-type vehicle for mobile production use combined with this equipment which will serve as a mobile control room for these remote events.¹⁸¹ This vehicle will be outfitted with the same patch panels, powering and ergonomic production space as recommended for PhillyCAM.¹⁸²

Post Production

Post Production is where all the raw components of the video and audio production are brought together to prepare the finished product and will include equipment such as editing systems, ingestion, digital audio mixing and solid state recorders. Creative components such as special effects can also be added to make the product more appealing to the audience. All the equipment recommended aids and assists the editor in creating this finished product.

Upon review of the City of Philadelphia's editing needs, CBG determined that one edit system and two portable laptop editing systems are required to meet the needs of the current staff.¹⁸³ While the portable laptop system allows for multiple users in various locations, and this should handle a portion of the work of the planned increase in staff, we have added another edit suite (fixed location) early in the projected timeframe in order to account for increased post-production needs.

¹⁷⁹ It is important to note that we are recommending purchase of a separate flypack system for the City of Philadelphia such that the City would not share this equipment with PhillyCAM. The amount of multi-camera field production work for Governmental officials and Agency clients combined with the amount of PhillyCAM producers and staff needs for live multi-camera productions indicates that each entity will require its own flypack system.

¹⁸⁰ See Exhibits B.6, pp. 1, and 3-4; and B.9, p. 10.

¹⁸¹ See Exhibit B.9, p. 11.

¹⁸² Similar to the need for two separate flypacks, the amount of multi-camera field production needed to support a combined total of 7 channels cannot be accomplished with one sprinter-type vehicle shared between PhillyCAM and the City.

¹⁸³ See Exhibit B.6, p. 2.

Infrastructure

Consistent with the discussion for PhillyCAM above, infrastructure for Governmental Access also includes all equipment such as, Encoder/Decoders, Optical Transmitters/ Receivers, Routers, Signal Converters, wiring and cabling needed throughout the facility to produce and distribute high-quality HD signals. CBG has recommended various infrastructure components for City Governmental Access below and in the attached Equipment Upgrade and Replacement spreadsheets.¹⁸⁴

Our review and analysis indicates several origination locations in which it is necessary for the City to have the capability of transmitting over fiber to the playback location.¹⁸⁵ These include but are not limited to: Love Park, the Courtyard, Office of Emergency Management, One Parkway Building and the MSB Building.¹⁸⁶ Transmitting over fiber allows productions to be transmitted live and have a backup recording at their main facility. It gives the City of Philadelphia Governmental Access the flexibility to do diverse types of productions as they are needed in these buildings.

Signal Transport

Until recently, the Governmental Access Channels fed baseband video and audio to a “Broadband Networks Inc., 1000 transport” transmitter for transportation to Comcast’s Headend. This has been changed to IP encoded, digital optical transport, similar to what is being used for Temple University’s TUTV.¹⁸⁷

As the programming continues its transformation to an HD format, this transport technology will not be viable due to the fact that the recent change does not support HD. Accordingly, HD encoders will need to be placed at the Governmental Access origination location, and signals transmitted in an IP digital format back to Comcast’s headend for insertion onto the subscriber network.

Further, detailed program information on the cable system’s electronic program guide is needed for all PEG entities, including Governmental Access, to enable viewers to find and record programs as they desire.¹⁸⁸ Currently, this capability should exist with Comcast under the transport system being used. PEG entities will need to ensure they have the ability to access Comcast’s scheduling system to upload programming and scheduling information.

¹⁸⁴ See Exhibit B.11.

¹⁸⁵ See Exhibits B.6, pp. 3-4; and B.9, p. 7, and 10-11.

¹⁸⁶ There is currently a fiber connection in place from MSB to City Hall.

¹⁸⁷ See the discussion below under - Overview of Temple University Television (TUTV-Channel 50).

¹⁸⁸ See Exhibits B.6, pp. 4-5; and B.9, p. 13.

Archival/Storage

Consistent with the discussion above for PhillyCAM, as the City's production facilities continue to grow, and produce and provide programming in HD requiring greater storage and archival capacity, the need for more archival/storage space will increase as well.¹⁸⁹

Even though the City of Philadelphia already has some of this technology in place, we have included costs for significant upgrades and growth throughout the 10-year projected timeframe. We are recommending that the City of Philadelphia have an additional 32 terabytes of storage over the 10 year replacement schedule in order to meet the program development requirements detailed in the Governmental Business Plan. This has been calculated based on our analysis of the current and future programming projections against the storage requirements needed for HD content (approximately 35 GB per hour of programming).

Headend/Playback

The City is currently using an SD playback server which has not been an issue until now, because the cable providers are only providing SD. With the move to HD channel delivery, the Governmental Access channels need to migrate to HD technology, so that they are ready and equipped to cablecast with HD playback capabilities.¹⁹⁰ We have estimated costs to upgrade the current playback system immediately to accommodate HD and then replace it in the future with the latest technology based on expected upgrade cycle.

Headend/Character Generator

Similar to PhillyCAM, another item identified in the headend/playback area that is recommended for the City is a character generator capable of 24/7 playback of on-air bulletin board information. However, it should be noted that a separate character generator may not be needed, if the server-based playback system may already have this technology in place.

On Demand/Streaming

Currently, Channel 64 is live streamed and some of its programming is available on demand on the internet. Until recently, the City had also provided some programming for cable-based on-demand distribution. On demand programming through the cable system is important because many of the programs, such as event coverage and meetings, are broadcast live at the time they happen and many viewers are unable to watch at that time.¹⁹¹ With on-demand options on the cable system, these viewers will be able to navigate a familiar on-demand menu and view these important programs at times that fit their schedule. Going forward, CBG finds that 60 hours of cable-based video on demand is required between the two distinct channels. The video streaming equipment and playback system recommended will be capable of handling signals within the facility and be HD compatible. Encoders have also been recommended in the attached spreadsheets to enable the City to provide encoded programs necessary for on-demand access.

¹⁸⁹ See Exhibit B.6, p. 2; and B.6, FN 4.

¹⁹⁰ See Exhibit B.9, p. 11.

¹⁹¹ See Exhibits B.6, p. 5; B.9, pp. 12-13; and Report Section A. p. 32.

Police and Fire Interactive Closed Circuit Channels

The Police and Fire channels should be retained in the new franchise and some improvements should be added to ensure that the departments can best utilize the channels. Most important is an upgrade to interactive programming capabilities. With two-way interactive communication, the departments' management can use these channels for roll call/morning briefings and interactive training. The Police and Fire channels should be interactive channels, permitting interactive communications on the channels between the Police Administration Building and the Police Districts, and between the Fire Administration Building and Fire Stations.

FINDINGS – EDUCATIONAL ACCESS

Overview of School District of Philadelphia (SDP) Channel 52 (PSTV)

The School District of Philadelphia (SDP) operates one Educational Access channel, Channel 52, which is named Public School TV or PSTV. PSTV is designed to deliver informative and instructional programs for students, parents, and the Philadelphia community at large. Until recently, PSTV programmed this content 24 hours a day, including audio/visual support for public meetings and presentations, imported educational programming, public service campaigns about SDP initiatives and activities and a variety of special school district-centric productions. PSTV had a full time staff of video producers and a production coordinator/engineer in order to produce and distribute all of its programming.

During CBG’s visit, CBG observed that PSTV facilities include a large TV studio along with a companion control room and green room, a master control area, office space for production and post-production personnel and ancillary space like a workshop and prop storage. PSTV facilities also include a video production installation in the School Board auditorium as well as an adjacent School Board production control room.

Utilizing these facilities, a wide range of programming was developed, including a monthly Superintendent's show, science and structural programs, language arts programs, monthly programming focusing on parents as school district partners, program on district outreach activities to the community called “SchoolSpan”, music programs, a technology program called “Philadelphia’s Got IT”, school board meetings and other public proceedings such as press conferences, etc. SDP’s staff and faculty were also encouraged to submit messages for the bulletin board information guide. Additionally, a number of programs were brought in via satellite such as, CNN Student News.

In 2013, PSTV lost its full-time staff due to lack of available funding. As a result, PSTV is currently in a transitional and transformation mode. As discussed further below, based on a review of documents, including SDP’s October 2014 PSTV Draft Proposal and Plan (hereinafter known as “SDP Draft Plan”), and interviews with the SDP administrators¹⁹², PSTV is being repositioned to provide an opportunity for students, staff and faculty to interact with the community through the use of digital media and for students to learn about and create content for the broadcast media.¹⁹³ As described to CBG, this plan includes shifting substantial video production from the central facility to selected schools, where production activities can be used directly for education and training, as well as generating programming for the channel. CBG accordingly recommends field camera packages, as discussed below.

During this transition, PSTV continues to provide a great deal of educational access programming to the Philadelphia community. This includes a continuation of school board meeting and other public proceeding coverage utilizing IT Volunteers and a contractor as a technical director.¹⁹⁴ In

¹⁹² Oversight and administration of PSTV has been transferred from the SDP Communications Department to the Information Technology Department. Representatives from both departments were interviewed.

¹⁹³ See the Summary Narrative of Educational Access Interviews (hereinafter known as “Exhibit B.10”), pp. 1-2.

¹⁹⁴ See Exhibit B.10, p. 1.

fact, PSTV has recently completed an upgrade of its school board auditorium and associated control room production facilities after choosing a vendor for turnkey implementation of the upgrade.¹⁹⁵

Discussions with SDP representatives and a review of programming schedules also shows that a significant amount of timely programming and evergreen programming¹⁹⁶ continues to be provided, including continuation of timely programs such as CNN Student News, provision of NASA Connect, Shamu TV, the Prince William Network and the Fairfax Network. Evergreen programming that continues to be provided includes, coverage of the Philadelphia Youth Film Festival, PPCY's Education Round Table, Liberty Kids (a children's animated series), Connecting with the Arts and a host of other educational programs. IT volunteers provide scheduling and operational support for playback of PSTV programming.

Interviews with PSTV Representatives and Key Findings

CBG interviewed those that are shaping the current and future direction of PSTV, including representatives from the Communications Department (the prior Administrator of PSTV), and Information Technology Department (the current Administrator of PSTV).¹⁹⁷

Facility and Equipment Recommendations for School District of Philadelphia

Based on our review and analysis of all the information and documentation provided by SPD and PSTV, and CBG's on-site review of facilities and equipment, the following are specific CBG recommendations for facility and equipment upgrades for the School District of Philadelphia to meet the needs assessed.

Studio Acquisition/Studio Control

The School District of Philadelphia currently has a reasonably large studio facility with many capabilities, but includes older technology that needs to be updated in order to realize their vision for this studio. This will give staff and students the capabilities they need to produce the types of programs described in the SDP Draft Plan.¹⁹⁸

We recommend that the SDP studio be equipped with new cameras that are HD capable. Other pieces of equipment used in a traditional studio environment such as a video production switcher, solid state recorders, confidence monitors, etc. will all need to be purchased to handle HD signals, as the School District transitions to all HD technology.¹⁹⁹ Miscellaneous distribution amplifiers and cabling are also included in the attached spreadsheet to enable interconnectivity between the studio control room and the rest of the production facility.

¹⁹⁵ See Exhibit B.10, p. 2.

¹⁹⁶ "Evergreen" programming includes shows that have a long shelf life, such as educational videos, animated series, coverage of school-oriented arts and entertainment shows and issue-oriented programming where the issues are long-standing.

¹⁹⁷ See Exhibit B.10 for interviews with Educational Access Representatives.

¹⁹⁸ See Exhibit B.10, pp.1-2.

¹⁹⁹ Ibid.

School Board Auditorium

The School Board Auditorium and Control Room have recently been upgraded.²⁰⁰ Therefore in the attached Needs Assessment spreadsheet, we are only recommending replacement to keep up with industry technology cycles in Year 6 of the projected 10 year timeframe.

For the facility SDP uses for School Board meetings, when the latest equipment complement is replaced at the Year 6 interval, we have recommended four robotic PTZ (pan, tilt, zoom), cameras, twelve wired and twelve wireless microphones, along with two television monitors, and a scan converter. This enhanced equipment will increase the production quality of the School Board meetings and other events televised in this room.

Included in the School Board Auditorium projections is a complete projection system capable of high light output enabling viewing in various conditions including day and evening use. Inputs to the system should include HDMI, and RGB. It should support wireless inputs as well. The system should be complete with accessories and infrastructure for permanent mounting in the Auditorium.

School Board Auditorium Control

In the School Board Auditorium Control room, we have recommended the following equipment for replacement and upgrade in Year 6 of the ten year timeframe:

- Switcher
- Robotic Camera Control
- Character Generator
- Digital Audio Mixing Consoles
- Multiviewer Monitoring
- Solid-State Recorder
- Misc. HD D/A's and cabling
- Engineering/Confidence Monitoring

As previously noted for other Access entities, the character generator listed in the School Board Control Room may or may not be needed based on the type of switcher purchased as many of today's switchers have built-in character generator technology. If this type of switcher is purchased, there may be a cost savings.

Field Acquisition – Single Camera

The recommendation to meet the programming development needs assessed related to the use of field camera packages for SDP includes five (5) professional level camera field packages that include 2 channels of wireless audio along with a full HD camera, tripod, lighting package, audio and accessories. These will be located at the District Office and used by staff, faculty and advanced students for development of programming outside of the studio facility.

²⁰⁰ Ibid.

An additional recommendation is being made for ten prosumer grade camera packages that include two channels of wired audio and accessories, an HD camera, tripod and a lighting package and twenty consumer grade packages that include one channel of wired audio and accessories, an HD camera, tripod and a smaller lighting package. The prosumer grade packages are intended for use by the faculty and students at the various high schools. The consumer packages are for use in the Elementary and Middle Schools.²⁰¹

Post Production

As discussed above, the major types of equipment involved in the baseline post production function transition are ingestion, monitoring, digital audio mixing, an editing system, and a portable solid-state recorder.

During our review of SDP Educational Access editing needs, CBG determined that two types of systems are needed: one being a higher-end, full-feature edit system and the other being consumer-grade computers able to run video editing software such as i-Movie. Two full-featured edit systems are intended for use in the School District Office. The other consumer-grade systems will be deployed to the various schools, twenty based on the needs assessed, in the District.²⁰²

Infrastructure

The infrastructure needed by SDP is similar to PhillyCAM and Governmental Access and is detailed in the accompanying spreadsheets. However, what's different is that a special requirement was identified concerning the SDI video routing system. A routing system allows for programming from the main facility to be accessed by other locations in the system; SDI, or serial digital interface, is the video standard used by SDP and many other PEG Access production facilities. The requirement is for SDP to have the ability to connect to many of the schools in the District. This eventually will require a larger routing system, but initially it is recommended that SDP start with a video router that has 32 inputs and 32 outputs with capability for expansion.²⁰³

Signal Transport

SDP's PSTV Access Channel feeds baseband video and audio to a "Broadband Networks Inc., 1000 transport" transmitter for transportation to Comcast's headend for insertion onto the subscriber system.

PSTV needs to be transported to the Comcast headend in a higher quality manner than what is being done today. This is necessary because as the industry moves away from baseband transport, a complete digital transport needs to be in place to improve quality. As SDP programming continues its transformation to an HD format, the current transport technology will not be viable due to the fact that baseband does not support HD. Comcast first needs to change out the equipment at PSTV to that such as Temple University is using today, with the added dimension of

²⁰¹ Ibid.

²⁰² Ibid.

²⁰³ See Exhibit B.11.

expanded capacity for HD. HD encoders should be placed at the PSTV origination location, and then transmitted in an IP digital format back to Comcast's headend for insertion onto the subscriber network.

Archival/Storage

Similar to the other production facilities described above, SDP needs more storage and archiving capability. Specifically, over the course of the next 10 years, PSTV will need an additional 60 terabytes of storage to be commensurate with their long term needs. This has been calculated based on our analysis regarding the current and future programming projections²⁰⁴ against the storage requirements needed for HD content (approximately 35 GB per hour of programming).

Headend/Playback

Based on the SDP Draft Plan concerning the migration of all SDP production equipment to current HD technology, we are recommending an upgrade to a full HD playback system.²⁰⁵ Specific equipment recommended is included in the spreadsheets in Exhibit B.11.

Headend/Character Generator

Another item identified in the headend/playback area that is recommended for SDP is a character generator capable of 24/7 playback of on-air bulletin board information. This allows for additional programming features that are of interest to viewers in the community. The character generator will enable the playback of video sources as well as the bulletin board information required. Again, it should be noted that a separate character generator may not be needed, if the server-based playback system chosen already has this technology in place.

On Demand/Streaming

Consistent with the other entities, video streaming equipment needs to be capable of handling signals within the facility, and be HD compatible. New HD encoders have been recommended in the attached spreadsheets for PSTV. PSTV also needs access to the cable-system-based video-on-demand platform. Based on CBG's analysis of SDP's program plans, 10 hours of on-demand capacity on Comcast's system, able to be refreshed by PSTV at regular intervals, would meet SDP's needs.

Channel 52

Channel 52 continues to be an essential educational tool for SDP, as well as an essential medium by which the schools communicate with parents. Given the level of programming on the channel now and SDP's plans for expanding use of the channel – particularly its plans for using video production activities for educational and training purposes in the schools that will result in increased programming - CBG finds that SDP continues to need a real-time cable channel of its

²⁰⁴ See Exhibit B.10, pp. 1-2.

²⁰⁵ As discussed in the SDP Draft Plan and detailed in Exhibit B.11.

own. Because parents and students now know its channel Channel 52, it needs to retain that channel position.

Overview of Higher Educational Access in Philadelphia

Philadelphia is rich in its provision of higher educational access television with four (4) distinct television channels providing higher educational programming to the Philadelphia community. These channels include: Temple University Television (TUTV - Channel 50), Community College of Philadelphia Television (CCPTV - Channel 53), Drexel TV (DUTV - Channel 54), and La Salle Television (La Salle 56 - Channel 56)²⁰⁶. Each of these channels provides programming largely generated from its own respective television production facilities on its campus in the City. CBG conducted interviews with executive staff for each of the channels, and a substantial amount of documentation was also gathered, in order to analyze both the current and future planned provision of programming as well as capacity, and content distribution methods needed for the future. Based on this information, CBG summarized each channel in the respective overview sections below. Each overview section is followed by CBG's needs assessment and recommendations for that channel.

Overview of Temple University Television (TUTV-Channel 50)

Temple University Television (TUTV) is housed in the School of Media and Communications on the Temple University campus, with major production facilities in the Kal and Lucille Rudman Media Production Center. The Production Center provides both a creative classroom environment as well as efficient and modern production facilities. TUTV's Mission is three-fold in that it offers a showcase for television and other multi-media content produced by students, faculty, alumni and community partners; it offers an experiential curriculum that enables students to create and deliver content in a professional environment and; it provides the university with an interactive pathway for civic engagement with the members of its regional community.

Its content is diverse and includes programming in the form of newscasts, news briefs, sports programs, game coverage, public affairs programs, interviews with alumni, documentaries, musical performances, satirical comedy, dramatic anthologies, media history, science and other educational, informational and entertainment programs. One of its most noted programs is Temple Update, the live student-produced newscast which includes reports from students in the London Study Away program and the recently developed program in Tokyo.

TUTV also partners with Temple's 12 Schools and Colleges to produce a variety of programming, including lectures, seminars, and research presentations. The TUTV Community Forum is a public affairs series designed to explore key issues confronting all Philadelphians, produced in conjunction with the College of Education's Department of Social Work.

Beyond this, TUTV's partnerships with major broadcast television outlets in the City such as NBC 10 enable students to participate in other educational and programming opportunities, including coverage by Temple students and faculty of the 2012 Olympics on location in London.

²⁰⁶ Channel numbers are in reference to the Comcast System. There are different Channel numbers on the Verizon FIOS System.

This diversity of content creation has enabled new programming development to increase from four (4) original hours to seven (7) hours of original new programming provided every week. TUTV adds to this programming from the PEG Content Exchange, which provides news and documentary selections, plus historical and performance programs from both domestic and international providers. TUTV has also aired documentaries produced by Temple alumni and a package of feature films and documentaries that are shown along with student and faculty members' providing introductions to the films to offer context.

This and other curated, imported programming enables TUTV to offer an 8 hour programming block that is aired 3 times each 24 hours starting at 10 am each day. This results in an average of over 13,000 airings per year of a variety of different types of programs, with more than half being educational programs followed by entertainment and then closely by news programs. Other categories include documentary, interview, music, sports, variety and special events.

TUTV also provides content online through both Vimeo and its Watch Live page that has recorded tens of thousands of video plays and viewings in a two year span.

Twenty-five percent (25%) of the weekly schedule is Temple-produced programming, with 10% of the weekly schedule (or 40% of the 25%) comprised of community oriented programming such as lectures and seminars. This also includes coverage of Live events such as the investiture of the President and the Excellence in Media Awards. TUTV and the University's Telecommunications Department have been in the planning and development stage of a project designed to allow the coverage of content from a variety of locations across the University's Main Campus in venues that range from the Liacouras Center to Mitten Hall to the roof of the new high-rise Morgan Hall.

Regarding technology, TUTV continues to upgrade its current systems to enhance the quality of its productions, including recent HD field camera and editing system upgrades. TUTV's goal is to be able to emulate the production technology found in the "real world" broadcast and television production environment so that students are well suited to work in production jobs throughout the industry. TUTV's goal is to be a fully HD production facility. It now must convert many of its programs to SD for cablecasting on the systems, but carries the highest quality version on its TempleTV.net website.

Temple University is using a Harmonic Divicon ION Encoder to transport its signal to the Comcast Headend for insertion onto the subscriber system. This encoder takes SDI or ASI (asynchronous serial interface) video/audio in and encodes it to an IP format and transports it to Comcast's Headend. This format is then ready to be inserted onto Comcast's Converged Regional Area Network (CRAN), so it can be picked off at any Headend or Hub in the region for insertion onto the subscriber network.

TUTV has four (4) professional employees including the General Manager, a Programming and Production Manager, a Technology Manager and a TUTV Webmaster. Both the General Manager and the Programming and Production Manager also serve as faculty in the Department of Media Studies and Production.

TUTV also engages a student Executive Producer, a student Programmer and other students that are additionally hired to shoot, edit and perform studio functions for a multitude of projects. Students receive either financial compensation or academic credit for their work at TUTV.

TUTV is well supported by the University and outside funders. The Kal and Lucille Rudman Foundation provided an initial \$1.2 million dollar grant to support the startup of the channel and the TUTV facility and made an additional \$1 million dollar grant this year.

A recent TUTV operating budget totaled approximately \$348,000 for both operations and staff salaries and benefits plus an additional \$240,000 for Capital equipment purchases. The budget varies from year to year based on the requirements of that particular calendar year, so has varied up to \$438,000 in operational funding down to \$90,000 in Capital funding.

Needs and Recommendations for TUTV

Based on CBG's review of all the information presented, our observations and analysis, CBG concludes that going forward, TUTV needs to continue to have a real-time cable channel and it needs to cablecast in HD. TUTV shows that it provides higher education programming that is responsive to the needs of the general Philadelphia community, as well as Temple University's mission as an educational institution. This dual focus is consistent with other well performing, well valued higher educational access channels, both in Philadelphia and around the country. With the move of the industry to HD video production and delivery, an HD channel is needed, especially considering that the focus of TUTV's video production curriculum is to develop and present programming in a way that is consistent with the 21st Century television industry. Because it is branded as Channel 50 and its viewers know it as Channel 50, TUTV should retain that channel position.

Additionally, TUTV successfully participated in the Philly in Focus video on demand platform and wants to continue to be able to provide and enhance its cable-based VOD content. TUTV has also found benefit in the region wide distribution of its signal through its online platform and needs to see whether this can be duplicated through region wide presentation of its cable channel, since Temple's influence is not only within the City of Philadelphia but region-wide. In the Conclusions and Recommendations, 60 hours total on demand capacity is projected for all the higher education channels combined to meet programming requirements of the 4 channels.

Overview of Community College of Philadelphia Television (CCPTV-Channel 53)

The Community College of Philadelphia operates Higher Educational Access Channel CCPTV Channel 53, housed in the Multimedia Services Department (MSD) at the College's Center City campus. CCPTV has active production during the Fall and Spring semesters, with programming rerun during the summer. CCPTV is staffed by MSD personnel including a full-time producer/station manager, a full-time video technical lead, a full-time video technician and a part-time editor and part-time audio technician.

All in-house shows are produced by department staff and hosted by college faculty. CCPTV is not part of an academic department, although there is a digital video curriculum where students get involved in both production and post-production activities. These students are responsible for a variety of ten-show series, which are then cablecast on the channel.

Regarding programming, since 2009, CCPTV has provided an annual amount of 8,736 program hours. In that over five (5) year span the amount of programming produced in-house and then played back over the channel has increased from 12 hours per day to 19.5 hours per day, with the remainder being either purchased programming such as classic telecourses like Destinos (Spanish language programming) and French in Action, or downlinked programming like international news programming from DWTV. A typical program day includes approximately 11.5 hours of non-repetitive original in-house produced programming one hour of purchased language programming and 2.5 hours of downlinked international news. The other 8.5 hours of any given 24 hour cycle are largely in-house produced program repeats from earlier in the day.

The new programming day starts on Sunday and each subsequent day of the week repeats Sunday until the next Sunday where new programs are provided.

CCPTV does not have a studio (with all the attendant features such as a switcher, studio cameras, lights, studio audio, etc.). This means that all in-house programming is produced with individual cameras and then edited, which is typically a labor intensive process. Even so, CCPTV is able to produce approximately 12 to 16 new program hours per month CCPTV estimates that if it is able in the future to acquire a studio facility where it can produce multicamera programs, it would be able to increase its programming output by approximately 40%.²⁰⁷.

CCPTV provides some programming over the main college website and has 210 hours on iTunesU. It is currently looking at developing the capability to do live streaming of the channel.

In-house programming focuses on issues related to the college, educational programs developed by the faculty and a variety of different types of series programs developed by students. One of the more popular programs is a quiz show called "Show Off".

CCPTV, because it does not have a discrete budget but is part of the MSD budget, estimates its annual expenditures for operating and capital at \$150,000 with an additional \$225,000 in salaries.

Needs and Recommendations for CCPTV

Given the current level of programming, which includes many televised courses that are essential for meeting the educational needs of CCP students, as well as CCP's use of its channel for training in video production, CBG finds that CCPTV needs its own real-time cable channel, at its current Channel 53 position. Since all current in-house programming at CCPTV is produced in high definition, CBG finds that CCPTV has a current need for an available HD channel to cablecast its HD content on. Meeting this need would require an upgrade in its connection to Comcast which is

²⁰⁷ Although studio facility and equipment projections have not been made for CCPTV at this time, it is a cable-related need and franchise-related funding may be needed at a future point in time to support studio development at CCPTV. See this Section's Conclusions and Recommendations, p. 120.

currently analog optical.²⁰⁸ CCPTV also needs cable-based video on demand capacity to pair with its current iTunesU on demand programming. In this way, on-demand access to CCPTV programs would be available through multiple platforms (cable-based, internet-based, home based devices, portable devices, etc.), consistent with the rest of the television industry. CCPTV would share in the 60 on demand hours forecast for all higher education channels.

Overview of Drexel University Television (DUTV-Channel 54)

Drexel University's Higher Education Access Channel DUTV, Channel 54, is designed to provide students a way to learn the craft of television while also providing quality programming to the residents of Philadelphia. DUTV is a critical component of the Antoinette Westphal College of Media Arts and Design undergraduate and graduate television programs at Drexel. Students create television programs and are involved in all aspects of their development, including writing, production, editing, management and promotion. Drexel also fully integrates a student's academic experiences with their co-op learning program which helps reinforce the connection between classroom and studio education and what is done in the professional world. Additionally, majors from across Drexel University's 14 Schools and Colleges are involved in DUTV, especially through contributing to DNews. This allows all students at Drexel to be involved with modern media and become far more "media literate" than if they didn't have this opportunity at Drexel.

Regarding programming, DUTV provides a mix of local, university-produced and acquired programming. Programming produced at the university and distributed on the channel has increased over the last 5-years from about 4% to about 50% of the programming day. The programming week includes 10-15 hours of shows that are locally produced, including 3-4 hours of new original, non-repetitive locally produced programming per week. Evergreen programming, depending on the subject, may cablecast on the channel over the course of one month or as much as one year.

Locally produced programming includes the Emmy winning monthly magazine show "DNEWS", the Emmy winning half hour comedy series "Off Campus" which utilizes professional actors, a show called "Digital Celluloid" which is produced by students and provides narrative to short movie features, and hundreds of short films and interstitial productions developed by filmmaking and script-writing students. Additionally, the station provides extensive coverage of events at Drexel, including the annual Drexel fashion show, the MAD Dragon concert and many events that occur at the Rudman Institute for Entertainment and Industry Studies. Imported programming includes programming from the State and other educational organizations.

DUTV operates a website for on-demand access to its programming, as well as a streaming video site in high definition. It also provides access to programming through the main Antoinette Westphal College of Media Arts and Design website. Together, DUTV receives thousands (tens of thousands if associated hits on other Drexel websites are considered) of hits per year with approximately half of the web traffic being new visitors and half being returning visitors.

²⁰⁸ Consistent with the prior discussion for TUTV, CCPTV first needs an upgrade to a modern, digital optical SD transport, followed by an upgrade to digital, optical HD transport. An alternative is to implement the HD upgrade, and use up and down conversion until an HD channel is provided.

DUTV in the recent past undertook a \$350,000 upgrade to their main production facilities, including studio, master control, and post production, and now is an all digital, HD television production facility. Programs produced outside of the main production studio were already being done in HD for the past 3-years including documentary, narrative, remote instruction and news production. Accordingly, DUTV is ready to begin cablecasting in stereo, high definition. In fact, 70% of their current broadcast day is produced or acquired in HD (some of the evergreen programming remains in SD), but they must down convert this material to letter boxed, 4x3 aspect ratio, NTSC for cablecast. Accordingly, based on their award-winning, high-quality original locally produced programming and the standards of the programming they bring in from other sources; DUTV has an immediate need for a real-time HD channel.

Drexel University is feeding baseband video and audio to Comcast's equipment for transport to its Headend. This format is not compatible with digital SD and HD formats because it requires the video and audio to be converted to a lower quality analog format for transportation to Comcast's headend.²⁰⁹

Regarding operations, currently the University primarily funds all of DUTV's existing operations. DUTV receives some underwriting grants and also occasional donations of equipment from the commercial broadcast industry. In addition to the 2013 HD upgrade, the University recently invested an additional \$150,000 in capital funding to update studio lighting, teleprompters, and master control facilities (master control, will be HD as of the end of 2014). The total DUTV operating budget, including salaries for the four full-time staff members, six full-time television and multimedia content instructors and approximately 20 student workers at any given time, and all operational costs, is nearly \$1,000,000 per year. The University indicates that these staffing levels will remain constant, but the number of student workers is anticipated to vary up to as many as 50 during any given year.

Needs and Recommendations for DUTV

Based on the high level of programming discussed above and the significant capital and operational commitments made by the University, and consistent with the recommendation made for all the higher Educational Access Channels, CBG finds that DUTV continues to need a channel of its own, and that it needs the capability of cablecasting in HD. Given its branding as Channel 54, DUTV should continue to have that channel position. DUTV would be able to share the 60 hours of on demand capacity recommended for the higher education channels combined, at their discretion.

²⁰⁹ See also FN 208. DUTV requires the same upgrade as CCPTV.

Overview of La Salle University Television (La Salle 56-Channel 56)

La Salle University's Higher Educational Access Channel 56 (La Salle 56) focuses on a variety of educational, informational and entertainment programming. It covers academic issues that provide the views, perspectives and activities of La Salle University's faculty, staff and students, programming about and by those in surrounding neighborhoods, as well as the Philadelphia community at large, La Salle sports news and related programming, entertainment news and information and imported programming from NASA, the US Department of Health and Human Services, and local broadcast outlets. In fact, approximately 95% of the programs aired on La Salle 56 are produced on-site at Channel 56's La Salle 56 studios in the La Salle Communications Center during the academic year (August through May). This equates to an average of 6-7 new shows per week during the academic year (equating to approximately 3-4 new original program hours per week [during the 10 month academic year]).

La Salle produces between 135 and 175 original shows (most shows are 30 minutes long) with up to 13 regular programs²¹⁰ produced during the academic year. Some shows are aired the same day that they are produced. Others are slotted in for later airing. The program schedule is set up so that each day has approximately 8 hours of new or evergreen programming, with the other 16 hours repeated from the previous day. Outside programming accounts for less than 5% of the channel's content. A programming and a message board is only used to provide information between video programs until the next half hour start time.

Once a show is developed it will play for 1-2 weeks for approximately 12 times per week. It is then archived with other local programming, a majority of which are shows that are considered evergreen and will have a value in ensuing weeks and months.

La Salle 56 develops its schedule so that the repeats are in different day parts on different days, so that viewers will be able to access programs that they are interested in and that a program rotation is created that is constantly changing.

La Salle 56's production schedule indicates that during the academic year the facilities are heavily used Monday through Thursday with some Friday use as well as the continual use of remote equipment. This includes the large studio, with 2 different permanent sets as well as other temporary sets and a green screen, six Final Cut Pro postproduction setups and 5 field packages (camera lights audio, etc.).

Regarding staffing, La Salle 56 has a long standing full-time station manager/producer that oversees all productions and operations. Additionally, there are 5-6 work study students that are employed during the academic year to assist in developing program schedules, creating station IDs and promotional announcements, updating online information and assisting with general operations.

Programming is produced by volunteers from the University's faculty, staff, students, alumni and community leaders from surrounding neighborhoods and the Philadelphia community at large.

²¹⁰ Regular programs are defined as those that continue to be produced every academic year, including programs such as Sportsline (16 years), Backstage Pass (15 years), Philly Factor (8 years), and ten others.

Over the years, this has included up to 80 students per year (that serve as producers and crew), the station manager/producer, alumni, students from communications classes, multiple community leaders and multiple faculty members.

Regarding funding, La Salle University supplies all funding for operations, including the fulltime station manager/producer's salary and benefits, work study support, operating supplies and facility support, as well as the capital budget. Specifically, capital funds come from multiple university budgets depending on the need and use, including the Communications Department (field, studio and editing equipment), Information Technology (software and computer hardware), Multimedia Services (upgrades to studio equipment), Arts and Sciences (additional funds for field and studio equipment), and the Provost Office (additional funds for field and studio equipment). On average, this equates to university support of approximately \$200,000 per year.

Needs and Recommendations for La Salle 56

Regarding needs going forward, similar to other higher educational institutions, these are primarily related to Channel capacity and cable system delivery methodology. Specifically, after CBG's interviews and review, CBG finds that La Salle needs to continue to have a dedicated, linear (real-time) higher educational access channel devoted solely to La Salle 56. This need is supported by the nature, level, type and amount of original, locally-produced programming that the station creates and cablecasts on the channel as well as the continued financial support of the university and popularity in the community. Because it is well known to its viewers at its present channel position, which is incorporated into its name, La Salle should keep that position.

Additionally, with its ongoing migration to HD equipment, which is expected to be completed by 2015, the station now needs HD channel capacity on the cable system. Along with this, there needs to be an immediate change in its current analog optical feed to Comcast to at minimum an IP encoded, SD digital feed with an HD digital feed provided by 2015, to be consistent with its cablecasting and programming capabilities²¹¹.

Specifically, La Salle's Access channel is using much older technology than the other higher education channels. Their channel's video and audio are fed to a channel T-9 modulator and are then transported back to Comcast's headend for insertion onto the subscriber network. The T-9 modulator is analog based and accepts baseband video and audio. This technology can add significant noise and other impairments much more readily than a digital format transmission medium.

Additionally, based on the success of its on-demand platform over the internet, the community would benefit, especially those without internet at home, from video on demand. Based on La Salle's desire to provide the content and popularity of other video on demand options, La Salle 56 needs the capability to provide programming on-demand on the cable system. This will provide additional capabilities for viewers related to time-shifted viewing of La Salle 56 programs. La Salle 56 would share the 60 hours of on demand capacity recommended for the higher education channels combined.

²¹¹ See also FN 209. La Salle 56 needs the same signal transport upgrade as DUTV and CCPTV.

PEG ACCESS CONCLUSIONS AND RECOMMENDATIONS

After review and analysis of all the data and information gathered from the focused discussions, follow-up phone calls and interviews, onsite facility reviews, related web-based and written documents and materials, Access Users Surveys, the on-line and telephone-based residential survey, during the PEG Access Needs and Interests Assessment portion of the Overall Needs Ascertainment Project, CBG has developed the following conclusions and recommendations, along with others noted in individual sections of the Needs Ascertainment Report. CBG's recommendations of how these needs should be fulfilled are detailed below and should be pursued with Comcast during franchise renewal negotiations.

1. Access Channel Capacity – CBG recommends that present access channels and related channel positions, be preserved and that capacity be expanded and provide for HD channels as described below. This includes continued delivery of:

- Four (4) channels for Philadelphia City government, one that focuses on meetings, one that focuses on information about City government, one closed circuit channel for internal use by the Police Department and one closed circuit channel for internal use by the Fire Department. The two Governmental Access channels must be high definition channels. HD would be desirable for the Police and Fire closed circuit channels. The Police and Fire channels should be interactive channels, permitting interactive communications on the channels between the Police Administration Building and the Police Districts, and between the Fire Administration Building and Fire Stations. Channels 63 and 64 must be retained as the Governmental Access channels. Channel 64 is known to the cable TV viewing public as the City channel. As described in the report (see pages 92-93), the City is rebranding the channels, with Channel 63 carrying live and recorded broadcasts of public meetings, including Council, and Channel 64 focusing on City departments and information about government. This effort would be seriously undermined by having to change channel positions to a location unfamiliar to viewers.
- One Educational Access channel for the School District of Philadelphia, focusing on school Board proceedings, district information activities and events, and programming produced by SDP students, faculty and staff. Channel 52 is known to students and their families as the District channel, having been so for decades, and that channel position should be retained.
- Five (5) Public Access Channels for PhillyCAM. This includes the existing flagship (Community) Channel 66 (PhillyCAM Community channel), as well as the third Live Culture channel to be implemented in the first half of 2015, and the forthcoming Sustainability channel, Heritage channel and Youth channel now in development.
- Four (4), individual, discrete channels for the existing programmers of Higher Educational Access content: Temple University for TUTV; Drexel University for DUTV; Community College of Philadelphia for CCPTV; and La Salle University for La Salle TV. All are branded at their present channel positions and those positions should remain.

Over the course of any renewed cable franchise, and as the amount of HD programming continues to increase for all the PEG Access channels profiled herein, HD capacity will be needed for each of the existing and anticipated PEG Access channels. This includes:

- Two (2) HD Channels for the two City Governmental Access Channels 63 and 64 (at the writing of this report, Governmental Access currently has one HD channel (1164) and we understand that Comcast and the City have been working to establish a second HD access channel in 2015).
- Five (5) HD Access Channels for PhillyCAM. At the writing of this report, we understand that the City and PhillyCAM are working with Comcast to facilitate implementation of PhillyCAM's first HD channel (the HD version of the Flagship Channel 66), in early 2015.
- An HD Channel for SDP's PSTV, to be provided upon full conversion of its production and master control equipment to HD.
- Four (4) HD Channels allocated to the four (4) higher educational institutions currently providing higher educational access programming (Temple, Drexel, Community College of Philadelphia, and La Salle), to be provided once each channel has reached full conversion of its production and master control equipment to HD.

Comcast must also provide each of these channels in an SD version until the entire system is converted to HD so that every subscriber, regardless of their tier of cable service, will always be able to receive all of the access channels. It will be equally important to ensure that HD channels are provided in successor formats (such as HD4K) so that the quality of the access channels is always at least equal to the best quality of commercial channels on the system. As noted further herein, equipment upgrades and replacements will be needed to ensure that the access channels are able to continue migrating to the then current television production industry standard, and that they are provided without noticeable degradation or deterioration in quality, from the point of origination at the access channel origination site to delivery to the subscriber.

As time shifted viewing continues to increase, it will be important to ensure that enough cable-based video on demand capacity is available for PEG Access channel programming that is either time sensitive or evergreen so that PEG Access programming can have the highest distribution possible, and the greatest accessibility by subscribers. This will require specific allocations for each PEG Channel entity as determined in the Needs Assessment, including:

- For Governmental Access Programming - 40 hours of video on demand capacity for programs on the channel focused on public meetings and 20 hours of video on demand capacity for programs on the channel focused on City departments and City government information.
- For K-12 Educational Access Programming - 10 hours of video on demand capacity
- For Public/Community Access Programming - 50 hours of video on demand capacity

- For Higher Educational Access Programming - 60 hours of video on demand capacity combined for all the higher education channels.

This would also include the necessary equipment to provide VOD programs to Comcast in the format they require, with an ongoing requirement to upgrade such equipment if Comcast changes its standards.

The programming submitted for VOD distribution should be able to be updated and refreshed on a weekly basis, as needed.

As additional advanced platforms of video delivery continue to be provided on the cable system, it will be important to make these platforms available to PEG Access channel and program providers, producers and users, again, to facilitate the widest possible delivery to the community and the greatest accessibility by viewers and content users. This may include, for example, programming provided via interactive television (iTV) services for governmental, educational and public access programmers.

2. **Access Equipment** -- New, upgraded and replacement equipment for the Governmental, Educational, and Public Access Channels to be provided consistent with the projections shown in the Exhibits to this report. Equipment category projections have been made from the information provided by the City's Cable TV Unit, SDP, and PhillyCAM and associated stakeholders, as well as that obtained through onsite review of equipment amounts, types and conditions, along with the projections for expansions in the nature and level of Access channel content development. Our review indicates that the following Access equipment funding is required to meet the needs assessed over the course of a projected 10 year timeframe (for a 15 year franchise term, these projections would be adjusted by a 50% increase (except for facility costs) in order to account for the additional 5 years):

- *PhillyCAM Public Access* -- To provide new, upgraded and replacement equipment for PhillyCAM to facilitate Public/Community Access programming produced in the PhillyCAM Media Center, as well as in the field through single camera and other mobile, remote operations, \$3,000,480 (\$2,500,400 base cost, plus \$500,080 installation/training/warranty cost) is needed during the projected 10 year timeframe to support the Public/Community Access programmatic initiatives indicated by our Assessment findings.
- *City of Philadelphia Governmental Access* -- To provide new, upgraded and replacement equipment for the Governmental Access Channels, to produce programming in the City Hall studio, in offsite meeting and conference room locations, and by portable and mobile remote operations, \$3,057,480 (\$2,547,900 base cost, plus \$509,580 installation/training/warranty cost) will be needed during the projected 10 year timeframe, in order to support the government programmatic initiatives indicated by our Assessment findings.

- *K-12 Educational Access* -- To provide new, upgraded and replacement equipment for the School District of Philadelphia's production of Educational Access programming, \$1,945,680 (\$1,621,400 base cost, plus \$324,280 installation/training/warranty cost) will be needed during the projected 10 year timeframe. These expenditures are necessary to support video production at SDP's Central facility (including the Board Room for School Reform Commission meetings and SDP's central studio facilities), as well as in the schools throughout the District), based on K-12 programmatic initiatives indicated by our Assessment findings.
 - *Higher Educational Access* --The Higher Educational Access Channels operated by Temple, Drexel and La Salle are funded by their Universities and through grants and donations from foundations and other funders. Most have embarked recently on significant capital upgrades to ensure that they are able to fully produce and provide content in HD. Accordingly, we have not projected specific Capital equipment or facility needs for these Higher Educational Access Channels. Community College of Philadelphia is in a different situation, however, and requires capital equipment and facility funding for a production studio, which it does not now have. (CCPTV original programming is now primarily developed using single camera (as opposed to switched, multicamera) production techniques, which require a high degree of postproduction work and limits the types of programs that can be developed. As CBG obtains additional information from CCPTV, we anticipate that it may require preparation of an addendum to this report covering studio capital needs. As circumstances change in the future, Capital funding may be needed for university channels, particularly CCPTV. Capital contributions provided as part of a renewed franchise should provide for increases to account for future Higher Education facility and equipment needs.
- 3. Access Facilities** – Three (3) specific needs were determined for facility space development and potential redevelopment concerning the Philadelphia PEG Access channels. First, as discussed in detail above and in Exhibit B.9, Philadelphia's governmental access operation needs to develop a larger studio space to be commensurate with its programmatic requirements for the production of studio shows, as well as new post production, office, storage and related space. This means outfitting a new space of approximately 2100 square feet and remodeling 900 square feet of the existing 1,760 square feet that the CATV Unit currently occupies. Based on the projected cost of \$325²¹² per square foot for the new space and \$175 per square foot for the remodeled space, this equates to a need of \$840,000 currently forecast for Year One of a renewed franchise.

Regarding PhillyCAM, two (2) facility space-related needs are evident as discussed herein. First, PhillyCAM needs funding to outfit an area specifically for youth production which will assist in meeting the growing need to enable young producers and the production of programming focusing on youth. The space needed for these activities is projected at 2,100

²¹² This estimate takes into account the cost of major renovation in City Hall, a stone building constructed in the late 1800s, that can present special construction issues and costs.

square feet, with a per square foot fit-out cost of \$250, for a total funding need of \$525,000 in Year 1 of the projected 10 year timeframe.

Second, there is a significant potential that PhillyCAM may need to move its operation in 2021 when its lease expires. To meet the needs determined PhillyCAM will potentially need funding to procure and develop another space (including making lease-hold improvements to another leased space). Based on this and the need for 10,000 square feet in a newly developed space, the total needed is \$2,500,000. We have forecast this for Year 5 of the projected 10-year timeframe in order for the funding to be available such that a new facility can be developed and PhillyCAM could transition to such a new facility consistent with it vacating its existing leased facility.

Overall, this equates to a need for \$3,865,000 in capital facility funding over the 10-year projected timeframe.

4. **Capital Support for Facilities and Equipment --** As indicated above, for equipment, the total dollar figure needed over a 10 year period equals \$8,003,640 (\$6,669,700 base cost, plus \$1,333,940 in installation/training/ warranty cost for City Governmental Access, PhillyCAM Public/Community Access and SDP K-12 Educational Access). Added to this, as described above, is an additional \$3,865,000 in Capital funding needed to support facility enhancements. This equates to a total of \$11,868,640 needed for Capital facilities and equipment support.

Note that in some years, the needs are significantly greater than in other years and create a situation where high amounts of funding are needed for that particular year. Examples include Year 1 (\$3,591,300 in equipment and facility needs), Year 5 (\$2,753,680 in equipment and facility needs), and Year 8 (\$1,960,044 in equipment needs). Depending on how funding is provided, there may be the need for capital fund advances and grants in those years over what may be traditionally provided as PEG support by way of monthly or quarterly PEG Fee payments.

5. **Operational Support for PhillyCAM –** Currently, PhillyCAM relies significantly on operating support that comes from the cable franchises, augmented by PEG member fees, grants and donations. Projections indicate that in order to both continue to maintain its current level of operations as well as increase its content development and distribution consistent with the needs assessed, PhillyCAM will need to continue to increase operational funding to an amount of \$1,467,013 on an average annual basis over the 10 year projected timeframe. Consistent with the existing franchise, such funding should continue to be provided as an operating contribution from cable service providers.
6. **Operational Support For Governmental Access –** Similarly, Governmental Access operations costs will increase as additional staff are hired to produce more programming to support the delivery of two discreetly branded channels to meet the comprehensive requirements of government outreach and the diverse needs of the Philadelphia Community. These costs are forecast to average \$612,510 over 10 years on an annual basis.

7. **Combined PEG Capital and Operational Support** - Comcast subscribers in the Philadelphia area are currently providing \$0.26 per subscriber, per month to support Public Access Channels only. Over a 10 year period, if subscribership holds steady at existing levels, and all subscribers in the Philadelphia area are factored in, the sum projected to be generated would be approximately \$8,580,000. This falls substantially short of the PEG Access needs described herein (totaling \$32,663,870 over 10 years), meaning that there will need to be an increase in the amount of funding currently provided. This rise in funding, however, is only to a level consistent with or well below the support provided by Comcast in other large jurisdictions around the country (ranging up to 2% of gross revenues, or approximately \$2.04 per subscriber, per month).

SECTION C



SECTION C

REVIEW OF INSTITUTIONAL NETWORK- RELATED NEEDS AND INTERESTS

INSTITUTIONAL NETWORK NEEDS **ASSESSMENT**

INSTITUTIONAL NETWORK

Introduction and Network Overview

CBG Communications, Inc. (CBG), at the request of the City of Philadelphia, PA, performed a review of the City's current network infrastructure, and assessed the network needs of the City going forward. This review was designed to gain an understanding of the networks' current operation, functionality, reliability, security and overall usefulness to the end users. In addition to examining the architecture and topology of the City's existing networks, CBG conducted meetings and interviews with networking staff and managers of the City's Office of Innovation and Technology (OIT), which is responsible for procuring and managing the City's network infrastructure, and information technology and related personnel from major operating departments. The purpose of these meetings and interviews was to understand the experiences and perceptions of OIT and user agencies concerning the networks' ability to fulfill the City's needs today and into the future. Among other meetings, CBG conducted a workgroup discussion with department information technology personnel and other City officials who are influential in City decision making regarding networking. These individuals represented both their respective departments and City network users as a whole. They were encouraged to share their experiences and visions as to how the City's networking needs will evolve. This review was part of CBG's overall assessment of the City's cable-related needs and interests performed in connection with the renewal of Comcast's four cable television franchises.

The City's current networks consist of approximately 338 communications circuits connecting 208 facilities (both exclusive of the 51 community computing centers described below). These include major City facilities like City Hall, the Police and Fire Administration Buildings, the Municipal Services Building, the One Parkway Building, and the Criminal Justice Center, as well as health centers, recreation centers, and department offices located throughout the City's 135 square miles. This infrastructure is furnished by multiple providers supplying multiple differing networking technologies – from T1 copper to TLS fiber to commercial cable modem service. Most circuits are furnished by commercial communications providers as a data transport service over circuits owned, managed and maintained by the provider. Some essential facilities in or near Center City are linked in a fiber ring that affords a level of redundancy. The ring includes a large number of fibers connecting OIT's network operations and data centers at 1234 Market with City Hall, the Municipal Services Building, and the One Parkway Building. The networks include City owned fiber which the City is responsible for maintaining. They also include 12 dark fibers (paired to form 6 circuits) furnished to the City by Comcast. This dark fiber network links principal City buildings in or near Center City. The City is responsible for activating the fiber and owns and maintains the activation equipment. Many connections are direct links from hubs on other circuits, some with redundancy, and many with no redundancy. Fire stations and other locations are linked by Comcast cable modem service, which is used by the City for data transport in lieu of City network connections and is provided at commercial rates. Internet access from the City's 51

community computing centers, known as “KEYSPOTS,” is also provided by Comcast cable modem service, at no cost to the City. Approximately 76 circuits are copper T-1 lines that have limited capacity and are direct connections from multiple hubs to City buildings, affording little redundancy. The City contracts for cellular wireless service to mobile data terminals, and operates an 800 MHz trunked digital radio system for Police and Fire emergency communications and some non-public safety users. These wireless services use the City’s fiber networks but are not part of the Institutional Network proposed in this report. The Streets Department installed, operates and continues to expand a fiber network linking traffic signals and traffic monitoring cameras, and Streets Department facilities, across approximately 25 percent of the City. The network is for transportation-related purposes, including centralized traffic monitoring and signal control. The network is separate from the City’s data networks and is not incorporated in the proposed Institutional Network.

As explained below, this mixed architecture makes the network inflexible and costly. Upgrading the network to enhance performance and adding/deleting circuits to meet changing user requirements both take substantial time and effort to coordinate multiple vendors and multiple technologies, increasing the cost of network changes. Resulting implementation delays affect user productivity because needed new applications and services cannot be rolled out until new circuits are in place. At the same time, the City cannot save network costs by quickly and easily removing unneeded circuits.

FINDINGS – INSTITUTIONAL NETWORK

Network circuits are provisioned with multiple different network standards and technologies with very different transport speeds, sometimes to the same facility, including: T-1 copper lines with a symmetrical speed of 1.544 megabits per second (mbps); Transparent LAN Service (TLS) fiber circuits with varying speeds most at 10 mbps, some at 100 mbps; fiber optic circuits with speeds of 10 and 100 mbps; fiber optic circuits with a speed of one gigabit per second (gbps); fiber circuits on a franchisee’s cable system with a speed of up to OC-192.

Currently the City purchases these multiple forms of network connectivity, using different technologies with differing data transport capacities, from multiple commercial network providers. While one vendor provisions most network circuits, the City depends on the circuits and services provided by the other vendors to provide connectivity to all City facilities.

The City identified costs of nearly \$90,000 per month to contract for the majority of its 338 communications circuits connecting the 208 facilities on its networks. As with most cities throughout the country, the City of Philadelphia is continually changing and enhancing its networks to meet the needs of City departments, people doing business with the City, and residents and businesses using City services. Many of these needs include mission critical applications and services that have become paramount to the City’s ability to function efficiently and effectively, including, among others 911 emergency communications, cashiering and payroll, Email, contract and payment processing, and specialized information systems used by virtually every City department. Because a communications network such as the City’s is never completed and must continually be upgraded and expanded to accommodate new applications, new services, and more users, high bandwidth and a high degree of scalability, at minimal cost to the City, are essential, as discussed in detail below.

Work Group Discussion

A focused discussion group was set-up as a “work group” to ensure that the participants knew that it was designed to be highly interactive, to evaluate existing networks serving the City from a very detailed, “hands-on” use of the network perspective, and to address future networking needs from a detailed planning perspective, with detailed visioning as to future applications and services the City will need. The work group included 4 representatives from OIT and representative from, the Police and Fire Departments, the Law Department, the District Attorney’s Office, the Parks and Recreation department, the Department of Licenses and Inspections, the First Judicial District, and SEPTA in attendance. Specific discussion topics included:

- Review of the existing networks, based on participants’ expertise and experiences, including the utility of the existing fiber infrastructure, benefits and limitations of contractor-managed services such as T-1 and TLS circuits, adequacy of transport equipment, system capacity and reliability, the applications the infrastructure now supports, and system performance parameters
- Discussion of current and future networking needs to be pursued and negotiated in a renewed franchise, centering on network architecture, infrastructure, connectivity, applications, security, reliability and availability.
- Overview of cable franchising and franchise renewal process

The key findings from the work group discussion are detailed below.

Workgroup Findings

Key conclusions of the work group participants included:

- **Segments of the existing network configuration are now or soon will be antiquated** - The circuits that are in place today are often not meeting the needs of the users of the network because they are too slow. This causes unnecessary inefficiency because staff at one facility cannot access the same applications, or the same versions of an application, as those at other facilities because the circuit connecting their facility with central servers is not fast enough.

When applications are initiated at locations with older, lower capacity links to central servers, their performance is degraded by the slower circuit speeds. Data intensive applications are slow or cannot be used at all without replacing the narrowband circuits, as further explained below.

- **Multiple standards make network upgrades costly and inefficient** – The City needs to react quickly to changing needs at facilities throughout the City. When applications outstrip the capacity of network connections, it needs to be able to change out circuits or add circuits quickly and at minimal cost. Today different network segments use different network technologies. Standardizing network circuits is necessary to ease the process of

scaling the network and for efficient maintenance of the more than 330 circuits identified in the City.²¹³

- **Network reliability and availability are paramount** - City staff indicated that the network simply cannot afford to be down. Many public safety applications run on the fiber networks, including the 800 MHz digital radio system used for Police and Fire emergency dispatch (providing backhaul and transport for digital radio communications), the 911 call center, and the video surveillance camera network. So do other critical applications, such as budget, payroll, cashiering, benefits and pension administration. Downtime for public safety applications places both the public and first responders at risk. Downtime for critical financial functions severely disrupt City operations and can result in large revenue losses.
- **Increased use of video based applications will drive the need for more bandwidth** - Video applications in place today include video arraignment of detainees that eliminates the logistics of moving them from the Philadelphia Prisons campus to Center City courtrooms, surveillance cameras on City streets, video conferencing and department training sessions. Use of these applications will increase, driven by the substantial efficiencies they permit. Additional applications are planned, such as increasing the availability of workforce development training, increased use of cloud based applications such as statistical analysis system (SAS) data management applications, a large expansion in the number of surveillance cameras with real-time transmission of video feeds to the monitoring center in Police headquarters, and video conferencing with contractors and others located outside the City.
- **Philadelphia needs “KEYSPOT” computing centers throughout the City** – The term “KEYSPOT”²¹⁴ as used in this report means a City facility that provides public access to the Internet via City owned devices, such as desktop computers, and often provides training in computer and Internet use as well. The KEYSPOT program provides access to the Internet for people who may not have a device capable of connecting to the Internet, or whose Internet access is limited by not having an affordable broadband connection. The program helps bridge Philadelphia’s “Digital Divide”. Workgroup participants stressed

²¹³ For example: Upgrading the capacity of a T1 line to 100 mbps Ethernet – an upgrade the City needs for many circuits –requires installing new fiber cable to replace the copper T1 lines. With a fiber network, such capacity upgrades require at most an equipment upgrade, and in many cases could be done by adding or changing cards in a router or switch. The upgrade is quick and low-cost with the fiber network, but expensive and time-taking when circuits require replacement. Further time and cost savings can easily be achieved on the fiber network by upgrading the entire network at once, as opposed to the piecemeal, circuit-by-circuit upgrades the City often must perform now to increase capacity to specific facilities. The time and cost required to upgrade the existing network results in different bandwidths at different facilities within a department. For example, the Police Administration Building and some Police Districts have broadband connections permitting officers to send and receive video files; many Police Districts have only T1 connections that are too slow for video files as well as the District’s other communications needs, limiting officers’ ability, to circulate surveillance videos quickly and easily. The fiber network recommended in this report would eliminate such issues by letting the City upgrade such circuits easily and inexpensively.

²¹⁴ The KEYSPOT program is a citywide coalition of community-based groups committed to bringing Internet access, training and technology to all of Philadelphia neighborhoods, regardless of income level. The KEYSPOT network is managed by the Mayor’s Commission on Literacy in partnership with Drexel University. There are 51 KEYSPOTS, offering hundreds of workstations across Philadelphia.

that Philadelphia needs such community computing centers to provide broadband Internet access to the many citizens who, often for financial reasons, do not have it at home. Internet access is currently provided to the City's 51 KEYSPOTS by Comcast, at no cost to the City and KEYSPOT users. If this service is not continued at no or minimal cost /under a renewed franchise, the recommended Institutional Network must include connections to KEYSPOTS. (The I-Net architecture defined in the Exhibit does not include specific connectivity to the KEYSPOTS)

- **Philadelphia needs WiFi hotspots throughout the City for free and low-cost mobile access to the Internet** – Both residents and visitors to the City need access to the Internet via their own mobile wireless devices (tablets, laptops, smartphones because for many of them, mobile devices are the principal or only means by which they use the Internet). This mobile access is needed where other unsecured and no cost WIFI access from retail businesses and other sources is not available. Management of this access will be necessary, including management of IP addresses, security of the network, and network maintenance. This management would require ongoing resources to ensure the network remains functional and valuable to the public.

Applications Running on the City's Networks

Applications running on the networks used by the City are numerous and varied among users. Applications critical to City operations, including public safety agencies, include the following:

- Computer Aided Dispatch – 911 Emergency Response
- 911 call-taking software and recordings
- Video/graphic/Police evidence management applications
 - Video surveillance
 - Third party surveillance video
 - Digital evidence management
 - Mug shots
 - Downloaded data from cell phones, computers
 - Uploaded photographs, video from incident scenes
 - Video arraignment
 - Training
 - Live
 - Workforce Development
 - Police/Fire live training videos
 - On-demand videos for training and other purposes
 - Video bridge/video conferencing
- 800 MHz trunked digital radio network (City fiber networks provide backhaul, transports digital radio communications)
 - Public safety communications
 - Non-public safety communications for City operating departments and related agencies, e.g. Water, Streets, Public Property departments, Philadelphia Parking and Housing Authorities
- Voice Over Internet Protocol (VoIP) telephone service
- Data, information processing

- Financial/accounting applications
- Police data transmissions to/from federal and state crime databases
- Desktop software sharing on internal “clouds”
- Centralized data backup and data management
- Internet access for City staff
- Cloud based software applications (hosted applications, software-as-a-service (SaaS) applications)
- Public Internet access at KEYSPOTS and public libraries
- Multiple new information processing applications now implemented and in implementation as a result of the City Enterprise Resource Planning (ERP) initiative
- Monitoring intrusion, fire, flooding, HVAC and other building alarms in City facilities
- Activating/managing mobile devices used by City employees
- Building access systems

Network Connection Speed Scalability

As described below, the City’s needs related to networking are changing and evolving as new services and applications are implemented, and users are added for existing applications. The City’s FY2013-18 Capital Budget Plan committed nearly \$70 million to implement new software applications, some to be installed on City networks, some “hybrid cloud” hosting (where the data is at the City but the application is hosted in the cloud), some cloud based and relying on Internet access over City networks. These major applications include citizen relationship management (CRM) software (311 call center management; work order management; enterprise resource planning (ERP) systems and associated data warehouses; automation of the Department of Licenses and Inspections permitting process; replacement of the Revenue Department’s cashiering system; and a number of other software systems for specific operating departments. As these systems come online over the next few years, some cloud based and some running on City servers, they will increase the load on City networks exponentially – by requiring faster network speeds to access these complex, data-intensive applications over the Internet or on centralized City servers. The increased load resulting from these major City technology initiatives is in addition to the changing day-to-day needs of City operating departments that include, for example, adding, moving or dropping facilities in the City, with attendant impact on the network circuits necessary to support the resulting shifts in user load among locations, expansion of bandwidth to accommodate new users, and adding high capacity circuits so department users can access data warehouses. City networks must be flexible and able to change quickly to meet such evolving capacity needs without the City having to reconstruct basic network architecture over and over, or to incur the high costs of frequently installing new fiber. This means a high degree of scalability is a priority in the design and implementation of City networks going forward.

This is illustrated by the 338 circuits identified by OIT that are in place now, linking the 208 separate City facilities. These include numerous T-1 connections. Although these T-1 circuits met the needs of the users at the time they were deployed, they are not adequate today and will not support even basic applications and services into the future, as the software systems described above are implemented and as new IT initiatives are planned to enhance the delivery of City

services to citizens and businesses. The City requires networks that will allow it to replace such limited bandwidth connections on an as-needed basis, quickly and at minimum cost.²¹⁵

Today the City does not have that capability. The methods it must use for upgrading circuits vary among network providers and according to the network technology used in the circuit. Because current network architecture uses multiple technologies that are based on different platforms and standards and is dependent on multiple vendors, the City's flexibility to make changes itself is limited, typically requiring vendor intervention and making upgrades unnecessarily costly.

Network Security

As with any governmental entity, network security is a significant concern to the City. The City transports all types of data, including public safety data, taxpayer data, financial data, health data, information about social services clients, personnel information, and other data that must be highly secured. Given the multi-provider nature of the City's networking services today, security of City information depends heavily on the adequacy of the security maintained by third parties, over which the City has little real control. Data security should be provided and fully controlled by the City itself. An example of basic security measures that are difficult for the City to implement now is the industry standard practice of keeping traffic separated from unrelated traffic to meet federal regulations, such as regulations of the FBI's Criminal Justice Information Services (CJIS) Division and National Incident-Based Reporting System (NIBRS), or the Health Insurance Portability and Accountability Act (HIPAA).²¹⁶ With multiple platforms, vendors and services (some, like the cable modem service to Fire stations, effectively "off network"), this basic security control is difficult and costly. Security is another example of how having multiple network providers adds a layer of management by the City, with attendant costs and inefficiencies, to ensure all providers are securing the City's data uniformly and in compliance with OIT security policy and federal and state requirements.

Network Reliability and Availability

City staff participating in the work group were clear that a highly reliable and available network is critical to City operations. Reliability and availability needs do vary somewhat based on the facility connected and whether public health and safety depend on communications links with the facility (as for the Fire and Police emergency dispatch centers, or Health Department ambulatory services clinics), but overall the City has a "maximum up-time" policy under which OIT staff must respond to all network outages, to any facility, within 60 minutes and have the network back on-line in as little time as technically possible. Going forward, network availability that meets OIT's internal standards requires redundancy for all essential circuits, where now redundancy is limited by the network architecture described above and must be addressed by adding redundant links.

²¹⁵ As noted above, one way this impacts the City's departments is that staff at different locations have different experiences, based on their physical location, as to the usability of applications they all depend on to do their work. For instance, one location may have access to applications using video, or requiring transmission of large amounts of data, or requiring constant access to centralized databases, that are not available or that are less functional or even unusable at other locations with lower bandwidth connections. The high capacity, flexible fiber network described would permit the City to upgrade capacity quickly and at less cost by upgrading network activation technologies, by replacing activation equipment or even as simply as by adding or replacing cards in existing equipment.

²¹⁶ Compliance in many cases requires strong data encryption, which requires high bandwidth.

This needs to be considered on a per site basis and by what services and applications are utilized at each facility. The City's public safety locations require a higher level of reliability and availability than many other less critical locations, and should have fully redundant paths on the network to ensure they don't lose connectivity with a cut fiber optic line or faulty piece of equipment.²¹⁷

Today the City must depend on its network providers to address most outages in network links to most of its facilities. This can and does result in network down times of two hours and more, often four hours or more, including provider response times. If one of the major network providers to the City goes down, or loses some part of its provisioned circuits due to internal issues, multiple City connections may go down at the same time, including redundant connections. This makes the City completely dependent on the quality of vendor maintenance and network planning, even for the critical public safety and other applications identified above. As the number and types of data-intensive applications critical to City operations continue to increase, dependency on Citywide network connections for day-to-day operations also increases, making additional network redundancy more and more a priority. Network connections controlled by the City itself, using its own staff or vendors the City controls directly, are the key to increasing reliability. A highly effective means of securing redundancy, perhaps the most effective because it results in a high degree of City control, is to create multiple fiber rings linking the essential City facilities, as discussed below (see *Development of a Dark Fiber Optic Network*).

Affordability and Cost Effectiveness

As described throughout this Report, the City's need for broadband network connectivity is increasing rapidly. However, the City has an equal need to keep its networking costs stable or even to reduce costs below today's level. Work group attendees made it clear that the City's networking budget cannot be increased substantially, if at all, from where it is today, even though capacity requirements will continue to increase. The only way out of this impasse is for the City to find more cost-effective ways of procuring network circuits and support, with scalability, at minimal procurement cost, a high priority.

City Needs Best Met by a Dark Fiber Network

Each of the specific needs identified in the foregoing sections, as well as the City's general need for increased network scalability today and into the future, is in CBG's experience best met by a network that is managed by a single entity, either the City itself or a single primary network provider that can be closely managed by the City. This would permit a centralized system for making changes to the network in an efficient and cost-effective manner. Today, network changes

²¹⁷ Industry reliability requirements dictate that redundancy be built in to all mission critical circuits and that they have diverse paths between facilities and hubs, and secondary/back-up connections from mission critical facilities and hubs and between hubs, from a diversely routed second provider. The City currently has a level of path redundancy in Center City only, but does not have provider redundancy. With a dark fiber network controlled and activated by the City, redundant circuits can be provided cost effectively to all facilities, at a level of redundancy that eliminates the need for multiple providers to back each other up.

often require involvement from two or more providers with differing technologies and capabilities and/or circuits with multiple different technologies that must be interfaced.²¹⁸

In CBG's experience, municipal networks are most effectively managed by the municipality itself, particularly in the case of major cities like Philadelphia, operating large, data-intensive networks that link scores of city facilities. The City's IT staff is abreast of the changing network needs of City departments and is therefore best positioned to respond. City IT staff are also best positioned to understand the network overall, to determine priorities among their users, and to balance competing capacity needs of different departments accordingly. CBG's experience is that no network as large and complex as the City's can be managed effectively at low cost unless all mission critical circuits are on the same fully up to date technology platform, which in CBG's judgment should be gigabit Ethernet over the proposed fiber network. For new builds, gigabit Ethernet is industry standard, providing capacity for future needs at a reasonable cost. The dark fiber network would permit upgrades to 10 gigabit Ethernet by replacing network equipment as the higher capacity equipment becomes cost efficient.

CBG's finding that a consolidated, single platform network under City management is necessary to satisfy the specific networking needs described above leads to this further finding: The most effective way for the City to achieve the scalability, reliability and consolidated management necessary to meet its networking needs over the next ten or more years, is to replace the circuits and data transport services the City now contracts for, from multiple telecommunications providers on a managed services basis, with a consolidated dark fiber optic network linking all City facilities and that is managed by the City. The City should "light" the network itself, providing, installing and maintaining the equipment to activate the network. Since dark fiber is "platform neutral," this approach would give the City the most flexibility in designing the network for easy and cost-effective modification and upgrade. Although the City could construct new fiber circuits itself, it does not have the budget to support such an infrastructure project now and is not likely to have it in the foreseeable future. In CBG's judgment the City's network needs could be adequately met by its acquiring the fiber from others under a lease, indefeasible right of use (IRU), or similar legal arrangement that guarantees City use and control for a sufficient period of time (CBG recommends that the term survive termination of a renewal franchise for any reason). Such a dark fiber based network activated and managed by the City would allow it to make upgrades, network improvements and changes on an as-needed basis, in a timely manner, without having to work

²¹⁸ Some examples of the networking difficulties the City experiences today are: the City is sometimes required to use multiple network vendors to achieve the required connectivity. For example, a Fire Station needed a broadband fiber connection but no fiber optic service was available at that site. To get connected, the City had to purchase cable modem service from a cable franchisee to connect to the nearest City site that has a fiber connection, which is by a different vendor. When the station encounters a service problem, the vendors can disagree over who has responsibility for repair, causing delay and resulting in a service level that is unacceptable for a public safety facility. Another example is the current upgrade of Police Districts to fiber leased-line service. Prior to this upgrade, Police Districts were on dedicated copper lines, which could not provide adequate bandwidth for necessary software and services. The only way to upgrade the copper lines was to replace them altogether with fiber circuits. Because of the considerable time and cost required to install new fiber circuits, about 40 percent of the Police Districts are still waiting to receive the fiber upgrade. With the proposed dark fiber network linking all facilities, the City can easily increase bandwidth to any facility by simply swapping out routers and networking equipment. The fiber network would also permit upgrades to the entire network so that all facilities will have the same capabilities, quickly and at far less cost because no adjustments to network circuits are required. See also Footnote 213.

with and coordinate outside network providers and without having to deal with changing long term budgets after initial equipment costs.²¹⁹

This architecture best fits the needs of the City as it allows the City to design a high capacity network to fulfill the needs of the City today and be positioned to change pieces of equipment on the network as needed to react to and meet the changing needs of the City in an ongoing manner.

Development of a Dark Fiber Optic Network

CBG has performed a high level design of a dark fiber network that would replace the 338 existing circuits to 208 City facilities that were identified by City staff. This conceptual design, detailed in the attached tables, provides a basis for understanding the scope and cost of constructing such a network if it were implemented as a newly constructed, stand-alone network where all construction costs were attributed to just this network. The design assumes the network would be constructed, wherever feasible, by overlashing dedicated City fiber in a separate City sheath to existing Comcast aerial plant; and where facilities are underground, installing dedicated City fiber in a separate City sheath in existing Comcast conduit.²²⁰ The estimated cost to build this network is approximately \$11.2 million, or \$47,000 per mile of construction, plus building entry costs. Cost estimates for each circuit, based on the fiber optic cable footages (mileage) proposed for each connection and the average cost per mile for the various sections of the build, are included in Exhibit C.1²²¹.

²¹⁹ A mission critical example of the kind of network change that requires such flexibility and high availability is the forthcoming migration of public safety agencies to Next Generation 911 (NG911) emergency dispatch services (*see, e.g.,* www.911.gov/911-issues/standards.html). NG911 services are IP-based services for sending and transmitting voice, photo, video, and other real-time, data-intensive multimedia to local government public safety agencies and their emergency responders (*see* www.911.gov/ng911_law/5ways.html; www.nena.org/?IP_Network_NG911). The FCC has mandated that Commercial Mobile Radio Service (CMRS) and providers of interconnected text messaging applications (which includes cellular service providers) be capable of supporting text-to-911 service – one essential NG911 service – by December 31, 2014, and be able to implement the service within six months of request by a Public Safety Answering Point (PSAP). Many local governments are already preparing for this upgrade or have started the transition (<http://gcn.com/Articles/2012/08/06/Alabama-Next-Gen-911.aspx>). The City is in the NG911 planning process now and expects implementation in 2017, well within the term of a renewed franchise. In order for the City to upgrade to NG911, it must have a high-availability, highly capable network infrastructure with reliability and security the City can guarantee through its own management and control. To do this major upgrade affordably, the City needs the kind of flexibility described above, with the ability to upgrade capacity by easy equipment modifications as opposed to the circuit replacements often required now. The dark fiber network described would meet these requirements. As described above, upgrades could be accomplished quickly and cheaply, e.g. by adding cards to routers and switches as needed, as opposed to replacing equipment or circuits, and without having to work through new designs and budgets with the managed services providers it now depends on. NG911 is one important example; the City will implement many such complex, network-intensive technology initiatives during the term of a renewed franchise.

²²⁰ Overlashing a separate sheath with dedicated fiber permits the City to activate and manage the network as an independent, City-controlled network, yet saves the considerable engineering and construction time and cost required to build a completely new network with separate pole attachments. The same is true for dedicated City fiber installed in existing Comcast conduit, except that the savings are likely greater given the additional cost of new underground construction.

²²¹ Specific high-level cost estimates for each proposed connection are shown and described in detail in the Proposed Dark Fiber Network Design Spreadsheets (hereinafter known as “Exhibit C.1), including the underlying assumptions used to develop an average urban-area cost per mile.

A final infrastructure design would need to be developed, including decisions on the capacity (fiber specifications and number of fibers), and specific routing. This detailed design would determine final costs for building the fiber infrastructure. The number of fibers must accommodate all current and projected network capacity needs throughout the network, with additional fibers for reasonable expansion at least through the term of the City's use of the network. The City's cost for equipment to activate the network would be additional and would include edge switches, core switches, termination frames, jumpers and patch cords, and routers. In order to develop and refine the overall costs for network equipment, a final infrastructure design would need to be developed using the gigabit Ethernet network standard, then decisions on capacity and specific equipment for any given link would be made. CBG estimates an average cost of \$4,100 per circuit for equipment costs²²². This cost projection averages deployment of smaller circuits at a lower cost and more expensive aggregation and core equipment at a higher cost, creating the average cost of \$4,100 per circuit. An average \$4,100 cost taken across 338 existing circuits, totals \$1,384,000 for activation equipment. Rounding to \$1.4 million and adding to the estimate for fiber construction, the total estimated network cost would be \$12,600,000 for the creation and activation of a newly constructed dark fiber optic network linking the 208 sites (338 circuits) that would be served by the City network. Comcast has charged a maintenance fee on dark fiber I-Nets it has constructed in other jurisdictions, to cover their costs for routine and demand maintenance of the I-Net fiber. In CBG's experience, these fees have typically been so low as to add only minimally to the foregoing estimates.

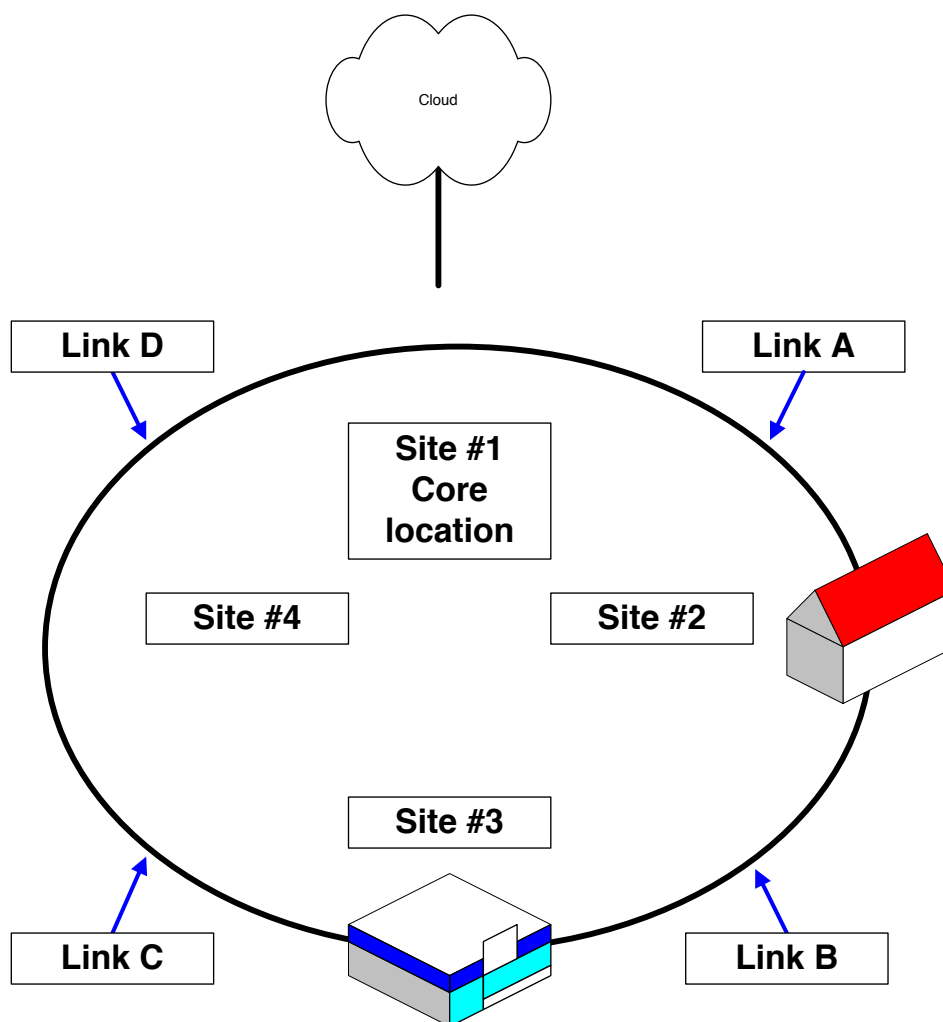
Two types of connections are utilized under this high-level design. The first is a ring design, the second is a "star" design. As explained below, fiber rings provide for a higher degree of redundancy, hence network reliability, than a star design, but typically are substantially more costly. CBG's network design combines the two architectures in order to maximize reliability at the lowest available cost.

A fiber optic ring is created by having fiber optic cables enter each facility and a separate set of fiber optic cables leave the facility to connect to the next location on the ring. This design by default provides a high level of redundancy such that if the fiber feeding a facility from one direction on the ring is cut or otherwise compromised, the fiber leaving the facility (i.e. feeding it from the other direction) can replace the path that has been compromised by routing traffic in the opposite direction around the ring. Therefore, connectivity can be restored in a relatively rapid manner as follows:

²²²This average is based on 24 Core switches at \$40,400 per core switch, 186 facility edge switches at \$1,750 per switch and 127 internal edge switches (fed internal to a facility from a facility edge switch) at \$700 each. Based on the outcome of pending City procurements for network equipment, CBG will update the equipment costs.

In the diagram below, all forward traffic is running around the network from Site #1 to Site #2 to Site #3 to Site #4 and then continuing on to Site #1, etc.

Diagram 1.



If link A is cut, effectively removing it from the network, all traffic that normally runs from site #1 to site #2 would now be routed via links D, C and B to get to site #2. Therefore all traffic on the network continues to reach all locations on the ring.

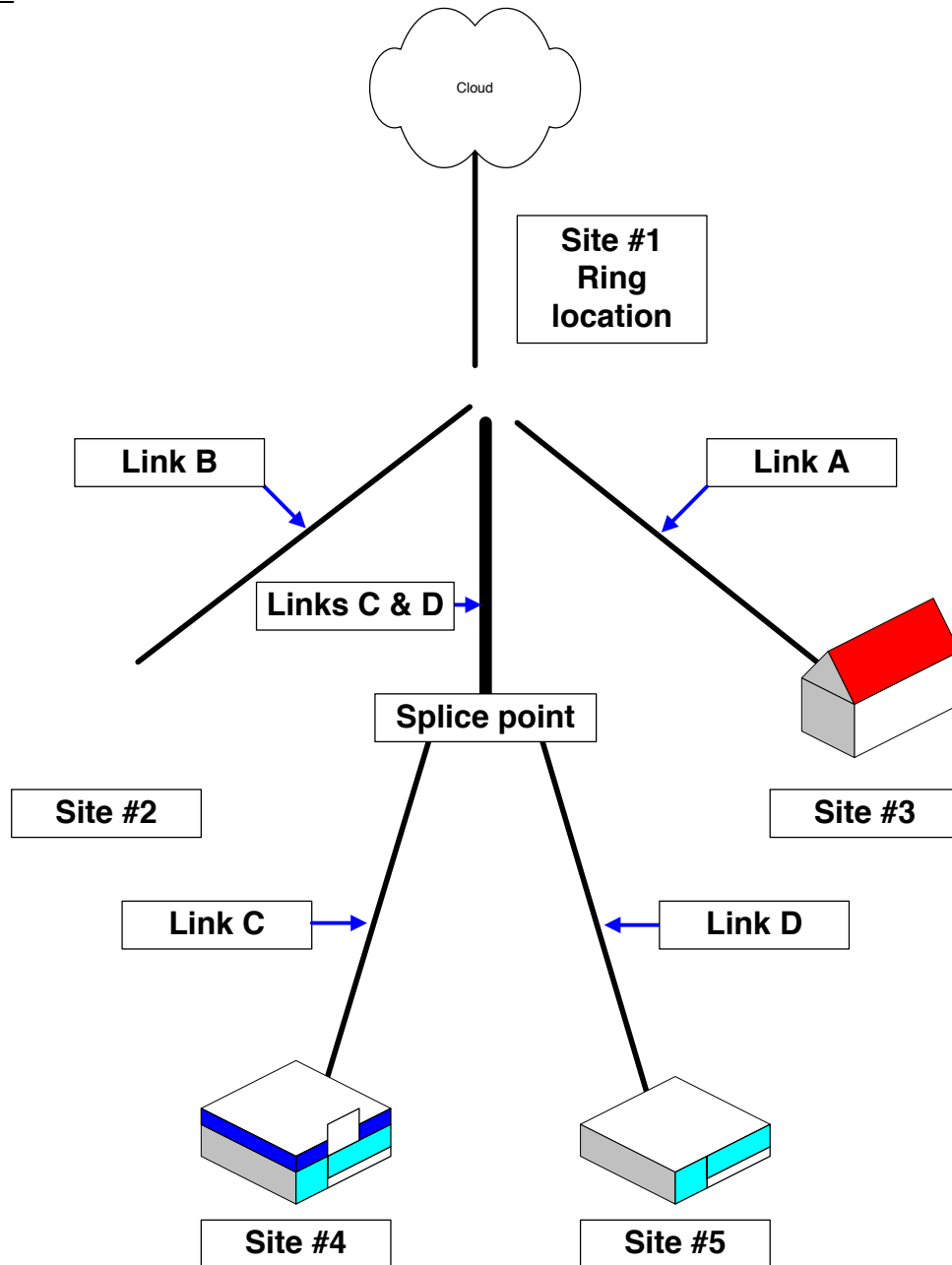
The effectiveness of this redundancy is increased by using routing equipment (“smart” routers) that automatically switches the direction of network traffic in order to bypass the link that has experienced a problem. This equipment automatically switches traffic routing with no interruption in service. Without this equipment in place, manual switching of fiber routes would be required, which would increase downtime in the event of a failure on one of the links, but would still provide redundancy.

Depending on the locations of the networked sites, their proximity to each other as well as other routing factors (such as the amount of underground versus aerial construction and the routing of existing conduits and poles), a full ring architecture for all sites can be more costly to build because

two separate paths are required. This typically requires more construction for placement of the fiber optic cables as well as additional maintenance of the infrastructure), though that depends, of course, on how sites are located geographically in relation to each other). Therefore, not all connections may be able to be cost effectively built as ring connections.

The second, often less expensive, architecture used in CBG's network design is known as a star configuration, under which connections are run directly from a core location to each site on the network. This design provides a single fiber path (though typically with multiple fibers in each) between the locations. Star designs are generally as functional as ring designs under normal operating conditions, however there is a lower level of redundancy because there is only a single link between sites on the network and the core site, with no backup if a link fails. Where reliability is less critical, a star architecture may be preferable because of the lower cost. This architecture is shown in the diagram below:

Diagram 2.



In a star or spur configuration, each site has only a single path to a core location (Site #1 in this diagram). If any link were cut, connectivity from Site #1 to Site #4 would be lost until the fiber is repaired. If the fiber were cut between a splice point and Site #1, connectivity to Sites #4 & #5 – all sites downstream of the splice point – would be lost until the fiber was repaired. CBG’s network design to connect the City’s 208 facilities combines ring architecture with star architecture in order to maximize redundancy and reliability while controlling costs. The design provides for a fiber optic ring linking 15 City sites in Center City Philadelphia. This provides the highest level of reliability for the facilities located in Center City, which include the principal office buildings (Municipal Services Building, One Parkway Building, City Hall, 1234 Market) with the Data and Network Operations Center, the Police Administration Building (location of the 911 emergency call center), the Fire Administration Building (location of the Fire dispatch center and Emergency Management Center), and because the geographical area is condensed, the additional cost for a ring architecture versus a star architecture is less than outside Center City.

A second, geographically larger ring was designed to circle the City facilities located outside Center City. This ring would function as a backbone, with specific locations “starred back” to the hubs. This backbone links an additional seven City facilities outside Center City and interconnects with two facilities on the Inner-City Ring, one of which is also a hub. Direct links “star” from the eight outer ring hubs to 186 sites outside Center City that are not on either ring. The ring design means each hub on the inner ring remains connected to the network in the event a segment of the ring is lost, and that each hub on the outer ring and the sites “starred” from the hub remain connected in the event a segment of the outer ring is lost, providing the redundancy of a ring design, hence higher reliability, for those additional sites. Further redundancy is provided by interconnecting the inner ring with the outer ring at two points, increasing the number of possible routes to a site where a ring segment is lost. This architecture provides the high level of reliability and availability the City requires while maintaining a lower cost than would be possible by connecting all sites via a ring architecture. CBG’s design further minimizes costs by using splice points where feasible – i.e. short runs spliced from a major fiber circuit, such as the existing circuit along Broad Street, to nearby sites that access a hub through the major circuit. Using splice points and shorter fiber runs requires less fiber construction than starred runs from each site to the hub, reducing costs. Spliced runs are shown on the attached tables (see introduction on page 1 of Exhibit C.1).

CBG’s \$11.2 million cost estimate is for constructing the dark fiber for the new two-ring network described, including the two rings and the starred links from hubs in the outer ring to sites outside Center City. CBG finds that a newly constructed fiber network with the proposed two-ring design would fully meet the City’s needs for very high network reliability, availability, security, and flexibility, whereas the alternatives (discussed below) would not. CBG recommends the City’s position be that Comcast build the dark fiber for this network as an Institutional Network pursuant to a renewed franchise in order to best meet the City’s cable-related needs. Based on the foregoing estimates, CBG finds that the cost of such a network is reasonable given the fact, as discussed below, that only a dark fiber network fully meets the City’s network needs, and taking into account that the cost would be spread across the subscriber base in all four areas. In CBG’s experience, the per subscriber, per month cost would be among the lowest I-Net costs per month passed through by Comcast to subscribers: the cost per month per subscriber for I-Net obligations in other

franchises is substantially higher.²²³ Additionally, given the hundreds of dollars per month per circuit the City pays current providers, and the cost of replacement for the many T-1 and TLS circuits the City now has and will need to upgrade in the next few years, it is clear that the cost of building and activating a new, standalone, dark fiber Institutional Network over the term of a renewed franchise is at or below what the City will spend on the networks in place today over that same period. The cost is therefore reasonable, in CBG's opinion, where only such a dark fiber network would fully meet the City's network needs.

Dark Fiber on Comcast's System

An alternative to the stand-alone network would be utilization of dark fiber constructed by Comcast as part of its cable and/or data networks and provided to the City for its exclusive use. This alternative has the potential of being substantially less costly for Comcast. The architecture would be the equivalent of the two-ring design recommended by CBG, with an inner ring linking the 15 City facilities in or near Center City, and an interconnected outer ring with starred circuits from hubs on the this ring to City locations outside Center City. The number of sites connected must include all 208 City sites identified in CBG's design, and must fully replace the 338 existing circuits. As for a stand-alone network, the capacity (fiber specifications and number of fibers) for the rings and each circuit would be determined by a final design developed with Comcast, as would the exact routing of fiber circuits. The number of fibers must accommodate all current and projected network capacity needs throughout the network, with additional fibers for reasonable expansion through the term of the City's use of the network. Dark fiber on Comcast networks would have to provide the equivalent in functionality of a stand-alone City network, permitting the City to implement any network standard it determines appropriate. The ability to expand capacity as City data transport needs increase would also be necessary. The City must have the right to splice into the dedicated City fiber, subject to industry standard procedures and coordination protocols agreed with Comcast. Most importantly, the City's right to use the dark fiber must survive termination of the renewed franchise for any reason, including expiration by its terms. As for a stand-alone network, CBG recommends a long-term lease or IRU with a duration that survives any termination of the franchise. The City would be responsible for activating the dark fiber with equipment of its choice, and would install, replace, maintain, upgrade and manage the equipment, which it must be free to do in its discretion. Comcast would be responsible for fiber maintenance only.

Dark fiber on Comcast's system, as compared with a stand-alone network, could not fully meet the City's network needs for several reasons:

- The City fiber, though dedicated to City use, would be part of the same fiber sheath that Comcast uses for its operations and could not be accessed by the City without going through Comcast in all outside plant cases. This would limit City control over the network and require a much higher level of coordination with Comcast similar to the coordination issues the City now has with network providers, as described above.

²²³ I-Net costs passed through to subscribers by Comcast in other jurisdictions ranges from a portion of the PEG Fee equating to \$0.70 per subscriber, per month to 1% of gross revenues (in Philadelphia the latter would equate to \$1.02 per subscriber per month based on third quarter 2014 franchise fee reports from Comcast) and higher.

- Because Comcast and its contractors access the infrastructure that would include City fiber on a regular basis, with no City control, complete security cannot be ensured. The same is true for network reliability, since City fiber could be damaged and circuits lost when Comcast's sheath is damaged and multiple strands of fiber may need to be repaired, with City fiber unlikely to be the priority.
- Disengaging the City network from Comcast, should it become necessary, would be complicated and difficult for a dark fiber network on Comcast's system. Comcast's cooperation after a disengagement would be essential and could be difficult to negotiate satisfactorily for the City. Disengagement would be much less an issue for a stand-alone network because it would be independent of Comcast's system and under City control already. Where the City's fiber is in a dedicated City sheath, it is a matter of identifying the City fibers and ensuring they remain dedicated to City use after a disengagement. Where City fiber is comingled with Comcast fiber, the City must depend entirely on Comcast contractors and technicians to keep the City network intact during and after a disengagement. The City can assume maintenance responsibility for fiber in a separate sheath after a disengagement to ensure adequate service levels, and the City can upgrade and expand fiber if and as it deems necessary. Where City fiber is comingled with Comcast fiber, Comcast would expect to retain control over maintenance of the City fiber after disengagement, and it is unlikely the City would be able to upgrade fiber or expand its fiber capacity. For aerial plant – most of the I-Net as designed – the City could, if necessary, move the City sheath to separate pole attachments to create a completely separate network. This option would not be available for comingled fiber.

These factors are significant and support a stand-alone network as the only fully satisfactory solution for the City. However, as noted, the actual cost of creating a dark fiber I-Net on Comcast's system would likely be substantially lower than \$11.2 million for the fiber infrastructure. Because we estimate an average of \$47,000 per mile for new fiber construction, reducing the number of miles of infrastructure to be built would considerably lower the overall cost. CBG believes Comcast, with its nearly ubiquitous, highly robust fiber network throughout Philadelphia, is well placed to minimize new construction for several reasons:

- Based on CBG's experience with other Comcast systems, we believe Comcast almost certainly has fiber infrastructure in place today, as part of the cable system, that is not being utilized. Such unused infrastructure could be leveraged to decrease the cost of building out a dark fiber network for City use.
- Comcast is regularly constructing fiber infrastructure in its ongoing program of dividing its cable system subscriber network nodes in order to provide greater capacity to smaller groups of homes and improve service reliability and quality by serving fewer customers per node. Comcast is also regularly constructing new fiber infrastructure to increase its ability to offer high speed data communications over its system to commercial users. Comcast could at little incremental cost add additional fiber strands for a City I-Net to its construction plans.

- The four franchise areas cover Philadelphia’s entire 135 square miles. In a franchise area this large, it is common for cable companies to have some areas where they have not built out their fiber optic network as deep as in other areas - e.g. blocks where commercial or industrial land uses predominate or subscriber density is for other reasons very low – but would do so if business plan requirements were met. In these cases, the City and Comcast may be able to share construction costs for the I-Net portion of fiber construction to expand the cable system, to serve the needs of both parties.
- In CBG’s experience, a cable system the size of Comcast’s is likely to have conduit in place especially in the Center City area where underground construction is mandated and construction costs are highest, that can accommodate additional fiber optic bundles for use as part of an I-Net.
- It may be possible to incorporate fiber circuits owned and activated by the City now into a new network, further reducing the amount of fiber construction and the cost of the network.

CBG believes the City can consider the alternative of dark fiber on Comcast’s system, as long as the fiber is dedicated to City use, City use survives termination of a renewed franchise for any reason, and the other conditions and requirements described in this section and below are met for such an I-Net.

Managed Services Cannot Adequately Meet City Network Needs

In some recent franchise renewal negotiations, Comcast has proposed managed network services or “managed services,” furnished by Comcast Business Communications (CBC), a subsidiary of Comcast Cable, as an alternative to building a new fiber I-Net or establishing a dark fiber I-Net on its system. CBG finds that a managed services alternative does not meet the City’s network needs for the following reasons and recommends that the City not pursue this alternative in renewal negotiations:

- Comcast typically charges for managed network services at agreed rates, which may not be substantially lower than the City’s current network providers, based on rates CBG is familiar with from other recent Comcast franchise negotiations and information provided by OIT regarding cost for managed circuits from current providers. The City would be committed to Comcast’s rates, with any negotiated discounts, and could not realize savings from managing the network cost effectively. Activating and managing a dark fiber network would afford the City opportunities for cost savings because it can control equipment and management decisions, and would not pay markups on the services provided. In CBG’s judgment, the long term cost of a City-controlled dark fiber network is likely to be significantly less than the cost of managed services.
- In CBG’s experience, Comcast has not incorporated managed service terms in franchise agreements, instead requiring the franchising authority to enter into a service agreement directly with Comcast Business Communications, outside the franchise. Such arrangements are less enforceable because franchise remedies do not apply and the cable franchisee is not directly responsible for service delivery and quality.

- In CBG’s judgment, Comcast’s requirement to enter into a managed service agreement with Comcast Business Communications typically does not include the provision of service level guarantees that would be acceptable for a municipal network as critically important as the City’s, with both public safety applications, and essential business applications dependent on its complete reliability. Standard CBC agreements, for example, provide for performance “objectives” rather than guaranteed performance levels. Given the City’s need for a highly reliable, highly available network, managed services on the terms CBG is familiar with from recent Comcast franchise negotiations are not a satisfactory solution for the City to meet its needs.
- Under a managed services relationship, network reliability, availability and performance are in the control of the service provider. Service levels depend on provider personnel and contractors who cannot be controlled by the City, creating the risk that City network outages and performance problems affecting public safety and other mission-critical applications will not be corrected promptly and effectively. If the network is fully under City management, the City can ensure the highest level of reliability and performance. Based on CBG’s needs assessment, the City requires a level of network availability that it can achieve only by the City controlling the network. That is possible only for a dark fiber network the City activates and manages itself.

Network security depends on the provider’s employees and security policies, its encryption capabilities, and its management of security software and hardware, introducing risks outside the City’s control that are not present in a network that is fully under the City’s management. Network security for public safety, medical records and other highly confidential and sensitive data also requires additional end-user equipment or software to implement truly secure connections in a managed service environment. As for network availability, based on CBG’s needs assessment, the City requires a level of network security that it can achieve only by the City controlling the network – possible only for a dark fiber network the City activates and manages itself.

- The City’s existing networks are largely vendor-managed networks. Under a managed services arrangement, the City risks replicating the cost, inflexibility, and vendor-coordination issues described in this report. Based on CBG’s assessment reported above, the City can meet its network needs only by activating, managing and controlling its own network.

Network Standards

Because the I-Net would be a dark fiber network, with the City responsible for installing, maintaining and managing the equipment to activate the network, many standards that are applicable to a critical communications network would not apply to Comcast and therefore would not be required as part of a franchise agreement. For instance, error rates, jitter, throughputs, latency, and similar performance requirements are primarily governed by the equipment placed on the dark fiber network and would be the City’s responsibility. However, there are still standards that would apply to Comcast’s development and maintenance of the dark fiber I-Net. These

include reliability or availability, response time and repair time when a problem with the fiber is reported to Comcast, and notification to the City in the event of planned outages due to required maintenance.

The following I-Net standards applicable to the fiber infrastructure should be included in a renewed franchise:

- Optical loss on the fiber shall not exceed manufacture's specification and in no event be greater than:
 - 1310 nm \leq .35 db/Km
 - 1550 nm \leq .25 db/Km
 - 1625 nm \leq .30 db/Km
 - \leq .1 dB per splice
 - \leq .75 per connector pair
- Network availability for I-Net fiber shall be equal to or better than 99.999% averaged across all locations on an annual basis. The network is considered unavailable if the fiber infrastructure, exclusive of City furnished equipment, causes a reduction in network performance below reasonable (and agreed) City standards for any reason.

In addition, the Franchise should allow for updates to the specifications for the optic fiber as network parameters applicable to fiber change over time. This will eliminate the potential to have obsolete specifications or standards for fiber optic cable in place over the final years of a franchise agreement.

Network Certification Testing and Evaluation

As facilities are initially activated on the I-Net, all single fibers should be tested to show acceptable construction and operation within the standards described above. I-Net users should have the ability to have Comcast test specific links when problems are believed to exist. Users should first determine that their equipment is functioning correctly and then work with Comcast to troubleshoot the problem including by performing Optical Time Domain Reflectometer (OTDR) testing when users believe the network is operating below design standards.

Co-location; Service, Repair and Maintenance Response

If the dark fiber I-Net were provisioned as a part of the same sheath on Comcast's system, a renewed franchise must contain specific language to establish clear co-location, service and repair and maintenance specifications and requirements. These should include but not be limited to:²²⁴

- To the extent controlled by Comcast, City access to hubs 24 hours a day, 365 days a year within 1 hour of City notice during business hours, and within 2 hours at all other times
- Accommodations at the headend and hubs for the following:

²²⁴ Similar terms would be necessary for a newly constructed, stand-alone dark fiber I-Net if the network is designed to pass through Comcast hubs, headend or other facilities. Depending on the specific design of the network, the City may require access to such Comcast facilities.

- Sufficient space for City equipment that must be located in those facilities, and the following services:
 - Sufficient heating and cooling for all equipment in the facility
 - Sufficient utility power to operate 120 VAC and -48 VDC I-Net equipment placed by the Users
 - Sufficient back-up power, including a generator and batteries for -48VDC and Uninterruptable Power Supplies (UPS) with a minimum of 1.5 hours of standby power for 120 VAC I-Net equipment placed by the Users
- Proper grounding of equipment and racks
- Fire suppression
- Security and monitoring of buildings
- Secured and monitored access to facilities
- Building maintenance
- Access for designated Users

Given the very high level of reliability and availability the City requires of its networks, a renewed franchise must commit Comcast to satisfactory service levels for dark fiber provisioned on its system (as noted above, activation equipment, including SLAs for the equipment, would be the City's responsibility). In addition to fiber capacity and upgrade requirements (see below), the service level standards should provide for at least 99.999 percent fiber availability for all circuits averaged across all locations on an annual basis, and for response and repair times in the event fiber cable is damaged or disrupted for any reason.

The City should require that Comcast provide a detailed maintenance program to maintain a dark fiber I-Net on its system in conjunction with its subscriber network. The program should include a preventative maintenance plan from the demarcation point within a facility through the network, including headend and hubs where applicable, that is sufficient to ensure compliance with industry standards, good engineering practices and applicable codes, including the National Electrical Safety Code (NESC) and the National Electrical Code(NEC).

For all facilities that will be impacted by routine or preventative maintenance activities or a planned outage, Comcast should be required to provide agreed, and sufficient (at least 14 days), notice to the City of the scheduled maintenance. Comcast should be required to be responsive to any communication from the City regarding concerns with maintenance window scheduling. In the event of a conflict with the City's schedule, Comcast should be required to exercise reasonable efforts to reschedule the work to a time acceptable to the City.

For routine scheduled maintenance of the fiber infrastructure that will, or potentially will, impact City use of the I-Net, Comcast should be required to schedule the work as required by the City to maintain its operations, including critical public safety operations.

The City should require Comcast to provide a full complement of administrative, network operations and engineering, headend/hub, field and other necessary personnel that it will employ at all times to meet the performance criteria detailed herein.

Comcast should be required to maintain a service call processing and tracking that assures the City of proper follow-through on service calls, timely repair and documentation of resolution for diagnosed problems with the fiber infrastructure. The City should review these trouble calls regularly to ensure agreement related to causes, response and repair times and work with Comcast if disagreements exist.

Comcast should also be required to inform the City, at regularly scheduled meetings, of planned cable system network expansions so the City can determine if adding additional fiber during the expansion, for an agreed, actual, incremental construction and installation cost, could benefit I-Net users by reducing the cost to connect sites to the I-Net.

Disaster Recovery Plan

The I-Net provisions of a renewed franchise must include a disaster recovery plan (DRP) satisfactory to the City.²²⁵ This is a written set of procedures to be taken to recover from a catastrophic network failure due to events such as natural disaster, severe weather, civil unrest, terrorism, network sabotage, or technical issues. Regardless of the cause, a DRP ensures that all parties involved in the operation of the I-Net, including Comcast and the I-Net users, will respond immediately to a catastrophic event and take the proper steps, in the proper order, to get the network running again. The following actions must be taken to create a DRP and should be addressed in a renewed franchise:

- Obtain commitment by pertinent City departments and staff and Comcast.
- Establish a DRP Committee to develop and regularly update the DRP, to include the appropriate Comcast technical personnel as well as OIT personnel.
- Perform an initial and regularly scheduled Risk Assessment.
- Establish priorities for a recovery situation.
 - Site priorities
 - Application priorities
- Establish potential equipment and other infrastructure needs in the event of a disaster.
- Ensure spare equipment and infrastructure is on hand and multiple (local and non-local) equipment suppliers are identified prior to needing additional equipment/infrastructure.
- Assign specific responsibilities for oversight and implementation of the recovery process:
 - Ensure that personnel are not assigned other, non-I-Net responsibilities that will compete with the recovery process during a disaster, by their organizations.
 - Develop multiple layers of personnel for each potential task, assume some personnel and organizations will not be able to perform tasks during the recovery.
 - Address the probability key personnel who are highly qualified and dependable during normal operations may not be available during a disaster recovery.
- Create a highly detailed and well documented DRP.
- Develop testing parameters and timings

²²⁵ The DRP is critical for a dark fiber I-Net provisioned on Comcast's system. A DRP would also be necessary for a stand-alone dark fiber network if and to the extent Comcast maintains the dark fiber and/or the network otherwise depends on Comcast facilities or services.

- Perform regular testing of the DRP and update the plan as needed, but at least on an annual basis. Ensure final approval and buy-in from major I-Net users and from the Comcast and City units responsible for carrying it out, to be renewed as the DRP changes.

Without a DRP in place, when a disaster occurs, Comcast and various users may have different, and perhaps opposing, ideas of what needs to be done to get the network back on line and what the priorities are. In addition, necessary equipment and personnel may not be available or may be assigned to repair or recover other non-I-Net facilities. A DRP for the I-Net can be included in the City's and Comcast's DRP(s) that currently exist but very clear responsibilities, as described above, need to be included for the I-Net.

INSTITUTIONAL NETWORK NEEDS ASSESSMENT CONCLUSIONS AND RECOMMENDATIONS

Applications Running on the City's Networks

The applications running on networks utilized by the City are numerous and of various forms, ranging from database sharing and backup between facilities to VoIP and video applications. These applications are increasing in number and capabilities, and therefore bandwidth needs are increasing. Examples are the addition of video surveillance cameras around the City, uploads and downloads of photos and videos from police officers, which are resource intensive, and the major new software systems the City is implementing, as described in the section *Network Connection Speed Scalability* above.

Network Locations/Connection Speeds

The City's networking needs change frequently, often because operating departments add, move and drop locations or require upgrades to the service to their locations as the services they provide change. Networks used by the City must be highly flexible, permitting quick and cost-effective addition of new locations served, quick and cost effective capacity expansion (bandwidth increases in existing circuits, addition of circuits), and to protect network resources, easy termination or reduction of services and locations no longer needed. One example is the prevalence of now obsolete copper T-1 circuits to City facilities, which become increasingly inadequate as new and upgraded applications are adopted by City operating departments.

When these circuits were implemented decades ago, they were sufficient to meet the needs of department users; today they are insufficient and an obstacle to implementing new software applications and services the departments require. (Examples, described above, include the implementation of citizen relationship management (CRM) and 311 call center software systems, ERP software in a number of departments, and the other major software implementations discussed). This creates an environment where network limitations at many locations prevent efficient use of the new applications or prevent rolling them out at all.²²⁶ The City needs a flexible fiber network that permits quick, cost-effective replacement of low capacity connections on an as-needed basis, as new applications are rolled out to new users at sometimes widely separated City facilities. Today, replacing circuits often involves installing new fiber cable, at considerable cost per user, and can require expensive purchase of services from different network providers, as well as coordination of multiple vendors or expensive interfacing of multiple network technologies.

Network Reliability and Availability

The City has stringent requirements for network "up-time" and minimal tolerance for network outages. Network providers to the City today have response times of approximately four hours with repair times that can be substantially longer than four hours. The City has internal policies that require City staff to be on-site within 60 minutes, with repairs occurring as soon as technically possible thereafter. But given current provider response and fix times, City staff is hard pressed to maintain this service level. If the City were managing a City-controlled dark fiber network,

²²⁶ See Footnote 213.

such as CBG recommends for an I-Net furnished by Comcast under a renewed franchise, OIT could control problem response and restoration times, resulting correction sooner than private providers are even be on-site. The same applies to network maintenance. Where private providers own and manage network circuits, routine maintenance procedures cannot be effectively controlled by the City. OIT reported this lack of City control has resulted in preventable outages. Where public safety applications (e.g. 911 emergency response) and critical business functions (e.g. cashiering, payroll and benefits administration) cannot perform without data transport over the network, it is essential that the City be able to control both routine maintenance and problem resolution itself. The dark fiber I-Net recommended by CBG would give the City such control because the City would itself be responsible for acquiring, installing and maintaining activation equipment, depending on Comcast only to maintain the fiber, under enforceable maintenance procedures and standards.

Network Security

Network security is a further important reason for the City managing its own network, which is the only fully effective way to ensure security. Dark fiber networks are secure for this very reason. The people that can access the network are limited to those authorized by the City, where now, technical personnel from multiple providers access the network for maintenance, upgrades, and problem resolution. A dark fiber network would allow the City to implement the same network security standards over all circuits, including for example, separating data appropriately to meet regulations stemming from CJIS and HIPPA within the City in a more efficient manner, as all circuits would be similar in design and management because the network would no longer have multiple providers.

Network Affordability

City Information Technology budgets remain tight notwithstanding the increasing demands of City departments for network capacity. The network estimates created for this Report allocate \$90,000 per month to continue the network as it is today, without upgrading any circuits. The current T-1 and TLS circuits will, however, have to be upgraded in the near future, given the new applications and services now in implementation and projected for the immediate future, as described above. This would increase the City's costs considerably from the \$90,000 per month. CBG estimates that over 10 years, the City will spend \$10.8 million just to maintain the existing network, without factoring in inflation to current service rates or expansion of network capabilities. CBG's estimate to create a new, standalone dark fiber network serving all 208 City sites identified by OIT, without factoring in savings that would be realized by using existing City owned fiber optic cables and infrastructure, as described above, is \$11.2 million (\$12.6 million including the City's cost to purchase, install, activate and maintain equipment). When these savings and inflation are factored in, together with the certainty that the network will require expansion beyond its current 338 circuits (at a cost of hundreds of dollars per month per circuit from current providers), as well as replacement of many of the current T-1 and TLS circuits, it is clear that the \$11.2 million cost of building the recommended new dark fiber I-Net is at or below what the City will spend on the networks in place today over the term of a renewed franchise. The cost is therefore reasonable, in CBG's opinion – particularly so given CBG's finding that only such a dark fiber network would

fully meet the City's network needs, and taking into account that the cost would be spread across the estimated subscriber base in all 4 franchise areas.

Recommendation: Development of a Dark Fiber Optic Network

CBG has performed a high level design of a dark fiber network that would replace the approximately 338 existing circuits connecting 208 facilities that were identified by City staff. This conceptual design is detailed in the attached spreadsheets. It provides a basis for understanding the scope of constructing such a network if it were newly built as a stand-alone dark fiber network where all construction costs were attributed to the network. The estimated cost to build the dark fiber network is approximately \$11.2 million including building entry costs or \$47,000 per mile of construction calculated without including building entry costs; (see Exhibit C.1). CBG estimates the total cost to the City to activate the network to be approximately \$1.4 million for equipment purchase (installation, if contracted, would be additional), for a total network cost of \$12.6 million. CBG finds that a stand-alone dark fiber network is the only solution that would fully meet the City's network needs as ascertained by CBG and described in this report. However, in CBG's opinion, the \$11.2 million cost CBG estimates for such a network would likely be considerably lower if all or part of the dark fiber for the I-Net were provided by Comcast on its system as fibers in Comcast's existing sheaths. As detailed above, the cost of providing the I-Net would be reduced by several factors that in CBG's experience with Comcast systems likely apply here:

- Fiber optic cable usable for the I-Net is likely already available in Comcast's cable system as dark fiber.
- In CBG's experience, a cable system the size of Comcast's is likely to have available space in cable system conduits, especially in Center City where utilities must be underground and construction is the most expensive, that could be utilized to drastically drop the I-Net cost in this area.
- Comcast constructs new fiber infrastructure as part of its program of dividing subscriber network nodes and to offer high speed data communications to commercial users.
- Comcast could at little incremental cost add additional fiber strands for a City I-Net to its construction plans.
- The City could work with Comcast to share the cost of adding additional fibers for the I-Net where Comcast is installing new fiber for its cable system.
- Fiber circuits owned and activated by the City now likely would be available to incorporate into a new network, further reducing the amount of fiber construction and the cost of the network.

CBG believes the City could consider such an I-Net, as long as the fiber is dedicated to City use, City use survives termination of a renewed franchise for any reason, and the other requirements and conditions stated above in this report are met.

CBG finds that managed network services will not adequately meet the City's network needs as ascertained by CBG. The City requires a very high level of network availability, reliability, security and flexibility that managed services arrangements as typically offered by Comcast in franchise negotiations with which CBG is familiar are not likely to meet. In addition, based on information from the City and CBG's knowledge of recent Comcast franchise negotiations,

managed services are unlikely to be at rates significantly below rates the City now pays, without the opportunities for cost savings the City could realize by activating and itself managing a dark fiber network that it controls.

SECTION D



SECTION D

SYSTEM TECHNICAL REVIEW OF COMCAST'S RESIDENTIAL CABLE TELEVISION NETWORK

SYSTEM TECHNICAL REVIEW OF COMCAST'S CABLE TELEVISION NETWORK

SYSTEM TECHNICAL REVIEW

Introduction

As part of the past performance review and needs assessment conducted by the City of Philadelphia, PA (“City”), CBG Communications, Inc. (“CBG”) completed our technical audit evaluating Comcast’s residential and business cable television subscriber network to evaluate Comcast’s compliance with the four franchise agreements between Comcast and the City, and applicable laws, and regulations, and to determine the condition of Comcast’s equipment and infrastructure and the technical quality of its operation of this infrastructure.

CBG conducted evaluation tasks, document review, system physical plant (infrastructure) audit driveout and inspection, facility tours and discussions with Comcast staff and discussions with City staff to determine the condition of Comcast’s subscriber network in the franchise areas. The network review included the headend, fiber optic and coaxial infrastructure. The review also included an assessment of Comcast’s ability to reliably and safely deliver services to community residents and businesses that meet or exceed the requirements of applicable laws and regulations and meet Comcast’s contractual obligations agreed to in the local franchise agreements.

The major findings and recommendations of CBG’s review and evaluation are described below in this Report.

FINDINGS RELATED TO COMCAST’S SUBSCRIBER NETWORK

As technical audits and system reviews traditionally begin, CBG requested various routine records and information from the cable TV system operator in order to establish a baseline and make informed determinations related to the system’s performance. This request is in the form of a “Request For Information” (“RFI”) and CBG sent the RFI to Comcast on June 25, 2013. Comcast provided CBG with a partial response on August 30, 2013 and informed CBG that Comcast required a Non-Disclosure Agreement (NDA) prior to providing the remaining information. An NDA was entered into by the parties in October 2013. In January 2014, Comcast provided the remaining requested information.

Although CBG received the information requested from Comcast, some of the information was aggregated rather than providing important details. For instance, the outage reports were summarized to show averages rather than specific information for each outage. The provided information indicates that generally, there does not appear to be a problem system-wide regarding outages, but based on the information provided CBG is not able to determine if any specific outages took significant amount of time to repair. CBG asked for this additional information from Comcast as it was needed to accurately perform our analysis and audit. This process of questions and answers between CBG and the cable company is common during the audit process.

Based on CBG's experience conducting prior technical audits, some cable television providers fail to fully and completely respond to the RFI. Accordingly, CBG recommends that the City continue the current franchise requirements, in Section 6 "System Maintenance Standards" and Section 11 "Availability of Books and Records," in any renewed cable franchise, in order to continue to obligate Comcast to maintain the system, and to provide technical documentation necessary to determine the technical capabilities and capacity of the system, as well as documentation of system maintenance activities and system reliability.

After an initial system plant inspection was performed using a random sample of City addresses, as detailed further below, the City notified Comcast of CBG's initial findings, by letter of Steven Robertson, Deputy CIO and Chief of Staff, dated June 5, 2014. The letter identified 218 apparent violations of the NESC and NEC that were directly observed by CBG and were considered significant enough to require prompt remediation, which the letter requested. Comcast responded regarding the specific plant violations identified in the letter, by letter of Ralph McClellan, "Re: Cable System Technical Review – Information Request/CBG Plant Inspection, dated July 15, 2014. Based on its analysis of inspection results and Comcast's response letter, the City sent Comcast a request for additional information (by letter dated August 8, 2014), that CBG requires to complete its plant audit. Comcast responded to the City's request by letter of Ralph McClellan dated October 7, 2014. The City's June 5 notice letter, Comcast's July 15 letter in response, the City's August 8 request for further information, and Comcast's October 7 letter in response are discussed further below.

System Design and Architecture

Originally the City of Philadelphia cable system was divided into four franchise areas, each with a franchisee and franchise agreement independent of the other three areas. These areas were served as four separate systems by several cable TV providers (Comcast initially only served Areas III and IV). Comcast has since acquired the other two franchise areas and today operates as one large cable TV system serving the entire City. For purposes of this Report, CBG reviewed the City as a single cable TV system served by Comcast.

Comcast operates a Hybrid Fiber Coaxial cable ("HFC") network that is designed to be able to provide video (Cable TV), Internet and data services, and telephone services with coaxial cable connections to all addresses within the City's service area.

Comcast's system architecture consists of two regional headends in the City. From these headends, Comcast transmits and receives signals to/from its national headend in New Castle, Delaware, with a secondary headend in Plainfield, New Jersey. In addition, the master channel line-up is generated at Comcast's Media Center in Denver, Colorado with a back-up headend in Stone Mountain (Atlanta area), Georgia.

Comcast, from its Philadelphia headends, uses fiber optic cable to send and receive signals to/from eight hubs throughout the City. From the headends and hubs, Comcast transmits and receives signals to/from nodes located in neighborhoods throughout the City's service area, where forward (or downstream, i.e. from headend to subscriber) signals are transformed from light, on the fiber

optic infrastructure, to Radio Frequencies (RF) for insertion onto the coaxial cable infrastructure for ultimate transmission and distribution to residents and businesses served by the particular node. Forward (or downstream) services include all standard definition (“SD”) digital and high definition (“HD”) digital channels, including Video-On-Demand (“VOD”) and 3DTV channels.

Furthermore, Internet data, traveling from Comcast’s headend to subscribers, and telephone or voice service to subscribers, is carried on the forward/downstream portion of the network. In addition, the nodes receive RF signals from subscribers via the coaxial cable infrastructure which feeds these signals into the node. The node converts these signals to light for transmission, via the fiber optic infrastructure, to Comcast’s headend. Some return signals include upstream data, such as ordering information for VOD and other video services, as well as telephone traffic.

Spectrum or Bandwidth

The total spectrum or bandwidth available on a cable system determines the services that can be provided by the system. Comcast’s system, as designed and operated today, has a total usable spectrum of 5 MHz to 750 MHz. In the industry, this system is referred to as a 750 MHz system.

Comcast’s system was originally built in the 1980’s and was most recently upgraded in 2001. At the time of the 2001 upgrade the system was at or near the state-of-the-art. Comcast now uses signals between 5 MHz and 40 MHz for the return (or upstream) system and transmits signals between 50 MHz and 750 MHz on the forward or downstream portion of their system. Thus, following this upgrade, the system had a total forward bandwidth of 700 MHz, primarily used to transmit video channels to subscribers. Of this 700 MHz, an estimated 30 MHz was used for non-video use such as telephony, Internet, monitoring, etc.. Thus, approximately 670 MHz or 95% of the total forward system bandwidth was utilized for cable TV video services broadcast to customers.

Today, Comcast still operates the same 750 MHz cable system (approximately 700 MHz in the forward direction, i.e. from headend to subscriber) in the City, as it was upgraded in 2001 (the upgrade is described below). When a cable provider installs or updates a system today, the provider installs equipment to provide a total capacity of 860 MHz and 1,000 MHz (1 GHz). Although Comcast’s system is not the most advanced cable system, it is consistent, in terms of bandwidth, with many cable systems in service today throughout the country, despite having a significantly lower total bandwidth than the current industry standard for upgrades.

It is difficult, even with frequency allocation charts provided by the operator, to describe the maximum number of channels, or services, which can be provided on a cable system, as the bandwidth utilized for specific channels and services is determined at the system level by each provider. For instance, compression technologies allow for multiple digital TV channels to commonly utilize one 6 MHz block of spectrum – the typical bandwidth of analog channels – to transmit between seven and fifteen Standard Definition (SD) digital channels or two-three High Definition (HD) digital channels. Additionally, varying amounts of a system’s bandwidth capacity is typically configured for and used to provide non-cable TV services, such as telephone service, Internet service, or data transport services that typically are broadband services utilizing significant spectrum.

Based on frequency allocation charts provided by Comcast and publicly available channel line-ups, the system, as currently constructed, equipped and operated, can provide the services typically provided to subscribers in the cable industry today. However, current system bandwidth may well be inadequate to meet subscriber demands over the term of a renewal franchise, as subscriber needs and desires change and increase, and as more services become available, particularly the bandwidth intensive services subscribers increasingly demand, such as High Definition video programming and the yet-to-be rolled out Ultra High Definition Television (4K HD, which will use as much as twice the bandwidth of current HD technologies). Furthermore, although Comcast uses compression techniques to increase the number of channels that can fit on the system, it continues to use less of the available bandwidth for cable TV video services. When the system was first upgraded to the 750 MHz system approximately 95% of the available forward (from headend to subscriber) bandwidth was used for cable TV video programming. Today, however, approximately 42% of the available forward bandwidth on the same 750 MHz system is utilized for non-cable TV services such as high speed Internet, telephone service, home security, and point-to-point broadband data transport, leaving only 58% of the system capacity available for cable TV service.

Depending on the length of the franchise renewal term, Comcast may need to upgrade its current system to gain additional bandwidth in order to provide cable TV programming, particularly if it continues its pattern of allocating additional bandwidth to non-cable TV services and at the same enhances its cable video service with more HD programming and/or migration to Ultra HD. Thus if the present trend continues, needed upgrades may be driven in large part by continued expansion of non-video services, with their negative impact on the system capacity available for cable TV related services.

Potential system upgrades could include using new electronic equipment to increase the system capacity to 1,000 MHz (1 GHz), deploying fiber to the subscriber's premises (FTTP), as well as utilizing technologies that conserve bandwidth, such as Switched Digital Video (SDV). More incremental upgrades may be prudent, such as continued node segmentation or reductions in node sizes, deployment of Siamese cables with both coaxial and fiber optic medium in order to prepare for a migration to FTTP architecture.

CBG recommends that in any renewed franchise with Comcast, the City should require at a minimum a triennial review of the system to determine its capacity to meet the community's cable-related needs and interests, and to provide the needed bandwidth for new services meeting those needs and interests that become available during the franchise renewal term.

Comcast's Philadelphia System Facilities

Comcast serves the City from its headends in the City and eight hubs located throughout the City. CBG toured the headend facility at 1700 N 49th Street and the hub located at 2446 Christian Street in January 2014. Comcast also provided information describing the headends and hubs, and additional data or information as it was required. CBG found that the overall condition of the inspected facilities was clean and well-kept with room in both the headend and hub for future equipment expansion.

Grounding of equipment in various locations throughout the headend and hub meets the standards for protection of the equipment and maintenance personnel. Fire suppression systems are professionally installed throughout the facilities and appear to be sufficient to protect the building and its contents from fire.

Digital System Performance

CBG historically began its analysis of cable systems by reviewing a system's most recent Federal Communication Commission (FCC) Proof-of-Performance (POP) test documents. These documents reflect the results of tests the FCC requires to determine compliance with standards for analog channels and are were required to be stored in an operator's Public File, and to be available for inspection by the Federal Communications Commission or the local franchising authority. However, because Comcast removed all analog channels from its system and became an all digital system in 2011, the tests and documentation are no longer required and Comcast no longer performs these tests.

The FCC also requires that operators of digital cable systems comply with certain technical standards for their systems. (See Title 47, Section 76.640 of the Code of Federal Regulations (47 C.F.R. § 76.640). However, the FCC's rules do not prescribe how, where on the system, or how often testing must be performed to determine compliance. Additionally, FCC regulations have no requirement for cable providers to document results of tests to determine compliance. Comcast representatives indicated Comcast has not performed or documented tests for compliance with these FCC standards as their system testing has not been specifically for the digital performance parameters specified by the FCC. They indicated that Comcast plans to perform such tests regularly in the future, however. The City should require Comcast to provide documentation of this testing and the results on a bi-annual basis, consistent with previously mandated FCC Proof of Performance testing.

As part of CBG's site visits, CBG observed Comcast personnel performing tests at eight locations (two in each of the four Franchise areas) to determine compliance with the FCC standards. Comcast provided the results of its tests to CBG. In addition, CBG viewed a system spectrum trace showing the response of the system which provides a snapshot of the overall system electronics and cable infrastructure's performance. The results of these tests were all within federal specifications.

Subjective Viewing of SD and HD Channels on the System

As part of CBG's testing, CBG subjectively viewed SD and HD channels at the eight locations within the City where the above mentioned observation of testing was performed, to identify signal quality problems currently existing on the system. Digital signals are typically either on or off with few if any distortions added by the network other than undesired attributes that can be introduced as a result of significant compression of channels to conserve bandwidth. When distortions and noise are significant enough, pixelation and picture freeze-ups can occur, whether the cause is compression or network-caused distortions.

CBG's observations found that, in general, the HD channels on the system are very crisp with little, if any, pixelation or other undesired attributes noted. CBG's observation of the SD channels

showed a varying degree of unwanted attributes that appear as noise in the pictures. Because pictures often include action or moving images, these reductions in quality aren't always seen by customers on their TV sets. This type of distortion is frequently due to problems that some television receivers have dealing with the compression in digital signal transmissions. In addition, this distortion is more readily observed on TV sets of 40 inches or larger and appears less objectionable on older picture tube screens (which also tend to be smaller than 40 inches) and Plasma screens compared to LCD and LED televisions. This distortion is most often referred to as "mosquito noise" and is easily seen around graphics or bugs (small digital graphics often in the lower corner of the screen used to identify the channel being watched) appearing on the TV screen, but it becomes more apparent throughout the TV picture as it becomes more severe. It is CBG's experience that although we performed our subjective viewing at eight locations, these results will likely be seen throughout the system.

This problem is often overlooked by most subscribers and is likely explained in part by the fact that people who have larger TV sets are more likely to have HD service and therefore watch programs in the High Definition format where mosquito noise is far less prevalent. Furthermore, people with smaller SD or analog TVs will likely not see mosquito noise as it does not become evident on smaller TV screens.



²²⁷**Picture 1.** The white arrows point to “Mosquito Noise” in a Digital TV picture. This photo is a generic photo from the website www.embedded.com. It is included only for purposes of illustrating Mosquito Noise and is not intended to depict or reflect the picture quality of any Comcast channel.

Standby Power

Standby power provides the system with the capability to remain operational when commercial power is lost for a period of time. Comcast employs several backup power methodologies, from the headends and hubs to the power supplies located on the distribution system in the field.

Comcast has large backup generator systems located at the headends and hubs that are capable of backing up the entire facilities if a commercial power failure occurs. These generators are designed to provide enough power to keep the headends and hubs operational in the event of a power outage at these critical locations. In addition, because there is a lag-time of several seconds between the loss of power and the generator coming fully on-line, Comcast also has large banks of batteries that are designed to provide power to all headend equipment that operates on -48VDC while continually being recharged as normal procedure. When power is lost, these battery banks will

²²⁷ <http://www.embedded.com/design/embedded/4013028/Video-compression-artifacts-and-MPEG-noise-reduction>

continue to provide power, without any outside power, for a designed minimum of 10 hours. For all critical equipment that operates on 120VAC power, Uninterruptable Power Supplies (UPS) are in place to run this equipment until the back-up generators are operational. All of these powering components are continually monitored by Comcast staff and problems are addressed prior to impacting services. For instance, Comcast has documentation of the age and condition of its battery banks and knows how long the batteries will perform in the event of a power failure.

Comcast has power supplies located on the distribution plant to provide power to the nodes and amplifiers used in the field. These power supplies are equipped with batteries that provide backup power in the event of a commercial power outage in much the same way the headend backup battery power is provided. Based on information provided by Comcast, these power supplies are capable of running, without commercial or other power sources, for approximately four hours. This run time will increase based on lower power needs at some power supply locations. The power supplies are maintained on a regular basis and continually monitored by the Network Operations Center (NOC).

Status Monitoring

Comcast uses numerous tools to monitor the operation of the network in real-time, a common industry practice. For example, many of these tools monitor all of the cable modems in the system showing areas of the system that are not responding and, therefore, are experiencing an outage. Other monitoring tools provide data on the performance of the network. For instance, the signal to noise ratio or C/N and other distortions can be measured and monitored throughout the system via cable modems at subscribers' homes and businesses. The system is watched to proactively monitor where the performance of the system is beginning to drop allowing technicians to be dispatched to remedy the problem before it impacts customers.

Other monitoring tools can measure the health of power supplies in the system and alert Comcast when issues arise that need further troubleshooting and repair. An example of this is when a power supply goes into standby mode because of a commercial power outage; the standby functionality in the power supply will keep the cable system running for approximately four hours. Status monitoring tools will notify the NOC that the power supply is running on batteries and will keep staff apprised of how long the supply will stay operating on battery back-up. When the batteries are drained to a certain level, Comcast personnel can connect a portable gas operated generator to the power supply and continue to keep the system running as usual for several hours or even days without commercial power. These tools can provide Comcast with data showing where other problems occur and often times staff can react to, and repair, problems before the network user knows of the problem. In the event of an outage, the monitoring tools can help resolve the problem in a timely manner by pinpointing or at least narrowing the area where the problem exists.

Outages and Outage Documentation

CBG, as part of the information provided by Comcast in response to the RFI, received documentation showing outages experienced by subscribers in the City's service area. CBG's review of Comcast's documentation does not indicate a large number of outages for a system the size of the Philadelphia system and the overall average repair time for outages is under 1.5 hours, which is consistent with average repair times seen in most cable systems reviewed by CBG. However, Comcast did not provide all the information CBG requested. For instance, the RFI requested "Outage logs with associated down-time, response time, and resolutions for the period of June 1, 2012 through May 31, 2013." Comcast only provided the total number of outages in the City with average response times and completion times. Therefore, CBG cannot determine if specific problems are systemic and if a significant number of outages last for long periods of time.

The reported average repair time for system outages is likely due, in large part, to the monitoring tools in place today. These tools, as described above, help eliminate outages by alerting Comcast to pending outage-causing problems, and also provide Comcast with information in the event of an outage that helps determine where the problem is occurring. These factors speed the troubleshooting process and therefore reduce the time to repair the problem.

Compliance with the National Electrical Code (NEC) and National Electrical Safety Code (NESC)

CBG performed an independent cable system drive-out inspection and physical infrastructure audit with City staff to identify any problems or code violation with the system plant and with service drops to residences and businesses. Comcast's plant was inspected for the condition of underground and aerial cable and equipment, grounding and bonding of plant components as required by applicable codes, as well as clearance and attachment issues and violations for cables. Comcast's plant was inspected specifically for compliance with the National Electrical Safety Code (NESC), which generally governs aerial facilities and facilities up to the exterior wall of the premises, and with the National Electrical Code (NEC), which generally governs wiring within the premises, from the exterior wall. Comcast's franchises with the City require conformance with both the NEC and NESC, as provided in Section 4, *Construction and Technical Standards*, of Article II of each franchise:

4.e Without limiting the generality of any other provisions of this Agreement, the Franchisee shall at all times comply with:

- 1. National Electric Safety Code, as prepared by the Institute of Electrical and Electronics Engineers, existing as of the time of construction or rebuilding;*
- 2. National Electrical Code of the National Fire Protection Association, existing as of the time of construction or rebuilding;*

If a system is not properly maintained, the appearance of cable facilities – e.g. cluttered wires, drooping or hanging cables – will be affected, but more importantly, such “aesthetic” issues typically are caused by failure to comply with the NEC or NESC and local regulations promulgated to prevent safety hazards. In addition to appearance and safety violations, the integrity of the cable plant is essential to proper operation of the network and its ability to deliver high quality signals in a reliable manner.

In order to conduct a reliable and valid inspection, CBG, with assistance from City staff, generated 250 random addresses throughout the City for inspection of Comcast's infrastructure up to and including the outside of the served building. To ensure an effective random sample of City addresses was drawn, CBG worked with City staff to identify the most comprehensive and continually updated list of City addresses. The City's United Land Records System provided this database and included 679,233 known addresses in the franchise area. This database is tied to issuing titles to property in the City. When a property is purchased and a new title issued, the database of addresses is updated. This same database is used by the City to manage inspection and codes and provides the most current listing of addresses in the City.

CBG, with assistance from City staff, generated a random sample of 250 addresses throughout the City and physically inspected Comcast's infrastructure in the rights-of-way and up to and including the outside of the served building at each address. CBG used inspection results for this random sample and standard statistical methods to project findings as to plant condition citywide. CBG's statistical methodology is described in detail below. To generate the random sample of 250 addresses for inspection, CBG sorted the database in alphanumeric order and included every 2,717th address in the sample. The margin of error on a random sample of 250 is $\pm 6.2\%$ with a confidence of 95%. This means that if CBG were to select another sample of 250 addresses randomly from this same database, the findings for those addresses would be the same, within the same margin of error.

Prior to beginning the drive-out and inspection, it was known that this database would include addresses of vacant lots, businesses with multiple addresses represented by a single address in the database, and some instances where the exact location of an address could not be identified, and some addresses that do not have a drop. CBG adjusted its projections to account for these known features of the database as described below.

Comcast, like most cable companies, regularly leaves drops in place when a customer disconnects service and reuses the drop in the likely event address becomes an active account in the future. Comcast must maintain these inactive drops in accordance with all applicable codes, as they must for active drops, and an NEC or NESC violation for an inactive drop has the same status, for purposes of the plant audit, as a violation in an active drop. This is true whether or not the operator considers the drop "abandoned." It is still part of the operator's plant and its responsibility to maintain. Taking inactive drops into account, the percentage of the total number of homes and businesses in the City with drops, active and inactive, is considerably higher than the percentage of total homes and businesses that have active drops, i.e. are current subscribers to a Comcast service delivered over the cable system in the City. (In its October 7 response to the City's July 15 request for additional information, Comcast identified the total number of Comcast service drops in the four (4) Philadelphia franchise areas, including active drops and inactive drops. CBG's projection of Comcast drops, described later in this report, is within the margin of error of the number of drops, active or inactive, reported by Comcast.) Because the audit utilized random sampling, the set of addresses to be inspected included a diverse representation of dwelling units in the City, from single family housing to duplexes, quad-homes and large apartment buildings and complexes. In addition, the sample included small and large business addresses in the City. Furthermore, the sample included a geographically dispersed representation of addresses in both the aerial portions and underground portions of Comcast's system, in all four franchise

areas. CBG's method allows us to make an objective study and overall inspection in a statistically valid manner of how Comcast's system is constructed and maintained throughout Philadelphia.

A City employee accompanied CBG to each of the 250 locations in the random sample. The following inspections and observations were made at each location:

- Can the address be definitively determined? If the exact address could not be determined, CBG noted the address as not found or no specific address.
- Is the hardline (also known as mainline cable. This is the cable system up to, but not including, the drop) constructed and maintained as required by the NESC?
 - Are proper clearances maintained to the ground, roadways and other occupants on a pole?
 - Are pedestals secure and installed in a workman like manner?
 - Are down guys and lashing wire properly maintained?
 - Are power supplies grounded and locked?
- Is there a cable TV drop?
- Is the drop installed and maintained as required by the NESC and NEC?
 - Are proper clearances maintained to the ground, roadways, decks and windows of adjacent buildings, and other occupants on a pole?
 - Is the drop properly grounded and bonded at the premises?
 - Is the drop attached to the premises correctly?
 - Not hanging in front of windows or doors
 - Not laying in front of doorways
 - Secure attachment

Methodology used to estimate the total number of physical plant violations Citywide

The following paragraphs explain and illustrate how CBG utilized the results from the random sample inspection to project the condition of the physical plant and code violations present throughout Comcast's cable plant citywide.

The same procedure is used for projecting citywide the number of addresses that have vacant lots, could not be inspected, or no drop was found. As explained below, these projections are used to adjust the universe to account for these features of the database.

For violations at the pole, pedestal or vault itself, CBG made adjustments to reflect the fact that such violations were linked to more than one address. For instance, if a pedestal, vault or pole with a violation is on the property line between 101 and 103 First Street, then both addresses are affected by the violation. If, as typically is the case, a pole, pedestal or vault carries facilities serving drops to multiple addresses, then a violation affecting facilities mounted on or in it could affect service to premises at each of the multiple addresses served. CBG did not, however, record violations at poles, pedestals or vaults serving multiple addresses as violations at each served address. Rather, CBG proceeded as follows to project, based on the random sample of addresses inspected, the number of violations with poles and pedestals citywide.

In the October 7th Letter, Comcast stated they utilize 99,440 poles and 7,221 pedestals in the four franchise areas of Philadelphia.²²⁸ This universe was then used to project from the number of poles/pedestals in the inspected sample that were found to have a violations to the number of poles/pedestals with that violation citywide, in the same manner as for service drops. For every pole/pedestal with a violation found, we divided 1 by 250 for the corresponding percentage of the sample of inspected addresses represented by that violation. This percentage was then applied to the 106,661 poles and pedestals used by Comcast to project such violations citywide. CBG's methodology is further described below in the subsection titled *Findings – Citywide System Violations* beginning on page 179.

Conditions that affected the application of our methodology include:

- CBG found 21 instances of addresses that could not be specifically identified. This includes addresses on the City's data base that are included in other addresses. For instance, when a business on First Avenue takes up an entire City block between two cross streets, it may have a single address. If we are looking for 150 First Avenue but the entire side of First Avenue between the two cross streets has the address 110 First Avenue, we cannot definitively say where 150 First Avenue is. Where this was the case, in order to avoid recording a violation that may not be exactly at the 150 First Avenue address included in the random sample and to maintain the statistical validity of the sample, CBG documented the address as "no specific address."
- Where CBG found a building but no drop in place, (14 instances), the location was recorded as not having a drop. The hardline cables were still inspected and any issues noted.

²²⁸ See Footnote 247 below for an explanation of why vaults are not included in this universe.

- Where CBG found no building at the address (19 instances), the location was recorded as “no building found”.
- When a drop was not connected at the premises, the bonding and grounding was not inspected. The drop was, however, inspected for clearance issues.
- When CBG could not gain access to a yard (20 instances) and therefore could not inspect the drop, the drop (address) was documented as a “No Access – unable to inspect” address.

Technical Inspection Findings

Comcast needs to regularly inspect and repair problems and violations that arise on its system in order to maintain a network that is safe to the public, Comcast employees working on or around the system, and personnel from other tenants of the rights-of-way in the City who must work in close proximity to Comcast’s facilities. Furthermore, NESC Code 214 requires that “lines and equipment shall be inspected at such intervals as experience has shown to be necessary.” As noted above, the franchise agreements require Comcast compliance with the NESC and NEC.

As discussed above, CBG performed an inspection of a representative sample, randomly chosen, of addresses throughout the City, and based on the inspection results, projected the number of plant violations citywide. The results of the inspection are a statistical representation of the plant violations that exist throughout the system. The list of code violations attached to this Report as Comcast Physical Plant Random Sample Audit Findings (hereinafter known as “Exhibit D.1”) identifies the violations CBG observed in its inspections of the addresses in the random sample and is not to be viewed as an all-inclusive list of Comcast plant violations throughout the four franchise areas. As reported in Exhibit D.1, CBG identified 142 violations at 122 of the 250 randomly selected addresses (49%) inspected, that are either violations of NEC or NESC codes²²⁹. CBG’s statistical projections of violations citywide are described in detail below in the subsection titled *Findings – Citywide System Violations* beginning on page 179.

For reporting purposes, CBG combined all violations found at the 250 random sample addresses into two categories. The first category is violations concerning drops as they leave the pole pedestal or vault up to the side of the residence or business. The second category of violations is at the pole pedestal or vault.

The violations included in both categories are further explained below.

²²⁹ In the Comcast Physical Plant Non-Random Sample Audit Findings Spreadsheet (hereinafter known as “Exhibit D.2”), CBG notes an additional 76 issues that were observed and documented while driving to the test locations, but not found at one of the 250 sample addresses. These observations were made while driving from one randomly selected address to another, or were made of facilities near a randomly selected address, but not located at the address. These 76 code violations are not included in the statistically valid random sample or the statistical projections of issues citywide, but are worth noting and require correction. They are included in Exhibit B.2 as additional, directly observed issues that are anecdotal, but CBG believes are further indicative of the condition of Comcast’s plant. They were provided to Comcast in the City’s June 5, 2014 notice letter discussed above as code violations observed by CBG, additional to those identified in the random sample inspection, that CBG and the City viewed as requiring prompt remediation by Comcast.

System Grounding and Bonding

The cable system must be grounded properly to provide a path to ground for stray voltages such as lightning or power conductors coming into contact with the cable system. In a similar manner, the distribution system and service drops must be bonded to other utilities in order to ensure that there is not a voltage difference between them. If they are not properly bonded, there will likely be a difference in electrical potential between the systems, thereby producing a shock hazard to anyone coming into physical contact with both utilities at the same time. Code requirements for grounding and bonding of cable TV networks and service drops are provided in the NEC and NESC and provide that a communication system can be grounded effectively by attaching or bonding to the building's electrical ground and to other communication and utility systems, such as telephone networks and water pipes. Bonding the service drop to other utilities that are themselves properly grounded is acceptable, as is bonding to the building's interior cold water pipes, within 5 feet from its point of entrance to the building²³⁰ but only if the cold water pipes are connected or bonded to an electrode (grounding rod)²³¹. However, bonding to water pipes cannot occur outside the building and an inspection must be performed on the water pipe to ensure there is not a break in the electrical path from the service drop to ground (such as would be introduced by plastic or non-metallic pipes or valves in the building plumbing or in water softeners²³²). The most significant violation found during the random sample driveout was that of faulty, incorrectly installed, or missing grounds and/or bonds (to other utilities) in service drops, including many drops where no bond/ground was made on the outside of the building and inside grounding/bonding could not be verified. In the random sample of addresses selected for inspection (and used for citywide projections), CBG observed 75 instances of such bonds/grounds at residences and businesses. The City's June 5, 2014 notice letter to Comcast discussed above identified all code violations directly observed by CBG, including these 75 instances of grounding or bonding violations in service drops. (The letter also identified two additional grounding or bonding violations found during the inspection that were not a part of the random sample.)

As noted above, Comcast responded to the City's notice letter on July 15, 2014, stating the results of its review of the violations CBG found and describing its remediations when violations were resolved. The letter stated that some violations did not exist or verified the drops as code compliant, and some violations were assumed to not exist even though physical or visual verification was not performed by Comcast.²³³

Comcast, to date, has stated they verified that 5 of the 75 grounding/bonding violations were found to be grounded/bonded inside the home or facility. Comcast has reported that they made repairs to 26 of the 75 locations the City reported to have a grounding/bonding violation in its June 5 letter. For 35 of the 75 locations, Comcast responded with a statement similar to the following statement concerning the drop at [REDACTED] *"Active, knocked on door and called customer with no answer. Common ground inside. (6/17/2014)"* That is, Comcast was unable to

²³⁰ National Electrical Code Section 820.40.(B).(1).(2),

²³¹ National Electrical Code Section 250.53(D)(2),

²³² National Electrical Code Section 250.53(D)(1),

²³³ The letter further stated that "Comcast's technicians are trained to assure that during any service call for any reason, the 'Last Technician Out' from any customer premises completes a set of tasks "that include checking for proper grounding and bonding; and that it "...utilizes a service-call based inspection and repair policy" which it contends "is a reasonable and responsible manner to check and repair cable plant conditions."

and called customer with no answer. Common ground inside. (6/17/2014)” That is, Comcast was unable to inspect the premises. For the 75 grounding violations identified in the City’s June 5 letter, Comcast reported as follows in its July 15 letter:

Table 18: Grounding and Bonding Violations – Comcast’s July 15 Response

| | Number | Percent of Total Grounding/Bonding Violations |
|--|--------|---|
| Comcast reported as fixed or repaired | 26 | 35% |
| Comcast reported visually verified as grounded inside | 5 | 7% |
| Comcast reported as grounded inside but not as visually inspected or verified | 35 | 47% |
| Comcast did not respond to the grounding violation identified at the specific address (other violations were reported by Comcast as fixed or found ok) | 9 | 12% |
| Total | 75 | 101%* |

* More than 100% due to rounding

Comcast confirmed proper inside grounding for only 5 (or 7 percent) of the grounding violations identified in the City’s June 5 letter. For seventy of the identified grounding violations (or 93 percent), Comcast reported either that it repaired the grounding violation (acknowledging the violation existed) or that it did not gain access to the premises to verify proper inside grounding or bonding.

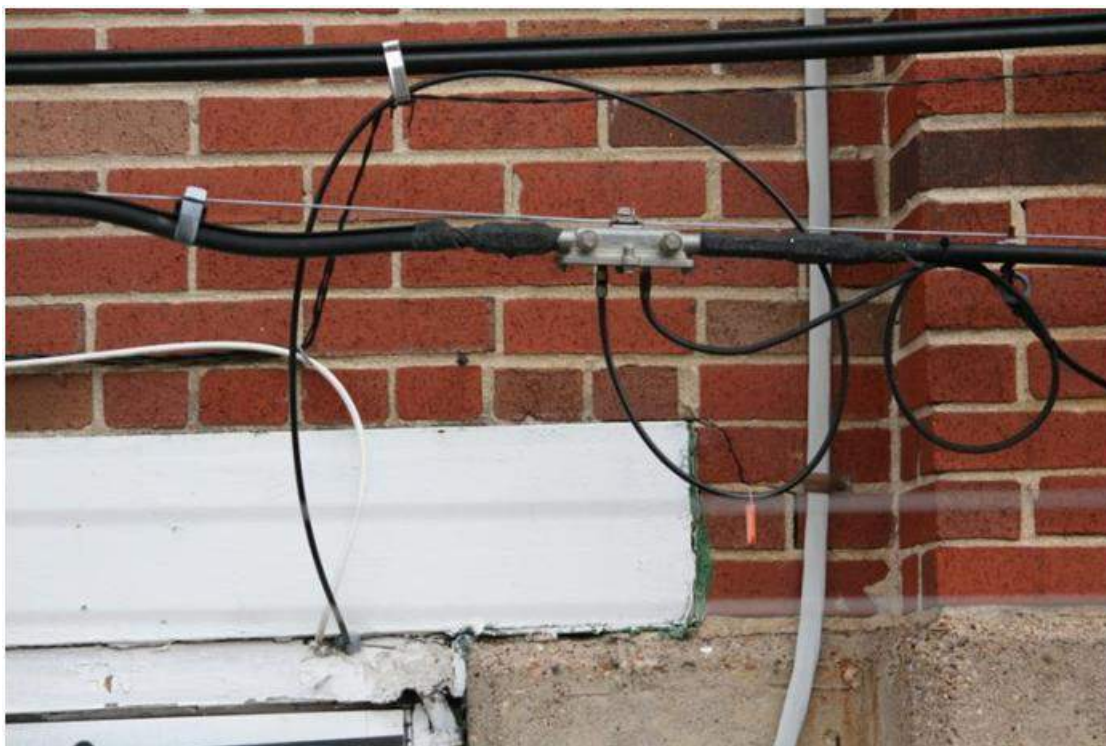
During our driveouts of other cable systems, CBG has found labels on some drops indicating that a ground was in place inside the residence and therefore not visible for outside inspections. This has been observed by CBG in Comcast’s systems in the Twin Cities area of Minnesota and in non-Comcast systems such as in St Cloud, MN and other locations. It is possible, and indeed likely, that some of the addresses we have noted have a bond/ground inside the building. In CBG’s opinion, these should always be labeled outside so Comcast and City inspectors are made aware of the bond/ground while doing an inspection.



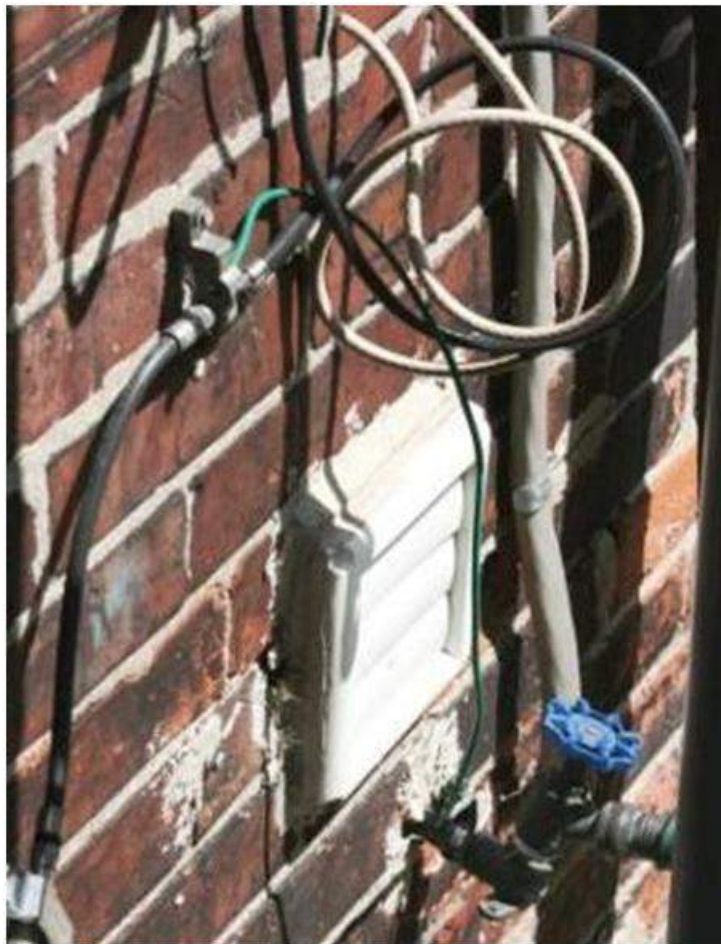
Picture 2. [REDACTED] - Proper bond - Bonding wire comes from Comcast's ground block and attaches to the metal meter box with an approved clamp. (Cable and ground wire though need better attachment to the building)



Picture 3. [REDACTED] – Cable goes directly into building. No visible ground/bond on drop and no tag to indicate ground/bond inside. (Comcast states: Fixed, grounded drop to adhere to BRIS [Comcast's Broadband Residential Installations Standards] Standard. 6/18/2014)



Picture 4. [REDACTED] – Drop goes directly from tap to enter building with no ground/bond visible and no tag to indicate ground/bond inside. (Comcast states: Active, knocked on door and called customer with no answer. Common ground inside. 6/18/2014).



Picture 5. [REDACTED] – Bonded incorrectly to outside water faucets or pipes. (Comcast states: moved ground from water 6/16/2014)

Service drops and hardline cables not properly attached to poles and hanging low from the strand between poles

Cable drops that are not properly attached to poles as the drops are hanging away from the pole, in some cases several feet, can create a tripping or entanglement hazard to the general public or a property owner as they come in contact with the cables. Additionally, these not-to-code drops create aesthetic problems. These cables often times are in what is referred to as the climbing area or climbing space of the pole. This area is to remain clear in order to provide a safe area of the pole for cable TV and other technicians to climb up to equipment fastened to the pole. Having this clear area on the pole is a safety concern and also a performance issue as someone climbing the pole can become entangled in the cables causing them to fall and/or causing them to damage the

drop. With much of the City having pole lines along its streets, this is perhaps the most visual Comcast problem in the City.²³⁴



Picture 6. Diamond St W & 5th St N – Drop not properly attached to pole – hangs out from pole creating a problem for workers climbing the pole. (Comcast states: Re-Jack strand, re-spliced strand, re-sag – completed 6/25/2014).)

²³⁴ CBG did not attempt to document all cases we drove past where drops were hanging lower than they should or where drops are touching phone infrastructure, but note that we observed numerous instances of these problems in addition to 21 such problems documented at the randomly sampled addresses selected for inspection.



***Picture 7. 2411 N 27th Street – Cables hanging down from strand only 6-7 feet above ground.
(Comcast states: Fixed, removed 4 drops 6/18/2014)***

Drops not properly attached to buildings

Cable TV drops must be properly attached to buildings in order to protect against early failure of the drop due to rubbing against the building or other facilities. In addition, proper attachment will ensure the safety of people that may come in contact with the drop and eliminate the possibility of them becoming entangled in the drop. Further, improperly attached drops droop from the building, negatively affect the appearance of the block, and if numerous, can have a significant impact on the aesthetic quality of the neighborhood.



Picture 8. [REDACTED] – Drop is not properly attached to the building. Drop is hanging in front of a window. (Comcast states: Not active, knocked on door and called customer with no answer. Common ground inside. 6/18/2014). NOTE: Explanation from Comcast doesn't match violation found.



Picture 9. [REDACTED] – Cable drop is not properly attached to building creating an entanglement potential and it is aesthetically problematic. (Comcast states: Fixed, removed unused drop and ran new drop and properly attached to the house. 6/19/2014).

Broken lashing wire and down guys that are missing, loose or dangling from the pole

Aerial (overhead) cable TV infrastructure is constructed by attaching a messenger strand cable from pole to pole, attaching it to the poles with heavy duty bolts, nuts and other hardware components. Once the messenger cable is in place, the cable television coaxial and fiber optic cables are strapped (lashed) to the messenger cable by wrapping a thin wire or multiple wires around both the coaxial/fiber cables and the messenger cable. The lashing wire is then secured or tied off at each pole by using a “bug nut” that is fastened to the messenger cable.

When lashing wire breaks it must be repaired before the cables become damaged by sagging into telephone or other low voltage facilities, or the weight of the cables pulls them out of their connectors. If the cables sag enough, they will violate NESC requirements for minimum clearance between the TV cables and other facilities, and minimum clearance between the cables and the ground.

CBG noted two violations with lashing wire in its inspection of the 250 random sample addresses²³⁵.

Poles at the end of a series of poles, or where the cables and wires angle off, such as around a curve in the road, must have a guy wire (down guy) to help support the poles and cables, keep the poles perpendicular to the ground, and maintain tension in the cables. Failure to install or properly maintain down guys places additional stress on the poles, leads to early failure of the pole(s), and can cause poles to fall into the right-of-way, dragging cables with them. In addition, if additional stress is applied to the cable or wire run, such as a pole being hit by a vehicle or ice loading on the cables and wires, one or more poles that would otherwise handle the added stress may fail without the additional support supplied by the missing or loose down guy. These conditions can jeopardize the safety of vehicles and pedestrians using the right-of-way. Down guys not properly attached to the pole or not properly anchored to the ground can lead to safety risks if the poles become stressed more than usual because the tension placed on the poles is not carried to the ground. Failure of the poles also creates the potential for failure of the cable system, and can damage and cause failure in systems of electricity, communications, and other providers occupying the poles²³⁶.

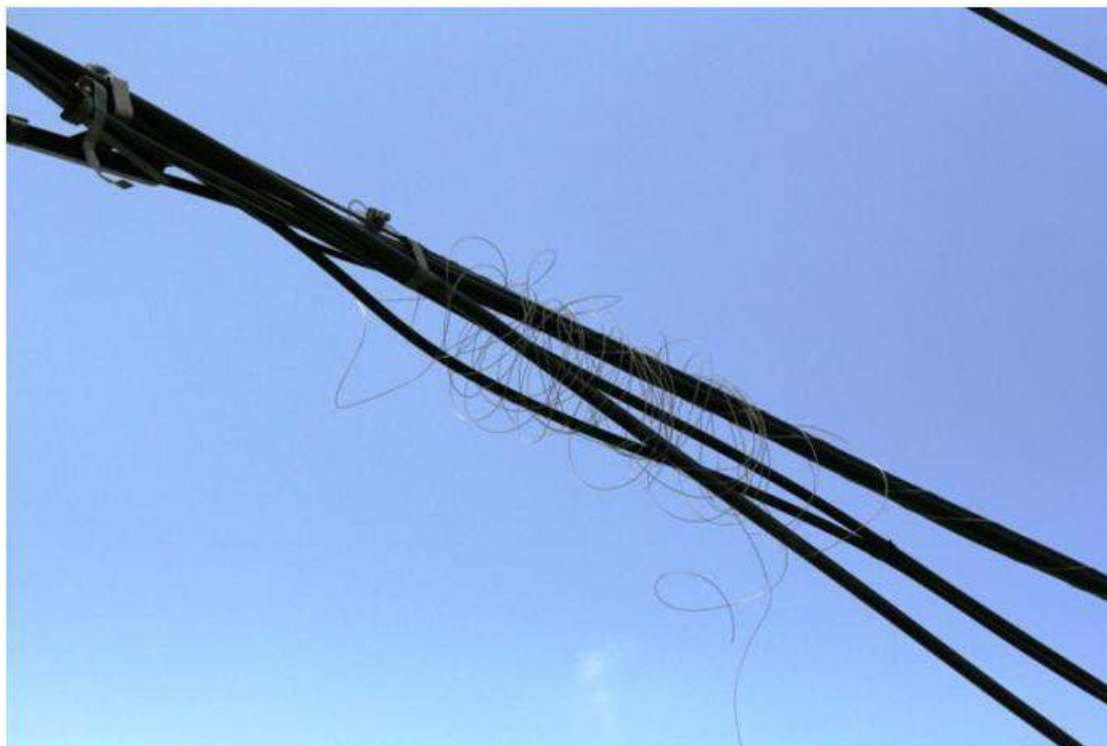
²³⁵ CBG also observed significant evidence of lashing wire that is broken and missing while driving from one randomly selected address to the next.

²³⁶ During the driveout, CBG observed and documented ten instances where a down guy was missing, loose or broken, and 20 instances of broken lashing wire at locations that were not included in the random sample of 250 addresses. Accordingly, these issues found are not part of the dataset used to project problems Citywide. Regardless, our observations are of concern as they reflect a lack of due maintenance and attention to portions of the physical plant in Philadelphia.



Picture 11 and 12. Palmetto Street & Oakmont Street – Missing down guy: This pole is at the end of a series of poles and under the NESC²³⁷, should be stabilized by a guy wire running from the pole to the ground in approximately the location of the arrow in the left picture. The circle shows hardware in place to connect a down guy to. This hardware is only used where a down guy is designed to be placed. The pole is leaning as a result of missing the guy wire, and guy wires from other occupants that should be in place as well, as shown in the right picture. (Comcast's response in July 15 letter: No Anchor in Homeowner's yard, no access. There would be clearance issue over sidewalk [sidewalk] if anchor was placed. 6/25/2014). Under the NESC, Comcast is responsible for guying Comcast-owned attachments to the pole, and is accordingly responsible for determining a solution as this pole is leaning and will likely continue to lean until it risks falling.

²³⁷ National Electrical Safety Code Section 264



Picture 13 and 14. 56th St & Lindbergh Blvd – Lashing wire is broken and cables are hanging down from strand. (Comcast's response: De-lash, re-lash complete. 6/30/2014)

Power supply and service boxes not locked

All power supplies and service boxes (power supply cabinets, fuse/breaker boxes and other cabinets containing electrically live equipment) must be locked pursuant to the NESC.²³⁸ One purpose of having power supplies enclosed in a locked cabinet is to keep water and debris out. In addition, locked cabinets keeps unauthorized persons from coming into contact with electrically live wires and equipment and the safety hazard they present. Furthermore, the batteries housed in the power supplies are costly and are prone to theft, which also “invites” people not qualified or authorized into a potentially hazardous situation. Providing locks on the access doors deters unauthorized access. Comcast has a significant number of power supplies with built-in locks. These appeared to be locked in most instances. However, the plant also has a significant number of power supplies and their corresponding service boxes that do not have permanent built-in locks. Many of these were not locked as required by code. CBG does not estimate the number of power supplies not locked as power supplies are installed at a small percentage of addresses in the City. However, we note that two power supplies were found to be unlocked at addresses in the random sample of 250 addresses.²³⁹

²³⁸ Section 224B2c of The NESC provides that “supply circuits included in such cables shall be terminated at points accessible only to qualified personnel.” Section 224B2e provides that “Terminal apparatus for the power supply shall be so arranged that the live parts are not accessible when such supply circuits are energized.” Locking equipment cabinets and boxes containing electrically live equipment is a standard cable industry practice for complying with these code requirements.

²³⁹ Nine unlocked power supplies were noted at addresses not included in the random sample, while one power supply appeared to be abandoned on the pole and doors were missing. Given the hazard presented by a live power supply that anyone can access, CBG believes the number of such issues observed indicates a maintenance issue that Comcast must address across its system.



Picture 15. 1607 N Cadwallader St – Power supply and breaker box are not locked. Box cover is missing. (Comcast’s response: Power supply removed. 6/20/2014)

All code violations found at the 250 inspected addresses in the random sample, including less frequently found violations, are identified and described in Exhibit D.1.²⁴⁰ Given the number and seriousness of the violations CBG directly observed, CBG believes it is important for the City to require, in any franchise renewal, that regular (and frequent) system inspections be performed by Comcast, with timely repair of code violations and other maintenance issues found.

²⁴⁰ The issues observed at locations that were not in the random sample, as described above, are shown in Exhibit D.2.

FINDINGS - CITYWIDE SYSTEM VIOLATIONS

Issues with drops as they leave the pole, pedestal or vault up to the side of the residence or business

The value of random sampling is that it allows researchers to offer predictive data within a margin of error. This technical inspection, using a random sample of 250 test points on a universe of 679,233 addresses, provides that reliably within $\pm 6.2\%$.

For example, during the driveout and inspection of the City, CBG found a total of 108 instances of Code violations, at 100 of the 250 (40%) randomly generated addresses, related to the drop from where it leaves the pole, pedestal or vault up to and including the side of the building. CBG projects that 40% of the 679,233 addresses in this plant audit have a code violation related to a service drop at the building.

The following table summarizes CBG's findings from its inspection of service drops in the random sample.

Table 19: Summary of Service Drop Code Violations

| Category | Number of Addresses | Percent of Random Sample | Projected Citywide in Philadelphia |
|---|---------------------|--------------------------|------------------------------------|
| Unable to inspect-No specific address identifiable or no access to address | 41 | 16% | 108,677 |
| No building at address | 19 | 8% | 54,339 |
| No drop at address | 14 | 6% | 40,754 |
| No problem found | 76 | 30% | 203,770 |
| Problem found (Grounding/bonding, cable clearances and attachments to buildings)* | 100 | 40% | 271,693 |
| Totals | 250 | 100% | 679,233 |

* Eight of the 100 addresses where code violations were observed had more than one violation,

Applied to the universe of addresses in Philadelphia, 21,735 addresses are projected to have more than the one violation per address indicated in Table 18, some of the service drops found non-compliant because of missing grounds or bonds may be properly grounded inside the building, where CBG could not inspect. Comcast in its response of July 15, 2014 stated that it had determined that five locations cited as "no bond on drop at building" in the City's June 5,

2014 notice letter, are properly grounded and bonded inside the structure²⁴¹. This would lower the number of *problem found* addresses from 100 to 95 and the estimated percentage of problems from 40% to 38% of addresses projected to have a service drop grounding/bonding violation citywide (the *no problem found* addresses are respectively increased by the amount of the decrease in *problem found* addresses).

CBG adjusted its projection of citywide *problem found* addresses to take account of Comcast's report in the July 15 letter, by removing those five addresses from *problem found* and adding them to *no problem found*. The adjustment is reflected in the fourth and fifth entries in Table 20.²⁴² Comcast has not to date verified with inside inspection or records documentation any of the remaining 44 instances of missing service drop grounds/bonds CBG found and the City identified in the June 5 notice letter. In its additional request for information dated August 8, 2014, the City asked Comcast whether it inspects, and maintains inspection records, to determine whether service drops have code-compliant inside grounds and bonds. In the October 7 Letter, Comcast states "Comcast does not keep records of inside versus outside drop grounding". While the observed and projected percentages for service drop grounding/bonding violations may be high to the extent that code-compliant inside grounds and bonds exist, since Comcast verified only five instances and does not keep records that would allow CBG to estimate the number of inside grounds/bonds, CBG can make no further adjustment.

Table 20: Adjusted Summary of Service Drop Code Violations

| Category | Number of Addresses | Percent of Random Sample | Projected Citywide in Philadelphia |
|--|---------------------|--------------------------|------------------------------------|
| Unable to inspect-No specific address identifiable or no access to address | 41 | 16% | 108,677 |
| No building at address | 19 | 8% | 54,339 |
| No drop at address | 14 | 6% | 40,754 |
| No problem found | 81 | 32 | 217,355 |
| Problem found (Grounding/bonding, cable clearances and attachments to buildings) | 95 | 38% | 258,109 |
| Totals | 250 | 100% | 679,233 |

To project citywide grounding/bonding violations, CBG used a subset of the random sample, consisting of only the addresses where CBG found and inspected a service drop, i.e. the 81 *no*

²⁴¹ In addition to the five inside drops, Comcast stated that it found no outside drop violation at six addresses where drop violations were identified by CBG. CBG directly observed and recorded violations at these addresses and has not adjusted its findings.

²⁴² In the same letter, Comcast confirmed a problem at 26 of the 75 addresses, stating, as indicated previously, that it made repairs at 26 of the 75 addresses noted as "No bond on drop at building" by CBG and Identified in the City's June 5 letter. These 26 addresses remain in the random sample as "problem found" addresses, as Comcast confirmed them as such by reporting them as investigated and repaired.

problem found addresses and the 95 *problem found* addresses identified in Table 20, for a total of 176 addresses from the random sample with a Comcast drop found and inspected by CBG.²⁴³ Based on 176 locations with a service drop, CBG projects that 475,463²⁴⁴ addresses in the City have one or more Comcast service drops, active or inactive. (Comcast is responsible for maintaining both active and inactive service drops in accordance with applicable codes so it does not affect CBG's results whether an inspected drop was active or inactive.) . Using these two subsets of random sample addresses, *problem found* and *no problem found*, CBG's projection of service drop violations (i.e. from the pole/pedestal/vault up to and including the exterior of the building) is as follows:

Table 21: Projection of City-wide Service Drop Code Violations Based on Addresses Inspected

| Category | Number of Random Sample Addresses | Percent of Random Sample Addresses | Projected Citywide Addresses With Drops |
|--|-----------------------------------|------------------------------------|---|
| No problem found | 81 | 46% | 218,713 |
| Problem found (grounding/bonding, cable clearances, and attachment to buildings) | 95 | 54% | 256,750 |
| Totals (based on subset of 475,463 addresses) | 176 | 100% | 475,463 |

CBG believes the projected number of addresses with drops in Table 21 is substantially understated because it does not include the addresses that CBG was unable to inspect (41 unable to inspect addresses from Table 20), the large majority of which CBG believes have drops. CBG was able to inspect for a drop at 209 of the 250 randomly selected addresses, as noted in Table 20. (Forty-One addresses could not be inspected.²⁴⁵). Of these 209, 14 addresses (7%) did not have drops, while the remainder (93%) did have drops. CBG therefore projects that 93 percent (93%) of the 41 unable to inspect addresses, i.e. 38 addresses, have drops. Accordingly, CBG adjusted the 475,463 addresses with drops projected citywide in Table 21 by including 38 addresses to the number of random sample addresses used for the citywide projection, for an

²⁴³ Stated another way, CBG removed from the random sample those addresses where there could not be a service drop because CBG found no building at the address (Table 21 second entry) or CBG found there was no drop at the address (Table 21 third entry), then used this adjusted sample to project service drop bonding/grounding violations citywide.

²⁴⁴ Comcast's October 7 letter reported drops in its system. The City's audit is based on a random sample of addresses, not drops, so the two totals are certain to be different. Additionally, assuming Comcast's record is accurate; the number of addresses with drops will be lower than the total number of drops because in CBG's experience with Comcast and other cable systems, some addresses have more than one active or inactive drop (e.g. multi-family row houses. This is supported by Comcast reporting over 600,000 drops for a current subscribership of under 300,000

²⁴⁵ For these addresses, CBG could not gain access or could not identify a specific address (see Methodology section above for explanation of *no specific address*), but CBG confirmed there were buildings at or near the address.

adjusted random sample of 214 addresses. This yields a projection of 584,140 total addresses citywide that have Comcast service drops, as shown in Table 22.²⁴⁶

Table 22: Adjusted Table of City-wide Service Drop Code Violations Based on Addresses Projected to Have a Comcast Service Drop

| Category | Number of Random Sample Addresses | Percent of Random Sample Addresses | Projected Citywide |
|--|-----------------------------------|------------------------------------|--------------------|
| No problem found | 81 | 38% | 221,973 |
| Problem found (grounding/bonding, cable clearances, and attachment to buildings) | 95 | 44% | 257,022 |
| Unable to inspect, projected to have service drops | 38 | 18% | 105,145 |
| *Totals (based on subset of 584,140 addresses) | 214 | 100% | 584,140 |

Issues at the pole or pedestal

During CBG's driveout inspection at the 250 randomly selected addresses, CBG documented code violations at 33 poles or pedestals at the sample addresses. These code violations are explained above and listed in Exhibit D.1 to this Report.

- CBG projected code violations at poles and pedestals citywide as follows: 34 code violations were found at 33 pedestals or poles serving one of the 250 random sample addresses. This equates to 13% of the poles or pedestals used by Comcast having a code violation.

²⁴⁶ Adjusting the random sample to include the projected number of "unable to inspect" addresses that have service drops, the citywide projection increases to 584,140 active and inactive drops. Additionally, some addresses in the City having more than one active or inactive drop and are not accounted for in this total. As noted above, Comcast provided the City with a total number of drops. CBG's projected total of 584,140 addresses with a service drop is within the margin of error when compared to Comcast's total.

Comcast's October 7 letter stated that in the four franchise areas, its cable facilities are attached to 99,440 poles and it maintains 7,221 pedestals, for a total of 106,661 poles and pedestals²⁴⁷. The following table summarizes CBG's findings from its inspection of poles, pedestals and vaults in the random sample and applies those findings to Comcast's reported number to project respective totals citywide:

Table 23. Summary of Pole and Pedestal, Code Violations

| Category | Number of Addresses | Percent of Random Sample | Projected Citywide Poles/Pedestals ²⁴⁸ |
|---|---------------------|--------------------------|---|
| No specific address found or no access to address | 19 | 8% | 8,533 |
| No problem found | 198 | 79% | 84,262 |
| Problem found | 33 | 13% | 13,866 |
| Total | 250 | 100% | 106,661 |

As for the projection of code violations in service drops, for which CBG removed addresses where no specific address could be determined or no access was possible, CBG adjusted the universe of addresses for this projection by removing the addresses where no cable TV infrastructure could be inspected. Specifically, CBG removed instances where specific addresses could not be identified or for which there was no access to the address. Unlike for service drops above, addresses with no building or no drop were not removed because poles and pedestals are not tied to specific buildings as drops are, and poles and pedestals for those addresses can be inspected because they are typically located in the right-of-way. Nineteen of the 250 addresses in the sample, or 8% were "no specific address found" or "no access to address." Applying that percentage to the universe of poles and pedestals equals 8,533 poles.

²⁴⁷ The 106,661 universe of Comcast plant does not include vaults because the City did not have the total number of vaults. However, vaults were inspected in the random sample inspection. All the vaults inspected during the random sample inspection are in the *no specific address* or *no problem found* categories. Tables 23 and 24 contain a mix of the random sample and pole/pedestal universe data. As such, the first two columns reflect the random sample and include vaults. However, the third column, "Projected Citywide Poles/Pedestals", does not include vaults. The result of this exclusion of vaults from the City-wide universe is that the universe presented is smaller than the actual universe. So if vaults were added to the universe total (currently 106,661), the total number of addresses in the "Projected Citywide Poles/Pedestals" columns would increase proportionality to the number of vaults added to the universe because the percentages in the "Percent of Random Sample" column remain the same as they already include vault inspections.

²⁴⁸ Ibid.

To create the adjusted subset: $106,661 - 8,533 = 98,128$ poles in the new subset. Again we must adjust the random sample to subtract the 19 addresses in the first table entry above. This equates to $250 - 19$, for an adjusted sample of 231. Using the adjusted subset and the adjusted sample, CBG's projection of code violations at poles and pedestals is as follows:

Table 24: Adjusted Projection of City-wide Code Violations at Poles and Pedestals Removing Uninspected Addresses

| Category | Number of Addresses | Percent of Random Sample | Projected Citywide Poles/Pedestals ²⁴⁹ |
|------------------|---------------------|--------------------------|---|
| No problem found | 198 | 86% | 84,390 |
| Problem found | 33 | 14% | 13,738 |
| Totals | 231 | 100% | 98,128 |

²⁴⁹ Ibid.

TECHNICAL REVIEW - CONCLUSIONS AND RECOMMENDATIONS

CBG finds that Comcast has substantial maintenance and code compliance failures in its Philadelphia cable plant, creating safety risks and not meeting its obligation under the current franchise agreements to maintain its plant in accordance with the National Electrical Safety Code and the National Electrical Code. CBG inspected a randomly selected sample of 250 addresses from the City's database of all addresses in Philadelphia. At each address, CBG inspected Comcast cable drops at the sample addresses, poles in the public right-of-way with cable facilities attached to them, and pedestals and vaults containing cable facilities. CBG found more than 100 addresses in the sample with Comcast cable facilities that did not comply with the NESC or NEC. CBG used data provided by Comcast and the City and standard statistical methods to project the number of violations in Comcast's cable plant citywide. The projection shows that Comcast facilities at more than 200,000 addresses in the City have code compliance failures. Specifically, CBG projects that 256,750 addresses citywide have a service drop with an NESC or NEC code violation (Table 19), and 13,738 addresses citywide have a pole or pedestal with an NESC or NEC code violation. (As described in Footnote 229, CBG directly observed another 76 code violations that are not part of the random sample and are not used for projections, but in CBG's opinion, further reflect the condition of the citywide cable plant.)

In addition to inspecting Comcast's cable plant, CBG evaluated Comcast's current system capacity and the trend over time of bandwidth usage. CBG found that Comcast's cable system is adequate for the City's current needs, but also found that Comcast is dedicating more and more bandwidth to non-cable television services such as broadband internet service and data transport services. As the cable industry continues its transition to high definition programming and even higher resolution standards to meet subscriber demand, Comcast's allocation of bandwidth on the cable system to non-cable services creates a risk that the system will not have the capacity to meet the needs of the City throughout the term of a renewed franchise without significantly upgrading system capacity or otherwise reversing this trend.

CBG also performed subjective viewing tests on standard definition and high definition channels at eight locations within the City to evaluate signal quality. CBG found that in general, the HD channels on the system are very crisp with little, if any, pixelation or other undesired attributes noted. CBG's observation of the SD channels showed a varying degree of unwanted attributes that appear as noise in the pictures.

CBG evaluated other aspects of Comcast's system as described in this report. In general, these other elements of CBG's review did not identify issues that it believes the City must address at this time or as part of the franchise renewal.

Based on its findings described in this report, CBG makes the following recommendations:

The City should require Comcast to produce an inspection plan and correct all code violations under the current franchise - Given the number and seriousness of the code violations that CBG directly observed in the audit and the large number that CBG projects across the City as a result of its statistical analysis, CBG recommends that the City require Comcast to provide a detailed inspection and repair plan which addresses these and all issues and code violations

throughout the four franchise areas. This inspection and repair plan should include a requirement on all drops that are grounded and bonded inside the building to be labeled as such on the outside of the building near where the cable enters the facility. Comcast should be required to implement this plan in the short term, under the current franchise, and the same requirement should be included in any renewal franchises. Specific issues and code violations that should be inspected for, initially and then on a regular basis at intervals of at least annually, include, but are not limited to, the plant and equipment components identified in the CBG's recommendation immediately below.

The City should require regular inspection of infrastructure, timely repairs, with accurate documentation provided to the City on a regular basis - Comcast must be required to maintain its system infrastructure in a safe manner and ensure it protects the public as well as technicians and others that must enter the areas around cable TV infrastructure. Comcast should first resolve all the problems noted in Exhibit D.1. As discussed above, Comcast responded to Exhibit D.1 in its July 15 letter. However, for 35 of the grounding/bonding violations identified, Comcast reported the drop as grounded inside the building but did not report inspecting or verifying the ground, and for another nine grounding/bonding violations, Comcast did not respond (see Table 18). Together, 59% of the violations identified, remain open until proper inside grounding/bonding or correction is verified by inspection. For poles and pedestals, Comcast's report indicated that 20 (59%) of the violations the City identified were repaired by Comcast, 6 (18%) violations were found to be ok, and 8 (24%) violations had not been corrected or verified by Comcast. These violations, found in Exhibit D.1, must still be addressed by Comcast.

The City should require a repair and maintenance program be implemented to address the many similar violations that, based on statistical probability, exist in the City - This program should be designed to continually inspect all cable TV infrastructure from the headend locations, up to and including at the subscribers' residences or business locations. Documentation should be provided to the City detailing problems found, dates found and repaired and the ultimate resolution. These inspections and repairs should include, but not be limited to:

- Proper grounding and bonding at the residence or business
- Proper clearance of aerial cables to the ground and roadways
- Drops properly attached to poles
- Down guys and guys over roads properly installed and tensioned
- Hardline cables properly attached to the pole and protected
- Power supplies locked
- Apartment boxes secured, neat and bonded to power and phone
- Pedestals in good condition, properly placed and secure from unauthorized entry, replace faulty doors, smashed covers, etc.
- Proper grounding and bonding at the poles and pedestals
- Proper clearances between facilities and providers on poles and from the pole to the residence
- Drops properly buried in a timely manner (all the way from the pedestal to the home or business)
- Ground rods sticking out of the ground

In addition, the City should perform spot checks on a regular basis to determine if the system is being maintained as required by both the NESC and NEC and as required in the current and future franchises.

The City should perform a triennial system design and bandwidth review - As subscribers' desires and needs increase over time, the system's capacity may need to increase. It is difficult to predict what bandwidth needs will be in just a few years, let alone over the course of a 10 year or longer franchise term. For instance, DOCSIS cable modem technology now allows the operator to expand available Internet access speeds and throughputs by utilizing additional channels or space on the system. Although this improves subscribers' Internet speeds it also decreases the bandwidth for Cable TV services. Furthermore, new services will come along and the number of high definition, 4K high definition and 3DTV or other advanced services or channels will continue to increase as these become even more the preferred, if not demanded, means of TV watching.

Possible methods of minimizing the impact of additional bandwidth needs include upgrading the system to 1,000 MHz, upgrading the system to FTTP architecture and deployment of SDV. These and other options should be reviewed and considered as part of franchise renewal, at a minimum during a required Franchise triennial technical review.

The City should require future system testing, with documentation, for FCC compliance – The City should require Comcast to test the system to show compliance with FCC regulations, specifically 47 C.F.R. § 76.640, at a minimum of eight locations in the City. Comcast should be required to document the results of this testing and provide copies to the City in place of their previously regularly scheduled FCC POP testing, which is no longer required.

The City should perform additional testing of picture quality – The City should review CBG's findings related to SD channel picture quality with Comcast and perform additional subjective testing, on a regular basis, in cooperation with Comcast, to further understand what issues subscribers may have. This testing can be done with Comcast converters and a television with a screen size of at least 40 inches.

EXHIBITS





communications, inc.

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EXHIBITS

REPORT ON CABLE TELEVISION-RELATED NEEDS AND INTERESTS, AND SYSTEM TECHNICAL REVIEW IN THE COMCAST FRANCHISE AREAS OF THE CITY OF PHILADELPHIA, PENNSYLVANIA

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EXHIBIT A-1

Cable Television Residential
Subscriber/Non-Subscriber
Random Sample Telephone
Survey Markup



EXHIBIT A.1

CABLE TELEVISION RESIDENTIAL SUBSCRIBER/NON-SUBSCRIBER RANDOM SAMPLE TELEPHONE SURVEY MARKUP

**PHILADELPHIA OFFICE OF INNOVATION AND TECHNOLOGY
CABLE TELEVISION SUBSCRIBER/NON-SUBSCRIBER RANDOM SAMPLE
TELEPHONE SURVEY MARKUP**

(N=800, 400 Subscribers and 400 Non-Subscribers)
(Landline sample=68%/540 and Cell Phone sample=32%/260)

INTRODUCTION: Hello, this is _____. The City of Philadelphia is gathering information about community needs from local residents about regarding cable television service, whether you subscribe to Comcast cable or not. Would you be willing to answer questions about cable television service in Philadelphia? **(ALL CAPS ARE INSTRUCTIONS TO THE INTERVIEWER)**
(IF PROMPTED FOR HOW LONG THE SURVEY WILL TAKE: 14 MINUTES FOR SUBSCRIBERS, 8 MINUTES FOR NON-SUBSCRIBERS.)

QUALIFIER:

Do you make or share equally in the decision as to whether your household subscribes to cable television?

YES 100%

NO

(Could I speak to the person in your household who does make or participate equally in that decision?)

| |
|---|
| IF THEY HAVE QUESTIONS/CONCERNS, THEY MAY CALL OIT: |
|---|

1. You must be 18 years or older to complete the survey, what is your age? (Enter age).
[Note: Also enter responses that are age descriptions such as “very old” as “refused/other”]

<18 - TERM

refused /other - CONTINUE (Range 18-93, Mean=52.63, Mode=50)

Subscriber (18-92 years old), Mean=54.23, Mode=50

Non-Subscriber (Range 18-93 years old), Mean=51, Mode=50

- 1a. Do you live within the City of Philadelphia limits?

- a. Yes N=800/100%
- b. No - Terminate
- c. Refuse - Terminate

1b. What is your zip code? (N=800)¹

| Zip Code | Zip Code | Zip Code | Zip Code | Zip Code |
|------------|------------|------------|------------|------------|
| 19102 (4) | 19118 (11) | 19128 (21) | 19137 (8) | 19146 (18) |
| 19103 (8) | 19119 (27) | 19129 (4) | 19138 (15) | 19147 (15) |
| 19104 (11) | 19120 (18) | 19130 (7) | 19139 (25) | 19148 (21) |
| 19106 (7) | 19121 (16) | 19131 (31) | 19140 (28) | 19149 (26) |
| 19107 (7) | 19122 (10) | 19132 (16) | 19141 (15) | 19150 (18) |
| 19111 (32) | 19123 (6) | 19133 (8) | 19142 (14) | 19151 (17) |
| 19114 (25) | 19124 (29) | 19134 (17) | 19143 (36) | 19152 (24) |
| 19115 (21) | 19125 (12) | 19135 (30) | 19144 (20) | 19153 (6) |
| 19116 (7) | 19126 (5) | 19136 (25) | 19145 (19) | 19154 (18) |

2. Does your household currently subscribe to Comcast cable television?

1. YES → SKIP TO Q6 Subscriber quota 50%, N=400
2. NO → CONTINUE Non-subscriber quota 50%, N=400
3. Refused - term

3. Have you **ever** subscribed to Comcast cable television service in Philadelphia?

1. YES → SKIP TO Q5 BELOW 64%
2. NO → CONTINUE 36%

4. (IF NO TO Q3) For what reasons have you **never** subscribed to Comcast cable TV in your community? (DO NOT READ CATEGORIES. PROBE AND CLARIFY FULLY, AS NEEDED. RECORD UP TO 3 INITIAL RESPONSES **BUT DO NOT PROMPT** FOR THEM) (N=144)

Top 6 First Mention

1. Not available 4%
2. Cost 35%
3. Satellite Subscriber/DirecTV/Dish 21%
4. Don't Want/Don't Watch TV/No time to watch TV 15%
5. Prefer to watch free over-the-air TV channels 6%
6. Unfavorable view of cable company 5%

¹142 respondents refused to provide a zip code and an additional 28 provided an incomplete or invalid zip code (4 digits recorded, typographical error, etc.)

5. (IF YES TO Q3) Why did you **stop subscribing** to Comcast cable television service?
(DO NOT READ CATEGORIES. PROBE AND CLARIFY FULLY. RECORD UP TO 3 INITIAL RESPONSES **BUT DO NOT PROMPT FOR THREE.**) (N=256)

Top 6 First Mention

- | | |
|--|-----|
| 1. Cost | 58% |
| 2. Billing issues/problems | 7% |
| 3. Moved | 7% |
| 4. Changed providers (i.e. Verizon, FiOS) | 5% |
| 5. Service Issues | 5% |
| 6. Poor customer service, difficult to deal with | 2% |

NON SUBSCRIBERS SKIP TO Q.9

6. (IF YES TO Q2) How many years have you had Comcast cable television service at your current address?

_____ YEARS ★

(N=400), Range 1-54 years, Mean=8.7 years

Mode=1 year, Median=5 years

7. Which of the following levels of cable television service do you subscribe to?
- | | |
|---|-----|
| 1. Basic Service, which has about 36 channels | 20% |
| 2. Digital Economy, which has about 45 channels. | 9% |
| 3. Digital Starter service, which includes about 80 channels. | 13% |
| 4. Digital Preferred service, which has more than 160 channels, or a higher tier of service | 55% |
| 5. Other, Specify: (Weren't sure of name of package and provided description) | 4% |
8. Do you watch mostly High Definition/HD Channels? (N=400)
- | | |
|--|-----|
| a. Yes | 47% |
| b. No | 40% |
| c. Watch both equally or watch both the same | 11% |
| d. Don't get HD channels | 3% |

ASK EVERYONE

9. Do you subscribe to Comcast's Xfinity broadband or high-speed Internet service? (N=800)

| | YES (GO TO Q11) | NO (GO TO Q10) |
|-----------------|-----------------|----------------|
| All | 38% | 62% |
| Subscribers | 70% (N=279) | 30% (N=121) |
| Non-Subscribers | 7% (N=27) | 93% (N=373) |

10. Do you have Internet access at home? (N=494; N=121 Subs, N=373 Non-Subs)

| | YES | NO |
|-----------------|-------------|-------------|
| All | 60% | 40% |
| Subscribers | 45% (N=54) | 55% (N=67) |
| Non-Subscribers | 65% (N=243) | 35% (N=130) |

*No Internet at home (N=197/25% of total sample)

11. Do you subscribe to Comcast's phone service? (N=800)

| | YES | NO |
|-----------------|-------------|-------------|
| All | 33% | 67% |
| Subscribers | 64% (N=255) | 36% (N=145) |
| Non-Subscribers | 3% (N=12) | 97% (N=388) |

NON-SUBSCRIBERS (THOSE ANSWERING "NO" TO Q2) WHO ANSWER "NO" TO BOTH Q9 AND Q11 MOVE TO Q28.

12. How much is your total monthly Comcast bill on average, including all services and fees?

[DNR] Don't Know
All Subscribers/Non-Subscribers (N=800),
Mean=\$152.62, Mode=\$200, Median=\$150.00

| | | |
|-----------------|-----------------------|-------------------------------|
| Subscribers | Mean=\$154.86 (N=400) | Range: \$16-\$790; Mode=\$200 |
| Non-Subscribers | Mean=\$117.62 (N=22) | Range: \$14-\$460; Mode=\$80 |

NON-SUBSCRIBERS (THOSE WHO ANSWERED "NO" TO Q2) SKIP TO Q28.

ASK SUBSCRIBERS ONLY (THOSE WHO ANSWERED "YES" TO Q2.)

13. My next few questions are about Comcast. Overall, how satisfied are you with your current cable television service? (READ LIST) (N=400)

| | | |
|----|---|-----|
| 1. | Very Satisfied → SKIP TO Q.15 | 23% |
| 2. | Satisfied} → SKIP TO Q.15 | 51% |
| 3. | Dissatisfied} → CONTINUE | 17% |
| 4. | Very Dissatisfied} → CONTINUE | 9% |
| 5. | (DO NOT READ) Don't Know → SKIP TO Q.15 | 0% |

14. For what reason are you not “Very Satisfied or Satisfied” -- that is, what could Comcast do **better** to make you **consider** a more positive rating? (DO NOT READ. ATTEMPT TO PLACE RESPONSE WITHIN ESTABLISHED CATEGORY OR ADD OTHER. **CODE TOP 3 RESPONSES IN ORDER MENTIONED. DO NOT PROMPT**)

Top 5 Responses (N=102)

- | | |
|--|-----|
| 1. Lower rates | 45% |
| 2. Programming issues | 12% |
| 3. Outages/interrupted service | 8% |
| 4. Better phone-based customer service | 6% |
| 5. Other, specify | 24% |
| 1. Customer service issue | |
| 2. Kept cutting out | |

15. Now I’m going to read you a list of cable TV **service features**. For each one I read, please rate your cable television service as either: Very Satisfied, Satisfied, Dissatisfied or Very Dissatisfied. The first one is . . . (INSERT ITEM, STARTING AT “a”) Overall, how satisfied are you with (ITEM), Very Satisfied, Satisfied, Dissatisfied, or Very Dissatisfied? (ASK FOR EACH ITEM, REPEATING SCALE AS NEEDED).

| | | Very Satisfied | Satisfied | Dissatisfied | Very Dissatisfied | Don’t Know |
|---|--|----------------|-----------|--------------|-------------------|------------|
| a | The picture quality | 40% | 57% | 3% | 0% | 0% |
| b | The sound level consistency across channels | 27% | 62% | 8% | 2% | 1% |
| c | Billing practices | 14% | 48% | 23% | 11% | 4% |
| d | Communications regarding rates and programming changes | 11% | 50% | 23% | 11% | 5% |

ASK ALL SUBSCRIBERS

16. Have you had a service call in the past year? (N=400)
- | | |
|-----|----------------|
| YES | NO (GO TO Q17) |
| 46% | 54% |

16a. Now I'm going to read you a list of cable TV service issues. For each one I read, please rate your cable television service issue as either: Very Satisfied, Satisfied, Dissatisfied or Very Dissatisfied. The first one is . . . (INSERT ITEM, STARTING AT "a") Overall, how satisfied were you with (ITEM), Very Satisfied, Satisfied, Dissatisfied, or Very Dissatisfied? (ASK FOR EACH ITEM, REPEATING SCALE AS NEEDED). (N=184)

| Service Issues | Very Satisfied | Satisfied | Dissatisfied | Very Dissatisfied | Don't Know/ Not Applicable |
|---|----------------|-----------|--------------|-------------------|----------------------------|
| a. The available times for service | 20% | 58% | 13% | 7% | 2% |
| b. The arrival time of the service technician | 22% | 56% | 12% | 8% | 3% |

17. Now, I'm going to ask you about any phone contacts you may have had with Comcast. During the **past year**, have you **called** Comcast for any reason other than installation? (N=400)

| | | |
|-----|----------------|----------------------------|
| YES | NO (GO TO Q22) | DON'T REMEMBER (GO TO Q22) |
| 64% | 34% | 2% |

18. For what **reason(s)** have you **called** Comcast during the past year? (DO NOT READ LIST. PROBE AND CLARIFY. CIRCLE ALL MENTIONS).

First Response (N=257)

| | |
|--|----------|
| 1. Cable outage/loss of signal | 16% |
| 2. Signal quality problems (picture, sound) | 10% |
| 3. Billing questions | 28% |
| 4. To change type of service subscribed to (add/remove channels) | 5% |
| 5. To change number of TV sets connected to cable | 1% |
| 6. Order pay-per-view event | .4% |
| 7. Request additional programming (channel or program) | 2% |
| 8. Request cable modem service | 5% |
| 9. Problem with my cable modem service | 11% |
| 10. Don't know/don't remember | 1% |
| 11. Other, specify | 20%/N=52 |
| They had a promotion | |
| Equipment problems/issues | |
| Phone problems | |
| Internet problems/going out | |
| Technical issues | |

19. When you called Comcast's office, did you get a busy signal before you got through? (N=257)

| | | |
|-----|-----|-----------------------------|
| YES | NO | DON'T REMEMBER (DON'T READ) |
| 15% | 81% | 4% |

20. Was your call answered, including any time you were left on hold, within 30 seconds by a Comcast customer service representative? (N=257)

| | | |
|-----|-----|-----------------------------|
| YES | NO | DON'T REMEMBER (DON'T READ) |
| 33% | 61% | 6% |

21. If your call to Comcast was to report a problem or request service, how long after your contact did Comcast begin working on the problem? (N=257)
Would you say...

| | |
|---|-----|
| a. The same day reported | 42% |
| b. The next business day | 16% |
| c. Days later | 14% |
| d. About a week. | 7% |
| e. About a month. | 3% |
| f. Problem never resolved. | 10% |
| g. Don't know/Can't remember (DON'T READ) | 7% |

ASK ALL SUBSCRIBERS

22. My next few questions are about cable signal **outages**. During the **past two years**, have you ever **lost** your entire cable signal for a period of more than **24-hours** when you still had electricity? (N=400)

| | | |
|-----|----------------|---------------------------------|
| YES | NO (GO TO Q24) | DON'T REMEMBER/KNOW (GO TO Q24) |
| 17% | 80% | 3% |

23. Did you receive a credit or refund on your cable bill from Comcast for the amount of time you went without cable television service? (N=69)

| | | |
|-----|-----|---------------------|
| YES | NO | DON'T REMEMBER/KNOW |
| 22% | 61% | 17% |

24. In the past year, have you had any significant problems with picture clarity or reception? (N=400)

| | |
|-----|--|
| YES | NO (GO TO EITHER Q27 OR Q28 – SEE QUALIFIER BLOCKED OFF BELOW) |
| 19% | 81% |

25. Have you had reoccurring problems with picture clarity or reception constantly, every few days, a few times a month or rarely? (N=76)

| | |
|------------------------|-----|
| 1. Constantly | 11% |
| 2. Every few days | 9% |
| 3. A few times a month | 26% |
| 4. Rarely | 53% |
| 5. Don't Know | 1% |

26. On which channels do you most frequently experience picture clarity or reception problems? Full list attached.

Top Mentions (N=76)

1. Channel 3
2. Channel 6
3. Channel 10
4. All of them
5. ESPN
6. On Demand Service

ASK Q 27 TO ALL SUBSCRIBERS WHO ANSWERED "YES" TO Q22 OR Q24;
OTHERWISE CONTINUE TO Q28.

27. How satisfied were you with the length of time it took Comcast to resolve your reception problem or restore your service? Would you say you were . . . (READ LIST) (N=121)

| | |
|-----------------------------|-----|
| 1. Very Satisfied | 16% |
| 2. Satisfied | 36% |
| 3. Dissatisfied | 26% |
| 4. Very Dissatisfied | 10% |
| 5. (DO NOT READ) Don't Know | 13% |

ASK EVERYONE

28. The cable company currently sets aside a portion of its channels to be used by the organizations and people within Philadelphia to produce local community programming. These channels are currently used by government, educational and public access television producers. (N=800)

Are you aware of these channels?

YES (SUBS GO TO Q30, NON-SUBS CONTINUE) 58%
Subscribers (N=272) 68% Non-Subscribers 48% (N=190)

NO (SUBS, GO TO Q38; NON-SUBS, CONTINUE) 42%
Subscribers (N=128) 32% Non-Subscribers 52% (N=210)

ASK Q29 ONLY FOR NON-SUBSCRIBERS

29. Do you have an interest in being able to receive local government, education, and public access programming? (N=400)

| | | |
|-----|----|-----|
| YES | or | NO |
| 38% | | 62% |

ALL NON-SUBSCRIBERS GO TO Q41

30. How often do you watch City of Philadelphia local government programming that appears on local channel 64? Programming includes City Council, 100 Most Wanted, Fire Department programming, and news from the Mayor's Office. (READ LIST) (N=272)

- | | |
|---|-----|
| a. More than 5 hours per week. (GO TO Q31) | 6% |
| b. Less than 5 hours per week, but on a weekly basis. (GO TO Q31) | 14% |
| c. Once or twice per month. (GO TO Q31) | 19% |
| d. Once or twice a year. SKIP TO Q32 | 15% |
| e. Never SKIP TO Q32 | 45% |
| f. Don't Know SKIP TO Q32 | 1% |

31. I want you to consider the government programming you've seen on Channel 64. Please rate the following areas on a scale of excellent, good, fair or poor. (N=107)

| | Government Access Channels | Excellent | Good | Fair | Poor | Don't Know |
|---|---|-----------|------|------|------|------------|
| A | Government Access' picture quality | 14% | 53% | 24% | 4% | 5% |
| B | Government Access' sound quality | 14% | 54% | 22% | 6% | 5% |
| C | Government Access programming's informational value. | 17% | 56% | 18% | 1% | 8% |

32. How often do you watch locally produced, Community and Public Access programming that appears on PhillyCAM, Channel 66 and 966? (N=272)

These Channels provide local community-based programming including, for example, Unsolved Philadelphia, Reelblack TV, Buzz Club, The Hype and Neighborhood Sports Showdown), (READ LIST)

- | | |
|---|-----|
| a. More than 5 hours per week. (GO TO Q33) | 3% |
| b. Less than 5 hours per week, but on a weekly basis. (GO TO Q33) | 11% |
| c. Once or twice per month. (GO TO Q33) | 14% |
| d. Once or twice a year. SKIP TO Q34 | 11% |
| e. Never SKIP TO Q34 | 58% |
| f. Don't Know SKIP TO Q34 | 3% |

33. Now consider the quality of the PhillyCAM programs on Channel 66 and 966. The rating categories again are excellent, good, fair or poor. (N=77)

| | PhillyCAM Access Channel | Excellent | Good | Fair | Poor | Don't Know |
|---|--|-----------|------|------|------|------------|
| A | The PhillyCAM channels picture quality | 16% | 49% | 27% | 7% | 1% |
| B | The PhillyCAM channels sound quality | 20% | 52% | 21% | 7% | 1% |
| C | The overall value of PhillyCAM's programming. | 22% | 58% | 17% | -- | 3% |

34. How often do you watch locally produced, Educational Access programming that appears on Channel 52, the Philadelphia K-12 Public Schools Channel? (N=272)

This channel provides K-12 programs and important school news, as well as coverage of school board meetings. (READ LIST)

- | | |
|---|-----|
| a. More than 5 hours per week. | 5% |
| b. Less than 5 hours per week, but on a weekly basis. | 9% |
| c. Once or twice per month. | 9% |
| d. Once or twice a year. | 10% |
| e. Never | 65% |
| f. Don't Know | 2% |

35. How often do you watch locally produced, Educational Access programming that appears on the channels dedicated to higher education, channels 50, 53, 54 and 55? (N=272)

These channels provide local college programming from Drexel, Temple and LaSalle as well as the Community College of Philadelphia. (READ LIST)

- | | |
|--|-----|
| a. More than 5 hours per week. (CONTINUE) | 4% |
| b. Less than 5 hours per week, but on a weekly basis. (CONTINUE) | 10% |
| c. Once or twice per month. (CONTINUE) | 12% |
| d. Once or twice a year. (CONTINUE) | 10% |
| e. Never (CONTINUE) | 62% |
| f. Don't Know (CONTINUE) | 2% |

ASK ALL SUBSCRIBERS Q36 AND Q37 WHO WATCH SOME FORM OF ACCESS CHANNEL PROGRAMMING AT LEAST ONCE OR TWICE PER MONTH – ALL SUBSCRIBERS ANSWERING “YES” TO Q2 AND “YES” TO Q28 AND ANSWERING a, b OR c, FOR Q30 **OR Q32 **OR** Q34 **OR** Q35.**

36. How valuable would it be to you to be able to receive local community channels in high definition/HD? Would you say it is Very Valuable, Valuable, Somewhat Valuable or Not at all Valuable (SAME AS “NOT VALUABLE”)? (N=139)

- | | |
|------------------------|-----|
| a. Very Valuable | 18% |
| b. Valuable | 20% |
| c. Somewhat Valuable | 29% |
| d. Not at all Valuable | 31% |
| e. Don’t know/Refuse | 3% |

37. Comcast has a service known as “On Demand” which allows viewers to access programming at any time. How valuable would it be to you to have local access programming provided on-demand on the cable system? (N=139)

- | | |
|------------------------|-----|
| a. Very valuable | 32% |
| b. Valuable | 24% |
| c. Somewhat valuable | 17% |
| d. Not at all valuable | 22% |
| e. Don’t know/Refuse | 4% |

GO TO Q39

ASK ALL OTHER SUBSCRIBERS Q38 WHO WATCH SOME FORM OF ACCESS CHANNEL PROGRAMMING LESS THAN ONCE OR TWICE PER MONTH OR ARE NOT AWARE – ALL SUBSCRIBERS ANSWERING: “YES” TO Q2 AND “YES” TO Q28 AND ANSWERING d, e OR f, FOR Q30 **AND Q32 **AND** Q34 **AND** Q35; OR “YES” TO Q2 AND “NO” TO Q28.**

38. Since you indicated that you weren’t aware or weren’t a regular viewer of the local access channels, we’re curious if there is any local programming you might find valuable on the cable system. Is there anything you would like to see added to enhance local programming in Philadelphia? TOP OF HEAD, CREATE CATEGORIES AS NEEDED.

See attached list.

39. Regardless of how often you might watch, how important is it that these local community channels are available to cable subscribers? Would you say it is Very Important, Important, Somewhat Important or Not at all Important (SAME AS “NOT IMPORTANT”)? (N=400)

| | |
|-------------------------|-----|
| a. Very Important | 34% |
| b. Important | 26% |
| c. Somewhat Important | 24% |
| d. Not at all Important | 13% |
| e. Don't know/Refuse | 2% |

ASK ALL SUBSCRIBERS

40. In other cities like Philadelphia, a portion of the cable bill goes to support the production of the programming you see on the local educational, community and governmental channels. Considering that channels like ESPN cost you around \$5.00 per month and TNT around \$1.16 per month, how much would you be willing to pay per month to support local programming? TOP OF HEAD RECALL. (N=400)

Range (\$0 to \$25)

Mean=\$1.41

Mode=\$0 (46%)

Ranges: (N=400)

| | | |
|---|-----|---------|
| Equal to \$0 | 46% | (N=184) |
| Greater than \$0 but less than \$1 | 2% | (N=7) |
| Greater than/Equal to \$1 but less than \$5 | 22% | (N=89) |
| Equal to \$5 or greater | 13% | (N=51) |
| Don't Know/Not sure what amount | 14% | (N=56) |
| Refused | 3% | (N=13) |

ASK EVERYONE EXCEPT THOSE THAT ANSWERED YES TO Q9; THESE GO TO Q44

Internet Questions

My next few questions are about Online Access.

ASK Q41 AND Q41a TO THOSE WHO SAID NO TO Q9 AND YES TO Q10.

41. You indicated earlier that you have internet access at home. Who provides that service?
(N=297/37%)

- a. Verizon 75%/N=223
FOLLOW WITH: Is that service?
 - 1. Dial-Up 7%/N=13
 - 2. DSL 52%/N=104
 - 3. FiOS 41%/N=106
- b. FiOS (included with Verizon above)
- c. RCN .3%
- d. Wilco --
- e. Dish 1%
- f. DirectTV 2%
- g. Wild Blue --
- h. Hughes --
- i. Clear 5%
- j. Other, specify 17%/N=51

41a. Why did you choose this connection type and service provider? CODE ALL MENTIONS, BUILD LIST AS NEEDED RECORD UP TO 3 RESPONSES BUT DO NOT PROMPT FOR 3. (N=297)

- a. Cost 42%
- b. Speed 6%
- c. Only available service 6%
- d. Most reliable in my area 14%
- e. Other 32%
 - 1. Already have phone service with them
 - 2. Recommended by friends/someone else
 - 3. Package deal
 - 4. Wanted everything by same provider
 - 5. Well respected company/like them/Best in area
 - 6. Always had service with this provider

ASK Q42 AND POTENTIALLY Q43 TO THOSE WHO SAID NO TO Q9 AND NO TO Q10.

42. **(IF NO TO Q10 - THEY DID NOT SUBSCRIBE TO THE INTERNET AT HOME).**
Why have you chosen not to subscribe to the Internet at home? OPEN CODE ALL RESPONSES, BUILD LIST AS NEEDED; RECORD UP TO 3 RESPONSES BUT DO NOT PROMPT FOR THREE. (N=197)

First Response

- | | |
|---|-----|
| a. I get the Internet on my mobile phone. | 3% |
| b. I plan to establish Internet service within the next year | 2% |
| c. I don't own a computer (GO TO Q43) | 31% |
| d. Cost / too expensive | 25% |
| e. High-Speed Internet service is not available | 1% |
| f. Sufficient access elsewhere | 1% |
| g. Nothing on the Internet I need | 5% |
| h. Don't know how to choose a service | 3% |
| i. Don't know how to use it | 4% |
| j. Don't have time to learn how to use the Internet | 1% |
| k. Don't know how to set it up | 1% |
| l. Computer safety – viruses, worm | 2% |
| m. Privacy/security/personal information (banking, credit card, identity theft) | 1% |
| n. Don't really know about Internet | 6% |

ALL GO TO Q44, EXCEPT THOSE INDICATING NOT HAVING A COMPUTER IN THE HOME (INDICATED 42c ABOVE).

43. You indicated you DO NOT have a computer at home. Why haven't you purchased a computer? TOP OF HEAD RECALL, INDICATE ALL MENTIONED. BUILD LIST AS NEEDED. RECORD UP TO 3 RESPONSES BUT DO NOT PROMPT FOR THREE. (N=68)
- | | | |
|----|--|-----|
| a. | Don't have one now, but plan to purchase one within the year | 7% |
| b. | Cost / too expensive | 28% |
| c. | Don't know how to use a computer | 16% |
| d. | Sufficient access to computers | -- |
| e. | My mobile phone is all I need | -- |
| f. | Safety / security concerns | -- |
| g. | Don't want one | 28% |
| h. | Don't know how to choose one | 2% |
| i. | Don't have time to use one at home | 2% |
| j. | Don't need one | 7% |
| k. | Don't have time to learn how to use one | 4% |
| l. | Don't know how to set it up | -- |
| m. | Don't want kids to use it | -- |
| n. | Worried about computer safety (viruses, worms) | -- |
| o. | Privacy/security/personal information concerns | -- |
| p. | Don't Know | 2% |

ASK EVERYONE

44. Do you access the Internet in places outside the home? (N=800)

| | |
|-----|----------------|
| YES | NO (GO TO Q45) |
| 50% | 50% |

- 44a. What are other places that you use the Internet? OPEN CODE, CREATE NEW CATEGORIES AS NEEDED RECORD UP TO 3 RESPONSES BUT DO NOT PROMPT FOR THREE. (N=398)
- | | | |
|----|--|-----|
| a. | Work | 42% |
| b. | School | 4% |
| c. | Public Library | 9% |
| d. | A relative or friend's house or some other home in the community | 7% |
| e. | A retail shop with wireless Internet services | 2% |
| f. | Everywhere (mobile Internet) | 25% |
| g. | KEYSPOT | 1% |
| h. | Other public computer center (Community Center, recreation center, etc.) | 8% |
| i. | Don't Know | 2% |

ASK Q45, Q45a AND Q45b TO EVERYONE EXCEPT THOSE WHO ANSWER “NO” TO Q10 AND DO NOT INDICATE 42a. or 42f.

45. What do you mostly use the internet for? (DO NOT READ LIST. RECORD UP TO 3 RESPONSES BUT **DO NOT PROMPT FOR THREE**. CREATE LIST AS NEEDED)

(N=589)

- | | |
|---|-----|
| a. Visit a government website like the federal government, Pennsylvania’s or the City of Philadelphia’s website | 1% |
| b. Look for information about a service or product you are thinking of buying | 7% |
| c. Sell something online | 1% |
| d. Buy something online | 12% |
| e. Do any online banking | 6% |
| f. Work from home (telecommuting) | 5% |
| g. Operate or support a home-based business | .2% |
| h. Look online for information about a job | 3% |
| i. Look for information about a place to live | .7% |
| j. Look online for news or information about politics | 4% |
| k. Look for health or medical information | 1% |
| l. Take a class or do homework | 5% |
| m. Keep in touch with family and friends | 9% |
| n. Use an online social networking site like Facebook or LinkedIn | 11% |
| o. Share something online that you created yourself | .2% |
| p. Contribute to a website, blog or other online forum | -- |
| q. Play online video games | 4% |
| r. Communicate with child’s school as parent or caregiver | .3% |
| s. Watch television or other videos | 4% |
| t. Other (26%/N=150) | |
| Email | |
| Pay bills | |
| Business (unspecified) | |
| Listen to music | |
| Don’t really use - Other family members use the Internet | |
| Sports | |
| Entertainment | |
| General information | |
| Weather | |
| Everything | |

45a. Do you currently, or want to in the future, use the internet to obtain information or services from the City of Philadelphia? (N=589)

- | | |
|----------------------------------|-----|
| a. Yes (GO TO Q45b) | 55% |
| b. No (GO TO Q46) | 40% |
| c. Don’t Know/Refuse (GO TO Q46) | 5% |

45b. What services or information are you interested in obtaining? (DO NOT READ LIST. RECORD UP TO 3 RESPONSES BUT **DO NOT PROMPT FOR THERE**. CREATE LIST AS NEEDED) (N=322)

- | | |
|---|-----|
| a. Emergency information | 12% |
| b. Traffic updates | 10% |
| c. Computer training | 1% |
| d. City Job searches | 7% |
| e. Register to participate in a class or event. | 2% |
| f. Ask questions via chat or e-mail with 311. | 4% |
| g. Request City services | 14% |
| h. Pay my water bills, taxes, etc. on line | 17% |
| i. Get employment information/help | 3% |
| j. Get a city permit on line | 2% |
| k. Other | 29% |
| 1. Information about the city/government | |
| 2. Various housing mentions | |
| 3. Current events | |
| 4. Various school mentions | |
| 5. Local news | |
| 6. General information | |
| 7. Education | |
| 8. Health/Medical | |
| 9. Don't Know | |

ASK EVERYONE

46. Is there anything else you would like to say about Comcast's service in your community? OPEN ENDED CODE UP TO 3 RESPONSES UNLESS RESPONSE IS ONLY NO/NONE/NOTHING, ETC. USE THE CODE CATEGORY (DO NOT PROMPT FOR THREE) (N=800)

| | | | |
|-----|-----|----|-----|
| Yes | 42% | No | 58% |
|-----|-----|----|-----|

First Mention

| | |
|---|-----|
| Price/Cost is too high/come down on price/lower rates | 18% |
| Service is good/Very satisfied with them | 7% |
| Customer service/don't like their customer service | 5% |
| Need more competition/More choices/Monopoly | 3% |
| Need to improve service | 2% |
| Technicians need to be more professional | .3% |
| Same programs over and over | .3% |
| They should give back to the community/schools | .1% |
| Don't know | 5% |

Respondents' verbatim (raw data) open ended final comments are available with CBG.

Background Questions

My last few questions are asked in order to better understand your opinion when considering others like yourself.

47. Do you own or rent your home? (N=800)
1. OWN 63% 2. RENT 32% 3. REFUSED 5%
48. Do you currently have children under age 18 in your household? (N=800)
1. YES 28% 2. NO 68% 3. REFUSED 5%

LANDLINE PHONE SAMPLE (N=540)

49. Do you own a cell phone? YES 82% NO 18%
50. IF YES, What do you consider your primary phone? (N=441)
a. Cell Phone 27%
b. Landline Phone 38%
c. Both are used equally 35%

MOBILE PHONE SAMPLE (N=260)

51. Do you have a landline telephone? YES 50% NO 50%
52. IF YES, What do you consider your primary phone? (N=129)
a. Cell Phone 56%
b. Landline Phone 15%
c. Both are used equally 30%

ASK EVERYONE

53. What is your race or ethnic background? (N=800)
a. African American 41%
b. Asian 1%
c. Caucasian 41%
d. Hispanic 4%
e. American Indian 1%
f. Biracial 2%
g. Refused 10%

54. What is the highest level of education you have had the opportunity to complete?
(N=800)

- | | | |
|----|---------------------------|-----|
| 1. | Some high school or less | 6% |
| 2. | High school graduate | 27% |
| 3. | Some college/trade school | 26% |
| 4. | College/4-year degree | 21% |
| 5. | Postgraduate | 13% |
| 6. | Refused | 8% |

55. Are you currently employed, seeking employment, or retired? (N=800)

- | | | |
|----|--|-----|
| 1. | Employed | 48% |
| 2. | Seeking Employment | 8% |
| 3. | Retired | 28% |
| 4. | Unable to work because of a disability | 6% |
| 5. | Full-time Student | 1% |
| 6. | None of the above | 4% |
| 7. | Refused | 5% |

56. And which of the following broad categories best describes your total annual household income, before taxes? (READ LIST) (N=800)

- | | | |
|----|----------------------------------|-----------|
| 1. | Under \$25,000 | 19% |
| 2. | \$25,000 to less than \$35,000 | 10% |
| 3. | \$35,000 to less than \$50,000 | 11% |
| 4. | \$50,000 to less than \$75,000 | 11% |
| 5. | \$75,000 to less than \$100,000 | 5% |
| 6. | \$100,000 or more | 8% |
| 7. | (DO NOT READ) REFUSED/DON'T KNOW | 36%/N=291 |

57. Gender (by observation)

- | | | |
|----|--------|-----|
| 1. | Male | 40% |
| 2. | Female | 60% |

Those are all my questions. My supervisor may wish to verify that I conducted this interview. For this reason only, may I please have your first name or your initials?
FIRST NAME: _____ And may I also verify that I reached you at
(NUMBER)?

The City of Philadelphia thanks you very much for your time.

Q26. On which channels do you most frequently experience picture clarity or reception problems?

Verbatims

6

1 15 83

11. 3.

16 ESPN 2 random, can't really say what others.

803 805 CBS fox 29

ABC MTV VH1

Across the board.

All HD channels. (2)

Any channel. (7)

Any of them.

Cable channel like id or something.

Can't remember exactly.

Channel 10

Channel 2 fox and I really don't know.

Channel 262.

Channel 3 everyday at 1:30. It changes to Spanish. Sometimes it switches to Spanish on channel 2 at different times. Sometimes at night on channel 5. It starts showing me things like I am hearing impaired. It has happened a lot. Channel 48 no sound

Channel 3.

Channel 3. Channel 10.

Channel 36 TNT

Channel 57.

Disney, cartoon network. Nickelodeon. Only kid's networks.

Dragon pack, Chinese channels.

ESPN 3 6 or 10.

HBO

HGTV 838 839 food channel 818 MSN NBC 812 public broadcasting 805 USA

I can't give exact. When it happens it all goes out.

I can't say exactly what channels they are.

I can't tell you about those channels. I'm not sure.

I don't know.(10)

I don't remember but on 23 when there's rain and complete outages it's all channels and the entire neighborhood.

I don't remember. (2)

I don't think it matters.

I have no idea.

In the past two weeks around 3 am, all channels. It could be the weather we are having but I don't know. It lasts for five minutes and then it stops.

It is whatever channel I happen to be watching.

It just went out totally, all channels.

It was like every channel. We had outside wiring problems which took them two years to figure out and I'm not kidding about the two years.

It was really all of them. All the channels went out for a short time.
Its all different ones it doesn't matter which one.
It's all of them, mainly in evenings.
Its not really one channel in general. It's the entire listing that goes out.
It's overall reception. Not just a specific channel.
Just a few, I'm not sure which one specifically.
Most of them.
None. They are good now that all is fixed.
Not specific channels.
Not sure.
On demand.
Premium channels and some basic.
Showtime.
SYFY. Bravo.
The channel I had on.
The high numbers.
The internet goes in and out. It's the only service I have. It's supposed to be high speed or higher service and it doesn't seem as fast as others.
The whole system.
The whole TV, all channels.
Three, six and ten.
Twelve and six.
Usually in blocks, so it would be several. For instance, if ESPN goes out, several go out at the same time.

Q38. Is there anything you would like to see added to enhance local programming in Philadelphia?

Verbatims

Yeah like entertainment for stuff like the arts and entertainment.
Word network.
Turner classic movies and another one like that without commercials. A lot of the stations that did not have commercials, they now have them, and that's not fair to the viewers who subscribe to them.
There was a fitness station all exercise and eating right and it disappeared from the line up.
The retirement programs aren't from Philadelphia. The council and school meetings should be available
The one thing I think would be beneficial would be local traffic like a good overview of the traffic and if it was 24/7
Texas Ranger.
Switch back to the speed channel and get rid of fox sports one.
Sure, how about the NFL and NBA channels.
Stop playing the same reruns.
Probably something educational for teenagers, just more education for teenagers.
Nothing. I do know some of the universities have channels that broadcast but I'm not sure if those channels are for the community or they buy them.

Nothing is coming to me off the top of my head, more arts. Channel dedicated to artist, dancers. Maybe it's there and I don't know about it.

Nothing in particular. I watch weird stuff, id channel, history and stuff like that.

No. I get my news which is fine. I'm fine with what I get.

More things for children to watch.

More children programs.

More channels. More stuff on it.

More arts and entertainment and local education programming.

More about local arts and with local news and local non profits.

Local information on the on demand channel. They do have some information but job listings would be nice.

Local channel about Philadelphia, just the news and stuff. Anything educational, interesting for kids, stuff like that.

Less commercials.

It's just a certain station they took away years ago I would like to see again. The boomerang channel. That's the best children's channel

If I don't have to pay, I would like to see all the channels.

I would think something to senior citizens besides medical. They offer different things to senior citizens but they don't have vesicles.

I would like to see the classes I sign up for on the public access channels.

I would like to see a channel that tells you what is going on in Philadelphia, who the heck² wants to tell you about birds and bird houses and stuff. I would like to see something informative like if there is a bad product out there or there is a damaged bridge. Most of the stuff we find out, we got to find out from the news, not that channel they set for us.

I would just say add more contemporary jazz music to the culture, I guess.

I try not to watch the news anymore even. At my age I don't really care what is on.

I suppose if they had a partnership with Philadelphia magazine and a fitness channel I'd watch it. I like to see the news and things like that, channel 10, 6 news, but on the news all you hear is bad things.

I like the historical channels.

Maybe they should have flyer to let you know what is on them and I think more people would watch them.

I just want to be able to access cable on demand without a subscription.

I get enough local stuff from the newspapers.

I don't really know. I would like to have a thing where you can call and complain about the government.

I don't know there is a whole lot I would like to see in Philadelphia.

I don't know if they have cameras in city council, I don't know if they do, but if they did, I'd probably like to see that, so we could see how our representatives are doing.

I couldn't think of anything. I might be interested in history. When u look and try to find a channel they don't tell you what your watching.

I can't think of anything, maybe knowledge, different stations basically do that, more educational shows.

I basically look at religious programs and I am very satisfied with that.

DIY channels.

² Altered from original verbatim due to inappropriate language.

Covers issues.

Coverage of city council proceeding.

Channel 12 is pretty good. Programs about health, finances and cooking.

Better shows for children.

Being that I am in the market for a home, there used to be a thing where they would show you real estate homes in the Philadelphia and surrounding areas. They don't have it anymore and it would be nice to have that again.

Actually, no, I do watch channel 12. It's probably music.

EXHIBIT A-2

Cable Television Residential
Subscriber/Non-Subscriber
Online Survey Markup



EXHIBIT A.2

CABLE TELEVISION RESIDENTIAL
SUBSCRIBER/NON-SUBSCRIBER ONLINE
SURVEY MARKUP

**PHILADELPHIA OFFICE OF INNOVATION AND TECHNOLOGY
CABLE TELEVISION SUBSCRIBER/NON-SUBSCRIBER ONLINE SURVEY
MARKUP**

(N=3,212 {2,114 Subscribers and 1,098 Non-Subscribers}
(Online Respondents = 3,211 and Written Respondents = 1)

The City of Philadelphia (City) is responsible for monitoring and administering the local contract to provide cable television services in the Philadelphia area, commonly called, a cable television franchise. Comcast Cable is seeking renewal of that television franchise. As part of this process, the City is gathering information about community needs from local residents regarding cable television service, whether you subscribe to Comcast cable or not. Your input will help the City to determine franchise provisions that will meet your future cable television related needs and interests. Your individual responses will remain anonymous and will only be reported as part of a larger group.

This survey should take you 10 -15 minutes to complete. Please complete the survey by February 7, 2014. Contact Mark McLaughlin at 215-686-9950 or by e-mail at Mark.McLaughlin@phila.gov if you have any questions regarding this survey.

QUALIFIER:

1. Do you make or share equally in the decision as to whether your household subscribes to cable television?

YES N=3,777/100% NO – Survey ends.

- 1a. Do you live within the City of Philadelphia limits?

YES N=3,227/100% NO – Survey ends.

2. Does your household currently subscribe to Comcast cable television?

YES → SKIP TO Q6 Subscriber 66%, N=2,114
NO → CONTINUE Non-subscriber 34%, N=1,098

3. Have you **ever** subscribed to Comcast cable television service in Philadelphia?

YES → SKIP TO Q5 BELOW 70%/N=764
NO → CONTINUE 30%/N=325

4. (IF NO TO Q3) For what reasons have you **never** subscribed to Comcast cable TV in your community? (Mark all that Apply) (N=322)

- | | |
|--------------------------------------|-----|
| 1. Not available | 3% |
| 2. Cost | 63% |
| 3. Satellite Subscriber/DirecTV/Dish | 4% |

| | |
|--|-----|
| 4. Don't Want/Don't Watch TV/No time to watch TV | 27% |
| 5. Unfavorable view of cable company | 50% |
| 6. No time to watch TV | 10% |
| 7. I use the Internet instead of watching TV via cable | 62% |
| 8. Other - 11%/N=36 | |

Verbatims in "other" category:

- Other providers.
- Comcast refuses to serve our community of 46 row houses at the corner of 45th and Spruce in West Philadelphia known as the University Mews
- Better package of internet/phone/cable through Verizon, which we hate.
- Netflix
- They are thieves who take advantage of Philadelphia
- Comcast has horrible customer service and prices
- The workers were EXTREMELY rude to my Dad.
- Antenna give me 60 channels for free
- High prices, subpar programming, amount of commercials and other advertisements
- I have FIOS
- They block Phillies games on PAID MLB package on Direct TV
- Will not subscribe since they refuse to supply Phillies games to DirecTV due to loophole in the law. I don't get to opt out of giving them a tax break (my tax \$\$ are needed to make up the difference) so why should they get this break?
- I use a different cable supplier
- Use roof antenna
- I chose Verizon FIOS for Broadband Internet and TV
- Comcast is virulently non-union and they gouge their customers.
- Their monopoly status as sole cable provider in the City of Philadelphia
- We use Comcast for internet but not TV
- I hate that I have to pay any company to watch my own TV set.
- Everyone I know tells me how awful Comcast is, and it's ridiculously expensive
- I have had negative experiences with Comcast in the past, and have never heard a positive customer satisfaction story.
- I would get cable if it was reasonably priced, but at the current prices it is not worth the hassle of dealing with Comcast.
- I don't want to pay for the channels that I don't want
- I will never pay to watch television
- Too expensive. Too many unwanted channels.
- I subscribe to Comcast internet services.
- Not in my budget at this time
- Hulu, Netflix
- No a la carte options
- I'm a Chicago native, I need DirecTV so I can get Sunday Ticket to watch the Bears
- Awful feedback from cities such as Seattle where it is affluent
- The current television subscription model is broken, and companies like Comcast and Verizon use their government-sanctioned near-monopoly to stifle progress on this front. The only reason I have Comcast for my internet service is because it is the ONLY FREAKING VIABLE OPTION in this City for broadband.
- Went with FiOS
- Anti-union

- I do not like the fact they are against NET NEUTRALITY. I feel Comcast only cares about profit, even at the expense of our democracy.
- I plan to subscribe this spring 2014

5. (IF YES TO Q3) Why did you **stop subscribing** to Comcast cable television service? (Mark all that Apply) (N=754)

| | |
|---|-----------|
| 1. Programming Issue | 17% |
| 2. Cost | 87% |
| 3. Service Issue | 48% |
| 4. Satellite Subscriber | 5% |
| 5. Moved | 9% |
| 6. I started using the Internet to watch TV | 38% |
| 7. I rely on free, over-the-air television | 21% |
| 8. Other (please specify) | 25%/N=189 |

- Quality of picture and programming
- Changed to Verizon FiOS
- They have the worst customer service and they are too expensive.
- We don't watch much TV to start, most of the money goes to ESPN which we never watch
- Comcast's business practices are reprehensible and therefore, I choose not to support them.
- I am a Comcast Internet-only subscriber
- I disagree with how Comcast fought the living wage bill. I also don't want to support a company that doesn't support its community.
- Too rich and powerful
- Wasn't impressed at the content. Everything repeats constantly.
- Don't like the layout
- They lie about the features
- Service and price. They literally lied to us about what was wrong with our service, until a technician was standing in our living room and the truth was announced over his speaker phone. He said "you weren't supposed to hear that" that was the last day we ever had Comcast.
- Philadelphia created a monster
- Verizon has better internet
- I cancelled it and they continued to bill me for services even though I no longer could nor wanted to access them. Upon complaint, my bill was sent to collections and fees were still being charged.
- Mostly because of their awful customer service
- Customer service
- They would never make you aware that you were using a promotion and all of a sudden the cost would increase with no notice.
- Did not like the prices so did not subscribe
- Billing issues
- I used to work for Comcast and received their courtesy service (which I no longer have).
- Hidden limited usage, ex. mb's & long distance (USA) usage threshold. Mother was in a hospice I called frequently, until her death. I was threatened to be cut-off and told to get

- another service. Need more competition. And Comcast just ann. a new building and the city council won't let them go.
- Disagree with Comcast's policies regarding evading city and state taxes, participating in ALEC, intervening in public schools funding, and opposing local Paid Sick Days legislation.
 - Comcast raised the price and their customer service is HORRIBLE to deal with, I'd rather not have cable TV then have to deal with them!
 - Over billing, Poor customer service.
 - Tired of constant price increases (beyond the rate of inflation) from Comcast. While satellite costs are also increasing, the increases are more reasonable.
 - Horrible customer service
 - Poor customer service
 - FiOS came to our neighborhood
 - How incredibly rude they were as a service provider.
 - They continually increased their fees that were outrageous, I was a customer for 15 years, They couldn't care less about their customers nor the costs
 - In protest of the company's involvement with ALEC, support of [REDACTED], taking anti-public school funding stances, working against paid sick leave legislation, and tax-dodging policies
 - Not worth the high cost given how little of the programming is valuable/of interest
 - Unhelpful Customer service,
 - Customer service is terrible
 - Comcast is evil
 - Comcast has the worst customer service of any company that I've ever dealt with.
 - They are a deceptive and antagonistic corporation
 - Drastic price inflation after contract end
 - Service issues, which Comcast gives very little priority for the exclusive franchise that Philadelphians authorize City Council to give. Comcast has forgotten its roots, they are more interested in playing on the international stage and in New York to be concerned about the average Phila resident. Also, the costs are outrageous, buying a package where one would only view a small % of the package, this is bad business and bad for Phila that is Phila
 - Because I believe Comcast was trying to establish a monopoly in Philadelphia
 - Verizon FiOS
 - Comcast is a bully of a company with horrible customer service and grossly expensive prices
 - Moved and new block does not have Comcast wiring.
 - COMCAST IS THE MOST EVIL COMPANY ON THE PLANET. NOTHING BUT HORROR
 - This organization cannot be controlled in any way. They simply get what they want and no one including the Government can stop them.
 - The channels we wanted weren't included, even more expensive to include them
 - Terrible customer service
 - They are a monopoly. They need to allow Flyers and Phillies on satellite and stop being greedy
 - Switched to FIOS
 - FiOS was cheaper and a better deal
 - Serious damage to my property Comcast never resolved
 - I hate dealing with Comcast and all their "rate increases". They're a bunch of crooks!

- They continuously changed pricing multiple times thru each year. I never knew how much my bill would actually be. When I would call they would change my package. It got to be too much of a head ache. After my Verizon contract is up I'm going to an internet based service. Cable is going extinct
- Verizon FiOS had a better deal and superior picture
- FiOS became available
- Basic Cable is extremely expensive. Comcast service bundle is too expensive and not very valuable.
- Verizon FIOS u\is much better and cheaper.
- FIOS is as BAD, COST is big with no responses to problems
- I constantly paid for service that wasn't reliable. Also customer service never really fixed the issue and we would have to wait and pay for service to be restored.
- Monopoly of Philly sports teams
- Total disregard for customer service and satisfaction. They are fully aware of their monopolistic deal with the city.
- Terrible customer service
- Very poor customer service; missed appointments from their techs
- They canceled my phone service by accident and it took 13 calls over two months to fix. Then they charged me an activation fee for their admitted mistake.
- Switched to Verizon FiOS as soon as it became available in my area
- Lack of good customer service
- Can't get the service because where I live
- Comcast tried to gaslight me by telling me I was not paying bills, although I had bank statements proving otherwise.
- Rates kept going up and up. I figured Comcast is getting enough out of my through their tax abatements. They don't need my subscription.
- Comcast has absolutely terrible customer service
- Bill amount always changing, terrible customer service
- Abysmal customer service
- I had been a Comcast Subscriber since 1980 and left in disgust.
- Not enough QUALITY content to keep me subscribed.
- Horrible customer service for both business and residential services
- Made us pay extra for same quality we can get over the air
- I hate Comcast
- Small monthly increases in the price. Those few pennies every month add up.
- Service technicians are unreliable
- The house we moved to already had a DirecTV dish and we were fed up with Comcast.
- Customer service was horrible, operators were arrogant
- Internet always went out, horrible customer service, no competent internet help, cable TV problems w no real-time solutions, ignorant customer service reps that barely speak English and know nothing about real/true problem resolution, disgusted w Comcast's monopoly on our TV programming in our city and area, I and my large family will never purchase any Comcast services ever again, we would and do go out of our way not to use or buy anything related to or affiliated w Comcast. resolution
- There service was horrendous and for the price it was not worth it. My digital antenna is more reliable.
- The Comcast cable boxes are terrible. There is no order to the programming on the user interface.
- The Customer Service was always rude.

- They constantly change the price and their service & available programming is subpar. Switched to FIOS.
- Abysmal customer service. Frequently charged for I requested services. Sent my bill to collection agency despite being current on account. Unexplained delays in issuing refunds.
- Comcast refused to show up to fix my cable box and internet connection/speed issues, services were always broken, and kept charging me after I wouldn't stand for their horrendous business practices anymore and tried to terminate service.
- I despise Comcast for numerous reasons and was happy to divest.
- Internet was too slow.
- Hidden throttling of Internet, no workable ways to control your own usage. When stopping: Comcast played games to raise charges for no service.
- No a la carte option; no CBC.
- Uncomfortable with the role Comcast has taken in broadband adoption initiatives in Philadelphia
- Horrible Service and customer service such rude individuals. Will never use Comcast again
- I hate Comcast with a passion
- Major billing issues
- Before Verizon FiOS, I had no other choice of cable provider in the city.
- Pure Hatred of Comcast
- A horrible customer service experience
- Poor service
- They started removing channels unless we paid more, eventually had only channels we didn't want
- Because they are allowed to dictate who gets to watch CSN. I have satellite and they don't allow them access.
- Customer Service
- Terrible customer service. Comcast is infuriating to deal with. Hence, I do subscribe to Comcast internet anymore either.
- Customer Service (really, the lack thereof)
- Terrible customer service
- Customer service is terrible, they have a monopoly on some events which should be illegal. Won't include some of the more liberal channels like LinkTV in their programming
- Their customer service is dog [REDACTED], their prices are outrageous. They should be banned from Philadelphia, or at least bring in someone to compete with them to drive down prices and increase customer service.
- Switched to Verizon FiOS
- Customer service is horrible
- Lowest quality customer service.
- I found them to be totally dishonest and the service poor and the cost was nothing short of usury.
- They didn't offer a package that contained the channels I wanted for a reasonable price. I didn't want all 100 channels at the price they offered.
- Extremely poor customer service, lack of appropriate pricing models, Comcast's anti-competitive practices, Comcast's role in dismantling Net Neutrality
- They are the most horrific company I have ever had the displeasure of doing business with.

- Comcast will not pay for construction for service. There are 47 homes in University Mews that cannot get service because of this. Up the block and across the street all have service.
- I hate Comcast
- Terrible customer service and loyalty
- Customer service is extremely difficult to deal with, and they continuously increase the cost. Their basic cable service is extremely overpriced, so I now rely on the internet to watch TV (Netflix, Hulu, etc.)
- My apt. provides free (but limited) satellite programming to all tenants. I briefly subscribed to a cable package provided by Comcast, but cancelled immediately after realizing it had been deceptively marketed to me.
- Horrible customer service and a far overpriced product.
- Horrible customer service. Random pricing that increases arbitrarily. Spotty service. Too expensive.
- There were only a handful of channels I was interested in watching, and I wasn't interested in subsidizing all the other crap they forced me to buy
- Too expensive for crappy service
- Poor customer service
- Tax abatements and service blackouts
- Internet speed provided by FiOS
- Tax breaks they've received
- Far too many issues with losing service
- Terrible customer support, and a lack of concern about my problem.
- Channels kept dropping as the price rose
- Didn't want them to have my business any longer.
- Bad customer service
- Rude customer service, price gauging, monopoly, could care less about the people
- I refuse to support a company that votes against net neutrality
- Mainly cost. We already had FiOS for cable and phone, so it was natural to switch from Comcast as well.
- Netflix
- They kept disconnecting and reconnecting channels I was supposed to have access to.
- Terrible Customer Service
- I got an antenna for HD programming and use Netflix. It's cheaper, more reliable and better quality overall.
- Terrible customer service.
- I hate Comcast.
- Horrible customer service
- Switched to FIOS with Verizon.
- Terrible services and package offerings. Introductory price is typically appealing but often doubles after a few months.
- Horrible customer service, unreliable service
- Poor Customer Service
- Bad service experience
- Comcast is evil and paying them doesn't currently actually help the city. that could change...
- Disagreed with companies political policies
- Comcast was terrible in almost every area, and I finally was able to get FiOS
- Horrible customer service.

- Comcast's political agenda and lobbying is detrimental to the internet as a whole.
- Lots of channels- with nothing on.
- Moved to FiOS for faster internet speeds.
- I refuse to pay a fortune for subpar service and terrible business practices
- I don't support the idea of a local monopoly.
- I only want five channels and I'm not willing to pay \$100 for them.
- Internet sucks
- Very expensive for what it is.
- Cost vs. value was prohibitive. Cost way too much for too little service.
- Poor customer service
- Slow internet speeds
- While there are so many channels, it was often difficult to find interesting programming
- Netflix, HBOGO, Amazon, etc
- Honestly, they are terrible.
- Throttling speeds
- Comcast only cared about getting paid and not myself, the customer
- Employees/contractors are a bunch of thieves and ignorant morons
- Too many issues with customer service.
- Got a better price on faster Internet
- Sick of Comcast's crap.
- Horrible installation
- Customer Service is terrible. Absolutely the most unprofessional company I have ever had to deal with. The city of Philadelphia should be ashamed of allowing this Comcast monopoly in the first place.
- Worst customer service ever.
- Horrible customer service
- Terrible customer support
- Obsolete and absurdly expensive technology from a company that has horrible customer service and refuses to change with the times.
- Poor customer treatment. Poor customer service. Poor personality and care and lack of empathy when providing a customer with such a basic and common service.
- I dislike supporting irresponsible conglomerates. Especially when they charge so much.
- Verizon offered a better deal for faster service.
- I refuse to buy anything from that blood sucking company that denied the city public access TV for 27 years.
- Worst company I've ever done business with
- I do not like paying for stations I oppose (ie:MSNBC)
- The customer service representatives when called were rude, insensitive and vulgar with their language and advice. We were frustrated with this kind of behavior, and it did not matter what time of day that Comcast was contacted; the representative would not try to help with your situation. We changed providers out of desperation.
- I did not want to give Comcast my money
- I watch TV too much when I have cable.
- Extremely poor customer service, which meant very low value for cost.

NON SUBSCRIBERS SKIP TO Q.9

FOR SUBSCRIBERS ONLY (THOSE WHO ANSWERED “YES” TO Q2.)

6. How many years have you had Comcast cable television service at your current address?
_____ YEARS ★
(N=1,882), Range <1-40 years, Mode=1 year, Mean=6 years
7. Which of the following levels of cable television service do you subscribe to? (N=1,929)
1. Basic Service, which has about 36 channels 13%
 2. Digital Economy, which has about 45 channels. 10%
 3. Digital Starter service, which includes about 80 channels. 18%
 4. Digital Preferred service, which has more than 160 channels, or a higher tier of service 59%
 5. Other, Specify: 4% (Weren't sure of name of package and provided description)
8. Do you watch mostly High Definition/HD Channels? (N=1,953)
- a. Yes 58%
 - b. No 16%
 - c. Watch both equally or watch both the same 12%
 - d. Don't get HD channels 14%

ASKED OF EVERYONE

9. Do you subscribe to Comcast's Xfinity broadband or high-speed Internet service?
(N=2,721; N=1,653 Subs, N=1,068 Non-Subs)

| | YES (GO TO Q11) | NO (GO TO Q10) |
|-----------------|-----------------|----------------|
| All | 73% | 27% |
| Subscribers | 91% (N=1,506) | 9% (N=147) |
| Non-Subscribers | 44% (N=472) | 56% (N=596) |

10. Do you have Internet access at home? (N=749; N=150 Subs, N=599 Non-Subs)

| | YES | NO |
|-----------------|-------------|------------|
| All | 95% | 5% |
| Subscribers | 89% (N=133) | 11% (N=17) |
| Non-Subscribers | 96% (N=577) | 4% (N=22) |

*No Internet at home (N=39/1% of total sample)

11. Do you subscribe to Comcast's telephone service? (N=2675; N=1,632 Subs, N=1,043 Non-Subs)

| | YES | NO |
|-----------------|-------------|---------------|
| All | 21% | 79% |
| Subscribers | 33% (N=540) | 67% (N=1,092) |
| Non-Subscribers | 1% (N=15) | 99% (N=1,028) |

FOR NON-SUBSCRIBERS (THOSE ANSWERING “NO” TO Q2) WHO ANSWER “NO” TO BOTH Q9 AND Q11 MOVE TO Q28.

12. If you subscribe to any of Comcast's services (TV, Internet or telephone), how much is your total monthly Comcast bill on average, including all services and fees? (Open Code) _____.

All Subscribers/Non-Subscribers (N=1,844),

Range: \$5 and \$758 Mean=\$130.05 Mode=\$200

Subscribers Mean=\$146.58 (N=1,439) Range: \$10-\$758; Mode=\$200

Non-Subscribers Mean=\$70.33 (N=405) Range: \$5-\$500; Mode=\$50

ALL NON-SUBSCRIBERS SKIP TO Q28.

FOR SUBSCRIBERS ONLY (THOSE WHO ANSWERED “YES” TO Q2.)

13. Overall, how satisfied are you with your current Comcast cable television service? (N=1,960)

- | | | |
|-----------------------|----------------|-----|
| 1. Very Satisfied | → SKIP TO Q.15 | 5% |
| 2. Satisfied} | → SKIP TO Q.15 | 24% |
| 3. Dissatisfied} | → CONTINUE | 31% |
| 4. Very Dissatisfied} | → CONTINUE | 38% |
| 5. Don't Know | → SKIP TO Q.15 | 2% |

14. For what reason are you not “Very Satisfied or Satisfied” -- that is, what could Comcast do **better** to make you **consider** a more positive rating? Open Code Answers (N=1,220) (Full list is available with CBG)

Top 5 Most Common Word(s) used by respondents, (representing 78% or N=955 of respondents) included:

1. Customer Service (432)
 - a. Most common words under this group were terrible (68), better (64), poor (61), horrible (48), awful (32), lacking (20), bad (15), horrendous (6), and represented 73% of this group.
2. Various Cost categories (418)
 - a. Most common words under this group were expensive (182), Lower prices (55), prices are too high (44), raising rates (33), cost is too high (22), reasonable price (22), lower rates (18), lower cost (18), getting higher (13), price gouging (10), exorbitant (9), ¹hidden fees (8), and represented 100% of this group.

¹ Survey software generates a list of the most commonly used phrases.

3. Channels (249)

- a. Most common words under this group were: package (49), offer (33), never watch (18), premium (16), demand (13), better pricing (13), and overpriced (7), and represented 60% of this group. For further clarification of how “channels” was used by respondents, some examples of comments included:

“Channels that are available in other areas on basic or starter packages are not available here.”

“We get a package of 40 channels but half of them are full of programs that we have no desire to watch.”

“The packages cost too much for channels I don't want.”

“The TV package bundles have should be broken up to offer more choice in the channels being paid for.”

“Lower prices Offer ala carte channel options Offer more HD channels”

“Offer a la carte channel choices.”

“I pay a lot of money for MANY channels I NEVER watch,”

“Stop charging me for sports channels I will NEVER watch”

4. Internet Service and Internet Speeds (187)

- a. Most common issues reported by almost 52% of this group of respondents (N=98) were related to speed issues with the internet, including words like speeds (70), slow (39), and faster (8). Examples of some clarifying comments include:

“Comcast offers little in terms of speed for price. Much of the world is excelling in internet speeds while the US is lagging behind. Google Fiber's implementation in Kansas City has shown how important it is to have fast internet for cheap. Lastly, since Comcast is the only option in the Philadelphia area for "high- speed " internet they can charge however they feel like and they can limit speeds whenever they feel like.”

“Internet speeds are so slow and very over priced. The rest of the world gets over a 100 megs down for about 40 bucks. We are stuck at 6 down for about that price. Comcast attacks and abuses IPS to make more money off the consumer when it comes to the world wide web. Comcast has been to bottleneck speeds to punish people for downloading or just because.”

“Comcast's download speeds are way below their advertised packages, and even those advertised speeds are far below the rest of the developed world. Comcast has a monopoly on cable and internet and it isn't right.”

“Despite paying for high speed internet, our connection drops out and/or becomes unstable frequently.”

“High cost with very slow internet service”

“The only reason we have Comcast is that it is the only option for reasonably fast internet in our neighborhood.”

- b. The 2nd most common issues reported by almost 25% (N=48) of respondents was related to internet service. Some examples of comments included:

“Stop trying to trick people who only want internet service to get their TV service bundled for a cheaper total price, only to increase the price later

on. Stop throttling any FTP download I make to 70 kb/s despite having a 30 mbit internet service . I can't download work files via FTP because Comcast loves slowing them down so that it's faster to wait to pick them up the next day at work.”

“I had an issue with my internet service being down recently, it took a week to get a representative to out to the house. Once he arrived he walked in and stood there with a blank expression on his face. Finally he spoke and informed us that he had no idea what he was here to fix. We explained our internet had been down for about a week. He then proceeded to show us 5 different times that his phone said there was nothing wrong with our service. Suggesting we get a new modem, he left not before he lingered and watch the last few seconds of the Cowboys game, the issue was unresolved. We fixed it ourselves with the help of a much more competent friend.”

“The prices are ridiculous. I just want an internet service but I have to pay for cable television too.”

“Our internet service doesn't meet the upload/download speeds the majority of the time and now they are increasing prices. If there was another service available in my area then I would have switched by now.”

“Generally internet service is slow, making it difficult to download or stream video content, however (finally something positive!) the service rarely does shut off completely. It also has terrible range and gets very slow when two or more machines are being used.”

“I like the High Speed internet service I have, but the modem equipment was so low end, that after 24 yrs I finally purchased my own better modem.”

“the internet service is horrendous and constantly has breaks in service”

5. Monopoly and/or Competition (N=162)

a. Examples of some clarifying comments include:

“Comcast is a monopoly that has doubled our rates in three years, to pay for sports television rights. Their rates need to be government regulated just like any other monopoly . Consumers are getting screwed by this monopoly.”

“Comcast has realized that they have a monopoly over a large majority of Philadelphia and have treated their customers in the exact manner that makes people dislike monopolies”

“They have a [REDACTED] monopoly on Philly, so they don't give a [REDACTED]² about customer service, and have made that VERY clear in my interactions with them. Clear enough?”

“Adopt better business practices, Lower prices, allow for healthy competition, be seen as a monopoly and not have so much power over tv/communications/internet.”

“Literally the only reason I use them is because the city has granted them a monopoly . ANY competition would vastly improve the current situation.”

² Verbatim altered from original content due to profanity.

“Service is substandard. I do not feel valued as a customer and feel that the monopoly Comcast has in this market is reflected in their customer service.”

“I hate the Comcast monopoly in Philadelphia but do I have a choice?”

“Break up this monopoly and instate a REASONABLY PRICED public utility ISP offering gigabit speeds, and then we can talk about some fucking SATISFACTION.”

15. For each of the listed cable TV service features, please rate each service as either: Very Satisfied, Satisfied, Dissatisfied or Very Dissatisfied. (N=1,811)

| | | Very Satisfied | Satisfied | Dissatisfied | Very Dissatisfied | Don't Know |
|---|--|-----------------------|------------------|---------------------|--------------------------|-------------------|
| a | The picture quality | 23% | 61% | 10% | 4% | 2% |
| b | The sound level consistency across channels | 14% | 52% | 22% | 10% | 2% |
| c | Billing practices | 3% | 17% | 26% | 53% | 1% |
| d | Communications regarding rates and programming changes | 4% | 15% | 28% | 49% | 4% |

16. Have you had a service call in the past year? (N=1,801)

YES 60%

NO 40% (GO TO Q17)

- 16a. For each of the cable TV service issues listed below, please rate your overall satisfaction with each service issue either Very Satisfied, Satisfied, Dissatisfied or Very Dissatisfied. (N=1,065)

| Service Issues | Very Satisfied | Satisfied | Dissatisfied | Very Dissatisfied | Don't Know/ Not Applicable |
|---|-----------------------|------------------|---------------------|--------------------------|-----------------------------------|
| a. The available times for service | 7% | 68% | 27% | 25% | 2% |
| b. The arrival time of the service technician | 8% | 41% | 24% | 24% | 4% |

17. During the **past year**, have you **called** Comcast cable for any reason other than installation? (N=1,767)

YES
79%

NO (GO TO Q22)
17%

DON'T REMEMBER (GO TO Q22)
4%

18. For what **reason(s)** have you **called** Comcast during the past year? (Mark all that Apply). (N=1,380)

1. Cable outage/loss of signal 59%
2. Signal quality problems (picture, sound) 36%

- | | |
|--|----------|
| 3. Billing questions | 71% |
| 4. To change type of service subscribed to (add/remove channels) | 47% |
| 5. To change number of TV sets connected to cable | 11% |
| 6. Order pay-per-view event | 2% |
| 7. Request additional programming (channel or program) | 8% |
| 8. Request cable modem service | 13% |
| 9. Problem with my cable modem service | 47% |
| 10. Don't know/don't remember | 1% |
| 11. Other, specify | 8%/N=113 |
- Tried to get bill lowered
 - Complain about rate increases
 - Name change on account
 - False reporting on my account balance
 - Cost too High...considering Roku to supplement cable cost
 - pricing
 - Very poor service.
 - They keep raising my rates.
 - How to access router to change password, encryption, etc
 - Bill change or possible cancelation because the prices kept increasing
 - Sent wrong installation kit.
 - Internet Service, Billing Problems, NO CALL/NO SHOW for service appointments. Too many to list.
 - \$\$ relief!!
 - Problem with Xfinity Home
 - Phone service
 - My cable box fried and had to go to a service center to get a new box
 - Streaming problems & an internet problem
 - Help with modem
 - Requested a DVR upgrade
 - Security cameras go out all the time.
 - Problems with on-demand service
 - I wrote to ask that my rates not be raised beyond my starting fee. I also stopped getting home phone service in an effort to save money only to find that it was cheaper to have the "triple play", and ended up getting home phone service again. How can three services be cheaper than two???h
 - cable was not working on one TV set
 - Rewiring and the sub contractor made ugly holes in woodwork
 - Caller ID was not working
 - Cancellation of cable due to unreasonable price.
 - Internet and phone disruption
 - Internet was running too slow.
 - To ask for a lower payment. Didn't get it and rep was rude.
 - Poor Wifi connection for home pc
 - Moving a line from Verizon opened a can of worms with those knuckleheads
 - Box burned out

- Router problem
- I was charged a returned check fee even though I don't use checks
- Channels removed from lineup by Comcast without prior notice!!!
- Constant billing increases
- Telephone service.
- Internet and phone problems.
- Online account access problems
- The prices keep going up. Ridicules for the money they charges
- Trying to upgrade to new version of cable box hardware
- Assistance with cable equipment, pixilation, inability to access connections for on-demand, lack of compensation for long outages (up to 8+ hours).
- TOO MANY SERVICE PROBLEMS TO ITEMIZE. HORRIBLE.
- Installation of Home Security system
- DVR issues and X1 platform
- Expense of monthly bill. Cost keep going up, despite Comcast profits rising. As a loyal customer and senior on fixed income it gets almost prohibited to maintain my plan.
- Installed equipment I didn't request. Racist statement by installer
- Problems with my DVR
- Ask for refund for poor, unavailable services. (They did not give us one)
- Equipment Malfunction
- Requested assistance to bring my bill down via promotions
- Issues with X1 platform and boxes
- Add other cable lines, new equipment.
- Get online access to TV, fix low wire
- DVR removes programs without viewing them
- Problems with my internet service
- They charged a late fee when our payment was not late. In fact, our payment was early.
- To try to get a less expensive, smaller package.
- On-demand constantly has problems.
- Charged for services and equipment that I did not request
- Charged for HD boxes we didn't have in our possession, they later realized they made a mistake when the tech came to the house.
- I bought a new cable modem and needed to register it
- Remote control issues
- Switch from analog cable box to digital HDMI box
- Problems with the wireless Internet
- They continue to raise fees.
- Needed new remote. remote I was given was used and stopped functioning
- I tried to report a fraudulent account at my address.
- Box activation
- Moving
- On Demand problem
- Try to find out what exactly I'm paying for.

- They couldn't install at first, had to get a different department to handle it (survey team)
- Log on issues
- To move my phone from one address to the other
- Search for lower cost packages
- Other Comcast services
- To shop available packages to keep price down
- Changed from "Triple Play" to "Double Play" - and we will soon be switching to "Single Play" (internet only).
- Unexpected increase in bill
- Billing re-negotiation
- Request remote control because there was a cable box but no remote in my apt unit
- Problem with internet
- To know if there would be another dedicated soccer channel once the last one was changed into another channel
- Internet access which is why I switched to a new cable modem; switched to X1 box because my old box was dying and the X1 box was the same cost
- To get my bill lowered
- Video On Demand disruptions
- Needed a box
- Repeated internet modem failure
- Cancellation
- Internet outages
- These idiots took my phone over from Verizon and now it hasn't worked since then. No dial tone, doesn't ring and after 23 hours on the phone with them and 2 techs coming to the house, the problem is still not resolved.
- Incorrect charges, double charges, incorrect channels, billed for incorrect channels
- Threaten to cancel to get a lower price.
- They have my name wildly incorrect
- Not providing internet speeds being paid for.
- Reduce bill
- Charged for a promotional package we never signed up for.
- I was paying for high speed internet and deluxe TV package and it took them over a month to provide me the services I had been paying for.
- Try and lower my bill because their prices are outrageous.
- Many problems with internet
- False charges
- Too many to list here...
- Noticed slow down from 50 mb down to 2 mb down. exchange equipment
- Billing issue
- To discuss my monthly rate
- Find a new deal since they always expire and offer no steady packages
- Billing issue

- I am on the board of a boat house on Kelly Drive and I was trying to order service. It is not available there
- Resolving issues with move.
- DVR stops working for no reason
- Upgrade Internet, constant outages
- Concern about increased rates

19. When you called Comcast's Cable office, did you get a busy signal before you got through? (N=1,377)

| | | |
|-----|-----|----------------|
| YES | NO | DON'T REMEMBER |
| 21% | 66% | 13% |

20. Was your call answered, including any time you were left on hold, within 30 seconds by a Comcast Cable customer service representative? (N=1,378)

| | | |
|-----|-----|----------------|
| YES | NO | DON'T REMEMBER |
| 15% | 74% | 11% |

21. If your call to Comcast was to report a problem or request service, how long after your contact did Comcast Cable begin working on the problem? (N=1,342)
Would you say...

| | |
|------------------------------|-----|
| a. The same day reported | 27% |
| b. The next business day | 12% |
| c. Days later | 20% |
| d. About a week. | 13% |
| e. About a month. | 3% |
| f. Problem never resolved. | 12% |
| g. Don't know/Can't remember | 13% |

| |
|--------------------------|
| ASKED OF ALL SUBSCRIBERS |
|--------------------------|

22. During the **past two years**, have you ever **lost** your entire cable signal for a period of more than **24-hours** when you still had electricity? (N=1,744)

| | | |
|-----|----------------|---------------------------------|
| YES | NO (GO TO Q24) | DON'T REMEMBER/KNOW (GO TO Q24) |
| 28% | 63% | 9% |

23. Did you receive a credit or refund on your cable bill from Comcast for the amount of time you went without cable television service? (N=480)

| | | |
|-----|-----|---------------------|
| YES | NO | DON'T REMEMBER/KNOW |
| 20% | 70% | 10% |

- 23a. How satisfied were you with the length of time it took Comcast Cable to restore your cable service? Would you say you were...

| | |
|-------------------|-----|
| Very Satisfied | 1% |
| Satisfied | 14% |
| Dissatisfied | 43% |
| Very Dissatisfied | 41% |
| Don't know | 2% |

24. In the past year, have you had any significant problems with picture clarity or reception? (N=1,723)

| | |
|-----|----------------|
| YES | NO (GO TO Q28) |
| 32% | 68% |

25. Have you had reoccurring problems with picture clarity or reception constantly, every few days, a few times a month or rarely? (N=549)

| | |
|------------------------|-----|
| 1. Constantly | 16% |
| 2. Every few days | 13% |
| 3. A few times a month | 35% |
| 4. Rarely | 32% |
| 5. Don't Know | 4% |

26. On which channels do you most frequently experience picture clarity or reception problems? (N=262)

Top Mentions (N=142)

| | |
|--------------------|----|
| 1. All | 50 |
| 2. ABC | 17 |
| 3. On demand | 17 |
| 4. FOX | 10 |
| 5. CBS | 9 |
| 6. ESPN | 9 |
| 7. HBO | 8 |
| 8. PBS | 6 |
| 9. Comedy Channel | 5 |
| 10. NBC | 4 |
| 11. Sports Network | 4 |
| 12. Discovery | 4 |
| 13. ShowTime | 4 |

27. How satisfied were you with the length of time it took Comcast Cable to resolve your reception problem? Would you say you were . . . (N=540)

| | | |
|----|-------------------|-----|
| 1. | Very Satisfied | 1% |
| 2. | Satisfied | 22% |
| 3. | Dissatisfied | 35% |
| 4. | Very Dissatisfied | 29% |
| 5. | Don't Know | 13% |

ASKED OF EVERYONE

28. The cable company currently sets aside a portion of its channels to be used by the organizations and people within Philadelphia to produce local community programming. These channels are currently used by government, educational and public access television producers. (N=2,778; N=1,704 subscribers; N=1074 Nonsubscribers)

Are you aware of these channels?

| | <u>YES</u> | <u>NO</u> |
|---|----------------------------------|---------------------------------|
| All | 69% | 31% |
| Subscribers | 69% (N=1,166) (SUBS GO TO 30) | 31% (N=538) (SUBS GO TO 38a) |
| Non-Subscribers (NON-SUBS, CONTINUE) | 71% (N=757) | 29% (N=317) |

Q29 ONLY FOR NON-SUBSCRIBERS

29. Do you have an interest in being able to receive local community government, education, and public access programming? (N=1,063)

| | | |
|-----|----|-----|
| YES | or | NO |
| 74% | | 26% |

ALL NON-SUBSCRIBERS MOVED TO Q41

ASKED OF ALL SUBSCRIBERS WHO ANSWERED "YES" TO Q28.

30. How often do you watch City of Philadelphia local government programming that appears on local channel 64? Programming includes City Council meetings, 100 Most Wanted, Fire Department programming, and news from the Mayor's Office. (N=1,159)

| | | |
|----|--|-----|
| a. | More than 5 hours per week. (GO TO Q31) | 2% |
| b. | Less than 5 hours per week, but on a weekly basis. (GO TO Q31) | 6% |
| c. | Once or twice per month. (GO TO Q31) | 13% |
| d. | Once or twice a year. SKIP TO Q32 | 23% |
| e. | Never SKIP TO Q32 | 54% |
| f. | Don't Know SKIP TO Q32 | 2% |

31. Consider the government programming you've seen on Channel 64. Please rate the following areas on a scale of excellent, good, fair or poor. (N=235)

| | Government Access Channels | Excellent | Good | Fair | Poor | Don't Know |
|---|---|-----------|------|------|------|------------|
| A | Government Access' picture quality | 5% | 38% | 39% | 13% | 5% |
| B | Government Access' sound quality | 5% | 33% | 39% | 18% | 5% |
| C | Government Access programming's informational value. | 14% | 43% | 29% | 9% | 5% |

32. How often do you watch locally produced, Community and Public Access programming that appears on PhillyCAM, Channel 66 and 966? (N=1,149)

These Channels provide local community-based programming including, for example, Unsolved Philadelphia, Reelblack TV, Buzz Club, The Hype and Neighborhood Sports Showdown

- a. More than 5 hours per week. (GO TO Q33) 2%
- b. Less than 5 hours per week, but on a weekly basis. (GO TO Q33) 6%
- c. Once or twice per month. (GO TO Q33) 12%
- d. Once or twice a year. SKIP TO Q34 19%
- e. Never SKIP TO Q34 59%
- f. Don't Know SKIP TO Q34 2%

33. Now consider the quality of the PhillyCAM programs on Channel 66 and 966. The rating categories again are excellent, good, fair or poor. (N=228)

| | PhillyCAM Access Channel | Excellent | Good | Fair | Poor | Don't Know |
|---|--|-----------|------|------|------|------------|
| A | The PhillyCAM channels picture quality | 10% | 35% | 31% | 16% | 8% |
| B | The PhillyCAM channels sound quality | 9% | 33% | 34% | 16% | 8% |
| C | The overall value of PhillyCAM's programming. | 19% | 37% | 29% | 7% | 8% |

34. How often do you watch locally produced, Educational Access programming that appears on Channel 52, the Philadelphia K-12 Public Schools Channel? (N=1,136)

This channel provides K-12 programs and important school news, as well as coverage of school board meetings.

- | | |
|---|-----|
| a. More than 5 hours per week. | 1% |
| b. Less than 5 hours per week, but on a weekly basis. | 3% |
| c. Once or twice per month. | 6% |
| d. Once or twice a year. | 11% |
| e. Never | 76% |
| f. Don't Know | 3% |

35. How often do you watch locally produced, Educational Access programming that appears on the channels dedicated to higher education, channels 50, 53, 54 and 55? (N=1,137)

These channels provide local university and college programming from Drexel, Temple and LaSalle as well as the Community College of Philadelphia. When answering, consider your total viewing time of all Higher Educational Access channels.

- | | |
|--|-----|
| a. More than 5 hours per week. (CONTINUE) | 2% |
| b. Less than 5 hours per week, but on a weekly basis. (CONTINUE) | 6% |
| c. Once or twice per month. (CONTINUE) | 12% |
| d. Once or twice a year. (CONTINUE) | 21% |
| e. Never (CONTINUE) | 56% |
| f. Don't Know (CONTINUE) | 3% |

Q36 AND Q 37 ASKED OF ALL SUBSCRIBERS WHO WATCH SOME FORM OF ACCESS CHANNEL PROGRAMMING AT LEAST ONCE OR TWICE PER MONTH

36. How valuable would it be to you to be able to receive local community channels in high definition/HD? Would you say it is Very Valuable, Valuable, Somewhat Valuable or Not at all Valuable (SAME AS "NOT VALUABLE")? (N=311)

- | | |
|------------------------|-----|
| a. Very Valuable | 27% |
| b. Valuable | 21% |
| c. Somewhat Valuable | 23% |
| d. Not at all Valuable | 23% |
| e. Don't know | 6% |

37. Comcast has a service known as “On Demand” which allows viewers to access programming at any time. How valuable would it be to you to have local access programming provided on-demand on the cable system? (N=310)

- | | |
|------------------------|-----|
| a. Very valuable | 36% |
| b. Valuable | 29% |
| c. Somewhat valuable | 18% |
| d. Not at all valuable | 12% |
| e. Don’t know | 4% |

GO TO Q39

Q38 ASKED OF ALL SUBSCRIBERS WHO WATCH SOME FORM OF ACCESS CHANNEL PROGRAMMING LESS THAN ONCE OR TWICE PER MONTH

38. Since you indicated that you weren’t a regular viewer of the local access channels (only watch once or twice a year or never), we’re curious if there is any local programming you might find valuable on the cable system. Is there anything you would like to see added to enhance local programming in Philadelphia? Open Coded (N=411)

Full list is available with CBG.

Top 6 Common Program Types:

1. Local News/Events/People/Sports (172)
2. Local and Educational Programming (63)
3. School sports/School Board Meetings/School Information (29)
4. Restaurants in Philly(28)
5. Local Traffic and traffic cams (23)
6. City Council (14)

GO TO Q39

Q38a ASKED OF ALL SUBSCRIBERS WHO ANSWERED “NO” TO Q28

- 38a. Since you indicated that you weren’t aware, we’re curious if there is any local programming you might find valuable on the cable system. Is there anything you would like to see added to enhance local programming in Philadelphia? Open Coded (N=232)

Full list is available with CBG.

Top 5 Common Phrases/Words:

1. Local News/Events/People/Sports (96)
2. School sports/School Board/School Information (34)
3. Local and Educational Programming (24)
4. City Council (16)
5. Government (10)

ASK ALL SUBSCRIBERS

39. Regardless of how often you might watch, how important is it that these local community channels are available to cable subscribers? Would you say it is Very Important, Important, Somewhat Important or Not at all Important? (N=1,637)

- | | |
|-------------------------|-----|
| a. Very Important | 30% |
| b. Important | 25% |
| c. Somewhat Important | 25% |
| d. Not at all Important | 16% |
| e. Don't know | 4% |

40. In other cities like Philadelphia, a portion of the cable bill goes to support the production of the programming you see on the local educational, community and governmental channels. Considering that channels like ESPN cost you around \$5.00 per month and TNT around \$1.16 per month, how much would you be willing to pay per month to support local programming? _____ Open Code Answer (N=1,397)

Range (\$0.01 to \$250) N=802
Mode=\$1.00

Ranges: (N=802)

| | | |
|--|-----|---------|
| Greater than \$0 but less than \$1.00 | 28% | (N=225) |
| Equal to \$1.00 | 31% | (N=247) |
| Greater than \$1.00 but less than \$5.00 | 27% | (N=219) |
| Equal to \$5.00 | 10% | (N=84) |
| Greater than \$5.00 | 3% | (N=27) |

Remaining (N=595)

Zero/Nothing/ None/Not willing (N=351/25% of those responding without clarifier)

Don't Know/Not Sure (N=23 without clarifier)

Respondents with funding clarifiers (N=221)

Top 6 Common words (N=162)

1. Pay (98)
2. Channel (47)
3. Programming (41)
4. Bill (41)
5. Watch (33)
6. ESPN and/or TNT (32)

Full List

- I've had enough of additional charges by Comcast!!!!
- This service should be provided at Comcast's cost in order to support its local community. Philadelphia has consistently committed to maintaining Comcast's near-

exclusivity in the local market, a practice that ensures strong profits for the company.
This is a service and cost Comcast owes to its dedicated home market.

- Not willing to pay. Community programming should be FREE. That is plain been greedy
- NO, as Comcast is the only provider they have an obligation to include this programming.
- Shouldn't it be donated time from the Cable company? These are Non profit programs!
- NOTHING! Comcast gets millions of dollars in tax breaks, makes millions in profits, fights the organization of unions that protect workers, pays their officers ungodly salaries, and then asks if we would be willing to pay for our local access channels? Seriously? That is sickening.
- NOTHING! Comcast gets millions of dollars in tax breaks...I get none and live on Social Security! Comcast owes Philadelphia and its citizens. Let them pay for it! I think its obscene to even consider putting more on the backs of the people that fund Comcast CEOs outrageous salary! (And probably line the pockets of our city officials as well!)
- Depends.
- It should be free. Or less than 1.00 a month.
- Is it for PBS? Then I'd happily pay as much as I may for ESPN or any other channel. If it's for public access, I'm not interested.
- Comcast should donate the time. They make enough money!
- Zero. Comcast should provide it as a public service.
- I would not be willing to pay because this should be a public service - especially for government/info programming - subsidized by Comcast in exchange for its enormous market share and high cost. My unwillingness to pay is not about an unwillingness to support this programming; rather I think that cost should be borne by Comcast.
- \$0. Comcast takes enough of my money, why should I have to pay extra for local stations? Take it out of the payments I already make. They should support the community that is based in.
- If my bill per month was vastly cheaper, I would be willing to support local educational, community and governmental channels.
- I don't watch any of these channels and if it were up to me I would want that specific channel removed to pay less on my bill considering no one in the household watches sports.
- No, you guys charge way enough already, you should be able to donate a portion of the billions you earn annually.
- Nothing pay too much now
- I pay enough for my cable bill. Please do not add anything more to my cable bill.
- Comcast should continue to subsidize community access but make it more widely known and available thru promotion
- Zero.....Comcast should be providing this
- Can't afford to pay anymore because my Comcast bill is too high!!!
- 0.00...My bill is already too costly.
- Since Comcast is a big member of our community, I think they should support this service
- Comcast should subsidize with all the credits they receive from the city and the money they make from us and advertisers. Cable was to be ad free that's why we were asked to

pay for it now however, we pay and get commercials and lousy program choices and old movies.

- If my rates were lowered, because I am already paying way more than I can afford each month for Comcast, I'd pay \$5/month for local channels.
- At this point in my life, nothing. I'm on a fixed income and have to choose my charities carefully.
- The Bill Is Too Expensive As It Is, Comcast Should Do Something To Help The Public, I don't think the customers should have to pay for that.
- The amount I pay for cable should already go to local programming. I pay 190. a month including several taxes and fees !
- I do not pay for anything extra - it should be taken out of the friggin huge profit that Comcast makes.
- Shouldn't Comcast pay for this? I responded to the last question incorrectly - I watch all of the community stations frequently
- \$0. My bill is already too high! Take off all of those taxes and fees
- Nothing already feel like many others that cable is outrageous
- None - Comcast should contribute
- Comcast services are already too high.
- Whatever was decided
- How much do I pay now out of my monthly bill?
- However much was needed to ensure public channels are available. However, I think public channels should be available to the public for free.
- If paying for just internet was cheaper than paying for a bundle with equivalent internet from I would do it.
- Nothing. The cable company should provide this as a community service, free to their subscribers. I never watch ESPN. Use this five dollars for local, community and governmental programming.
- I shouldn't have to pay anything. Comcast should be footing that bill.
- This should remain be a public service. It's the least Comcast can do for us!
- I am not sure. Probably a dollar.
- I rather not PAY for a Channel I do not use.
- Absolutely zero if Comcast is involved with the transaction.
- Government should pay for the government access channel. These should be optional for those customers who want them, just like premium services. Customers who don't view these shouldn't have to pay for them.
- Nothing. It should be included.
- I pay Comcast plenty as it is. \$0
- You can take away every last ESPN channel that I have and put all that towards local programming, but I refuse to pay another cent for anything.
- Zero - don't watch it, don't want to pay for it.
- Zero.....and it is crazy sports channels are so expensive. Consumers should be able to choose and pay only for what they watch.
- I don't feel that I should pay anything additional. Comcast has made incredible sums of money for years, they can go to the bill to give back to the community that has given them ample tax breaks

- 0...who prospers, cable and government
- Nothing and I don't want to pay for ESPN or TNT either.
- I NEVER watch ESPN. Put that \$5 toward local programming!
- Bill already too high
- WHYY Is Very Important And I Would Pay To Supper That Station
- Not interested in any increases. Already expensive. . \$0
- Nothing because most of that information is on the news if it is important.
- \$0.00 bill too high already
- None. It should be FREE
- Nothing. The bill is already way too expensive.
- Nothing...as long as Comcast charges outrageous prices, let them contribute.
- I think they should provide it for free for Philadelphia. Comcast needs to support the city.
- Zero! Comcast should pay! They have the money from ripping people off.
- Let Comcast pay for it. They already overcharge for what we're getting. They keep building skyscrapers and we have to pay for them with higher than necessary rates and taxpayer subsidies.
- The price is irrelevant - I am sure it is sensible. If the need for community programming is the deal Philadelphia has made to grant Comcast monopoly status I for one will pay whatever is necessary to support community programming if the Philly government opens the cable market to competition.
- I don't watch "traditional" cable channels like ESPN or TNT, so channel my funds to local programming.
- Not a penny the Cable company should pay for this service not the consumers.
- Nothing. ESPN and TNT are gauging me. I don't need the City to do the same.
- If I was able to NOT pay the \$5 for the ESPN I don't watch I would be willing to pay around \$1
- How about [REDACTED] pays for it himself? If he can afford to buy NBC, he can afford to pay for the local access programming HE'S SUPPOSED TO PROVIDE UNDER THE LAW.
- Sure. As long as the city forces al a carte pricing on Comcast so that I don't have to pay for any channel I don't watch, the local community channels included.
- None. I would never volunteer another penny to Comcast. Paying per the channels you watch should be an option.
- Local community programming should be paid for by COMCAST as a condition of them getting their license!
- As a good corporate citizen, It should be provided from Comcast profits -- not the public.
- Why do I pay such a high cable bill I don't want another bill but better current movie channels not one that on over and over again.
- If I could pay for channels separately (i.e. only pay for 5 channels that I actually watch instead of 90 that I don't) I would be willing to pay equal to the highest channel cost.
- Let Comcast support these programs as a community service
- Couldn't really say. I don't even watch ESPN or TNT.
- I am already supporting them because of the huge monthly bill I am already paying
- I would rather support local programming than pay for commercial channels I don't watch.

- CBG Communications, Inc.

- I'd rather my \$5 went to local programming than ESPN. I'd rather not pay for ESPN at all.
- As little as possible.
- It should be provided for FREE since the cable bill is already so high.
- I don't want to be billed for such programming.
- Zero. Can't afford another penny I would cancel ESPN if I could.
- ZERO!!!! My cable bill is wayyy tooo high as it is!!!!
- None. It is not good or educational. The Internet is used for that stuff in my household. ESPN is crap I don't watch it but I still have to pay for it.
- Would prefer to pay \$5 for local and get rid of ESPN which is a complete waste
- As I currently don't watch local programming I would prefer not to pay for it.
- I don't want to pay more for the services I already get. The programming has value, but that value is already included in what I pay. The tax paid on cable bills should be going to programming (or other related) costs.
- Nothing. My bill is way too high as it is. I'm already paying a ton of money for a bunch of channels that I never watch.
- 0 (zero dollars) - nothing. This is not important to us and we don't want to pay for it. Our cable bill is already outrageously expensive.
- I already pay enough. Comcast is too damn expensive. I should be paying less, not more.
- Cable bill is already way too high and climbing
- My bill is already too high.
- Nothing. If I don't watch it why should I pay for it.
- Nothing... when I ask the city for help in any issue all I get is the runaround especially city hall and water department.
- \$0.00. That is zero. Nothing. Not a dime.
- I don't want to pay any more money for TV. It's already very expensive.
- Wouldn't be willing to pay anything additional. If Comcast wants to take a portion from my current bill, that's fine.
- I'd gladly give up ESPN and give my \$5 to the programming. A choice would be nice, with tiered contributions.
- Nothing.....pay way too much already, plus, being able to operate in Philadelphia, Comcast should provide this for the city for FREE!
- None, my cable bill is higher than expected
- I'm not paying anything more. Get it from Comcast
- You should pay for local programming. you make the money
- My city taxes and tax breaks that Comcast gets should be more than sufficient to support these channels without my additional contributions.
- Take the \$5.00 I pay for a useless ESPN and apply it to educational/community channels
- Nothing--and I don't get ESPN or TNT
- Zero. The company should fund it
- Trick question, I don't think my bill should be lower and Comcast should have to pay more of its profits to provide these services
- Very little or anything at all.
- Depends on the content
- That depends how much I'm already paying for other things.

- Nothing on top of my bill. Comcast should give some of their huge profits toward this. Or lower my bill. Or let me choose the channels I want to lower my bill. Then I'd consider it.
- Already pay too much - ask Comcast to give more
- If I want to support local programming, I support PBS. I am not willing to pay one extra cent to Comcast.
- I pay too much for SD versions of channels that broadcast in HD for free. Comcast should provide HD signals for all local broadcasters like they used to. I won't pay any extra for these channels if I can get them with a digital antenna. Lacking that, I would pay \$1 per month.
- Nothing. I only get those channels as a part of a package that is cheaper.
- Nothing. No need to watch it for me.
- It depends on the content. I am not paying for content that I'm not interested in based on the fact that it's local. If there's some cool local content thou, I'll consider paying
- I would prefer the channels raised money the same way as PBS.
- As I said before, any additional cost would be difficult for me.
- Zero. Comcast should have to pay for this.
- Zero. Comcast charges me enough to pay for these things themselves
- ESPN is a rip off. Fox sports one and NBC sports are better. So the 5 is way too much. I would pay a quarter mostly cause I didn't even know they were available.
- I support PBS and WHYY. High caliber programming requires adequate funding, otherwise it's not compelling.
- Depends. I need more info to provide an answer
- Should be FREE
- I understand that it might be important to some people, but not to me. If I want local programming, I'll go to someplace outside of TV. The internet, probably.
- If quality was improved (cameras, production, etc) \$1... at current rate \$.25
- Don't know but would support funding for local channels.
- You give them the tax breaks, they should pay for it!!!
- Depends on if the money would go directly to that programming and how much more Comcast would jack up the rates. Often there are fees that I have no clue what they are for...
- Take my \$5.00 for ESPN and use it for local content. I don't want to pay for channels I don't watch.
- No. I pay enough already. Comcast has ridiculous fees. They can finally pay up.
- Comcast should pay for that, we already pay enough
- Comcast prices are already too expensive."
- Without knowing more about these channels, I would not be willing to pay anything at the moment. My bill is too high as is.
- Not much. The quality of the programming isn't very high and I can hardly ever tell what is going to be on when because it isn't listed in the TV guide portion of the channels. It needs to be more specific.
- Unsure, I have no use for ESPN or TNT ... so a surcharge for something I rarely use would probably be something I wouldn't accept up front.

- If the local channels had quality programming, then the amount should be commensurate to that quality.
- I would much rather support local programming than ESPN.
- Maybe, depends on if I enjoy the programming on them.
- None. I don't watch them and I shouldn't have to pay for them. I don't even use the cable anyway.
- \$0.00, I don't want the majority of my channels, I only want to pay for the very few I use.
- I really don't watch TV because your equipment is crap, and I'm cancelling it within the next month to plug an antenna into it, so \$0.
- Comcast is already too expensive. How about they stop being greedy and support the community that is making them millions.
- Zero, unless the city of Philadelphia forces a la carte pricing all cable channels so that I pay only for what I watch.
- Nothing it should be a community service
- The price of my cable bill is already too high. Unfairly so. I have no interest in paying more for programming I may or may not watch. There should be an a la carte channel system and I shouldn't have to pay for any channel I don't intend to watch.
- Zero and now I am very concerned that I pay \$5 a month for ESPN: a channel we never watch.
- I don't support politicians. Liars and cheats.
- More money. break up the packages and let us pay for channels we will use and not the ones we don't
- \$0. My bill is already high enough
- The city gets enough of my money
- If this money was guaranteed to go to local programming and not to Comcast I would contribute as much as \$5
- They don't 'cost' me anything. They cost next to nothing for Comcast as well, yet I would easily pay 2.00 dollars per channel if this shit were a la carte. Idiot.
- I don't own a TV and will never subscribe to cable television. The internet satisfies all of my media needs.
- I DON'T WANT TO PAY MORE
- No, and I severely doubt the cost estimates of those channels are remotely near Comcast's price to deliver them.
- Would depend on the programming
- 0\$ it should be included in taxes that I pay. It would be outrageous to pay anything
- Unknown. I should be able to drop ESPN and other channels, if I don't want them.
- Not enough information to make an informed decision.
- Nothing it should be included in the price
- I think Comcast makes more than enough to support these channels.
- I would be willing to pay for these channels if Comcast would stop raising my rates
- Why doesn't Comcast dig into their own fat pockets to pay for this?
- I think that Comcast steals enough of my money that they should just give 5.00 from what I already pay to you all.
- \$0. I don't watch it enough to pay additional fees.
- My bill is too high already!!!!

- As it stands now, I only have HBO... and my monthly bill is &153.98 which I find very very expensive.
- I do not participate in viewing local programming and so would not be interested in paying.
- Not much, but only due to Comcast's current rates, which are already too high given the level of service provided.
- That's what I pay exorbitant wage taxes for."
- Depends on the programming
- I'd rather they took the 5 dollars from ESPN and gave it to Philadelphia channels than give Comcast another dollar.
- We don't get ESPN or TNT, so less than those prices. \$0.50.
- Already being ripped off by cable company maybe they should give more of their profits away
- \$0 - I would like to select exactly what channels I subscribe to and pay for them.
- That ESPN rate is insane. If that could be lessened and the difference given to local programming, that would be fine. I would also be fine giving an additional dollar or so.
- TBD - asking me to pay any more when the cost of cable and Comcast's market domination is the issue is like asking a camel in the middle of the dessert, "more sand, sir?"
- I'd rather get rid of those expensive channels I don't watch.
- Zero. Why would I want to pay for local programming that I need Cable to receive?
- More, if I didn't have to pay for ESPN
- I already pay to support local programming. It was also my understanding that Comcast (or whoever the provider is/ends up being) had to provide some of this funding. Which means a portion of my bill already goes to support this. Can you tell me how much? With that information, I would be better able to answer this question.
- None. My bill is already too high.
- The bare minimum.
- If it went directly as pass-through monies I would say up to 1-2 dollars per month, but if it was just an excuse to be billed more with no direct contribution to PEG, and was used as an excuse for COMCAST to reduce its contributions then I say I would not be willing to pay extra. COMCAST makes money off of these franchise agreements, it needs to be beholden to provide these services (PEG) as a responsible contribution back to the commons of Philadelphia for allowing it to do business here.
- I'd rather the money come from Comcast but I guess \$2 is fair enough.
- About that much, but Comcast should cover ALL these charges.
- A few dollars, but I would rather have a choice to support one or the other. resent having to pay for ESPN when I never watch it
- Cable companies should be subsidizing this, and if the cost is passed to the individual it should cost less than \$1.00.

ASKED OF EVERYONE EXCEPT THOSE THAT ANSWERED YES TO Q9; THESE GO TO Q44

Internet Questions

My next few questions are about Online Access.

Q41 AND Q41a ASKED OF THOSE WHO SAID NO TO Q9 AND YES TO Q10.

41. You indicated earlier that you have internet access at home. Who provides that service?
(N=710/22%)

| | |
|---------------------|-----------|
| Verizon | 71%/N=507 |
| Clear | 6%/N=43 |
| Declined | 6%/N=44 |
| Don't Know/Remember | 1%/N=8 |
| Others Mentioned: | 16%/N=108 |

- Another company that charges less and doesn't play games with the rate every 6 months.
- AOL
- AT&T (4)
- ATT mobile share
- Cavalier (2)
- Cavtel (2)
- Comcast. Just not their branded Xfinity, as far as I know. We get the cheapest thing that they don't advertise.
- Cricket
- Direct TV
- DISH
- DSL extreme
- Earthlink (5)
- Google fiber
- Hotwire (6)
- IDV net
- Juno
- Megapath
- Mobile carriers. T-mobile, Verizon, Virgin Mobile in our house.
- Mobile Citizen
- Mobile device hot spot
- Monitor data corps
- My phone company
- My Self-Sufficiency program, Achieve-Ability, provides my internet service because they provide internet service free of charge in my apartment building.
- Net zero (3)
- Off brand

- Pa.verizon
- PhillyNet
- RCN (5)
- Sprint
- T-Mobile
- Zito Media

41a. Why did you choose this connection type and service provider? (Mark all that Apply).
(N=695)

- | | | |
|----|--------------------------|-----------|
| a. | Cost | 68% |
| b. | Speed | 40% |
| c. | Only available service | 8% |
| d. | Most reliable in my area | 29% |
| e. | Other | 37%/N=258 |
- Not Comcast
 - No hidden fees or bill in advance
 - Dislike of Comcast monopolistic practices and attempt to bully competition
 - Recommended by a friend.
 - Monopolies are anti-capitalistic and bad for democracy.
 - Already providing phone service
 - I had Comcast, but their customer service is horrible.
 - Bundled with phone
 - Tried Comcast one time but couldn't get it to work - I was told I could have it done by contractors for Comcast who would have to re-wire my home to make it work and I would be charged to have it done.
 - Because in Philadelphia we are given NO OTHER CHOICE!
 - See above--Philadelphians get it stuck to them no matter what!
 - My wife got it - I don't remember why. We would switch to any provider that actually offered high speed access in our neighborhood
 - Many bad experiences with Comcast
 - It is NOT Comcast.
 - Best deal at the time
 - IT MAKES ME NERVOUS TO HAVE COMCAST CONTROL ALL ACCESS TO MEDIA AND INFORMATION;
 - Too much trouble to change.
 - They are not as horrible as Comcast.
 - Dislike Comcast
 - I share with my neighbors - they chose the service.
 - Poor service with Comcast - terrible customer service
 - Prefer to give business to Verizon as opposed to Comcast, the vast majority of young people do not like Comcast
 - Comcast Internet not available without TV bundle
 - Didn't want to give money to Comcast.
 - I don't need TV service

- Connected to my phone service
- Have used since fall 2000
- Better Customer Service
- Have always had it pre Comcast offering internet
- Introductory rates should be a crime. No one tells you that in 6-12 months your rates will double or triple. Unfortunately, all providers have this cost structure. However, Comcast has the shortest intro time period and the highest costs after the intro period is over.
- Don't trust Comcast
- Not putting all ones eggs in one basket
- It isn't Comcast
- I tried to transfer my Comcast service but the tech didn't show up for his appointment and the customer service was maddening. So I switched to Verizon FiOS because it was available in my area.
- I got paid by the purchase
- Comcast had frequent outages in my neighborhood (Northern Liberties, from 2005-2010)
- Unfavorable view of Comcast
- Cost savings from bundle
- Fiber optic technology
- Forced choice
- Comcast has proven to be too expensive and arrogant
- Convenience of Portable Device
- I have Verizon telephone service.
- It's how we started with the internet and we stayed with it.
- Verizon offers better customer service and more RELIABLE service.
- I don't like to bundle service, if Comcast has an outage I want other options to communicate and get info.
- To the best of knowledge
- Have phone service with them
- Use my land line and waiting patiently for FiOS
- Already had Verizon
- Overall quality of service, better customer support
- You can get them on the phone when there is a problem and they will fix it!!!
- It's not Comcast.
- Customer service
- Comcast charged monthly fine when I only had their internet
- Comcast has a very bad reputation for both service and for their role in the community (for ex, ██████████ role in lobbying Harrisburg to weaken Philly public schools) and I do not want to give them any money
- Already had phone wire
- Phone line
- Bundled with TV
- I have a mi-fi device that I can take with me anywhere that I go

- Cost of Comcast service keeps going up and up well beyond the rate of inflation. DSL is more affordable, and has not had a price increase in years.
- Came with cable and phone
- Don't want Comcast to control everything
- SPREAD THE WEALTH AROUND
- Did not want to deal with Comcast again and also they only offer this as part of a bundle.
- Rates do not change
- Had Comcast and was paying for 20mbps and only getting 3 mbps.
- I have always had good service from Verizon.
- Quality, customer svcs
- So that I don't have to give Comcast money to do all of the things mentioned in previous answer
- Bundled with Direct TV/ landlines
- Switched to FIOS from Comcast for TV
- I worked for Verizon
- Started with it
- Verizon is more responsive.
- Alternative to Comcast
- Unhappy with Comcast
- Not sure anymore
- I hate Comcast!
- They're not Comcast.
- Landlord chose prior to my arrival
- Verizon is also evil, for what it's worth
- Packaged with my landline phone service
- Not having to deal with the misleading policies and horrible customer service of Comcast.
- I didn't like how Comcast treated me
- Their PRICES ARE MORE REASONABLE AND THE CUSTOMER SERVICE MUCH BETTER
- Integrity of Comcast
- I prefer Verizon to Comcast
- We are happy with that provider and avoid Comcast at all costs.
- Provided by landlord
- Poor customer service from Comcast
- I had nothing but problems with Comcast. wasted thousands of dollars!
- Wanted any provider other than Comcast
- Did not want a Comcast product (see previous comments)
- Bundled with cable and phone
- Was the only option at the time.
- It wasn't Comcast
- Comcast seriously damaged my property after installing service next door. They never responded to my repeated requests to resolve the outstanding damages to my property.

- I refuse to subscribe to Comcast. Waiting for FIOS
- I'll do anything to not give my money to Comcast!
- They promised to keep my price the same for 2 years. I know exactly how much I will pay each month.
- Didn't want to support Comcast
- Value of product
- Wifi
- I changed to Verizon because the service from Comcast was constantly failing.
- Former employee
- I will not do business with Comcast because of consistent poor service.
- Verizon is the BEST
- Because it is not Comcast
- Comcast service was so terrible!
- Verizon offered to have a technician come out to my home free of charge for the installation. Comcast also wants to charge a monthly fee for the box which they term as a rental fee. Every experience I have ever had with Comcast from a customer service perspective has been unpleasant. Verizon is cheaper and customer service is more friendly.
- Newer, more advanced technology platform.
- As BAD, both are too expensive, with no reasoning
- Comcast Xfinity was unreliable and their service was terrible
- Comcast is evil
- Bundled with my phone
- Comcast has horrible customer service
- Didn't want to get any more products from Comcast
- Verizon isn't great, but they are unbelievably amazing compared to Comcast. I've had Verizon for three years and the one single interruption in service was Hurricane Sandy when we completely lost power. Comcast went out regularly and when contacted for help they didn't seem concerned or in a hurry to rectify the situation.
- Mostly because Comcast's service is so terrible and it is the only other viable option for internet
- Frustration with Comcast
- Better customer service
- Comcast sucks, their customer service sucks, I found that I get a better value with Direct TV
- Provider was someone other than Comcast
- Because they aren't Comcast
- Bundling package with my existing cell phone
- Would subscribe to FiOS if available
- Very few reliable options in Philadelphia
- Special offer
- My total disgust with Comcast.
- Heard it was faster than Comcast
- Special offer

- Convenience, received over existing telephone line
- It was the only available service at the time I started subscribing and I've never changed.
- They offered an attractive package before Comcast did.
- Employer provided
- Upgrade of my old copper telephone dsl and POTS
- No data caps
- Not Comcast
- I hate Comcast so much
- Customer service was 1000% better than Comcast
- Got a deal
- Wasn't sure if cable outage affects internet connection
- Had it previously
- Mobility
- Very happy not to use Comcast and we are very happy w AT&T services and price. Comcast could learn a lot from AT&T and other cutting edge companies who know how to keep their reliable customers happy. Comcast sucks!
- Competition for Comcast!
- Fiber Optic. Cable was intended for TV, not TV AND Internet. Too much LAG and non dedicated Line. Sharing Bandwidth with your neighbors is a horrible idea. The cost is way too high for the speeds you get and the speeds are completely false because of the "speed boost"
- They were easier to do business with than other telephone companies
- Landlord provides service
- I didn't want to continue with Comcast and this was comparable.
- Comcast is unreliable. Internet speeds slow down at peak hours.
- It's not Comcast
- There are options now and we are looking at them
- FreedomPop is my own hotspot for when coffeehouse service fails or isn't convenient
- Came with rent.
- Overall service Comcast treats their customers like criminals
- I had Comcast in the past for internet and strongly disliked the service provided when we had issues.
- Far superior customer service
- Already had phone service; was able to bundle
- Independently owned
- Comcast service is horrible
- I hate Verizon less than I hate Comcast
- Because we didn't want Comcast
- Housing office chooses the wifi provider, but we don't have to pay to use the wifi.
- They're not Comcast
- Already used Verizon for telephone
- I do not use internet much at home.

- False advertising of actual speeds - random fees - cost increases - throttling streaming services - I would rather disconnect my internet service entirely than use Comcast
- I hate Comcast and their customer service, and want to limit how much I have to pay them.
- They aren't Comcast
- FiOS box already installed at apartment I moved into
- Xfinity is outrageously expensive
- Customer Service
- Better customer service, quality service
- We only want internet, not phone or TV, and we don't appreciate Comcast's unnecessary installation fees and bait-and-switch pricing.
- Good customer service
- Bad Customer service experience with Comcast in the past
- It's not Comcast.
- I did some comparison shopping and RCN was cheaper and had far more positive customer reviews
- Better than Comcast in all facets.
- Because after 31 years I have come to the conclusion that I despise Comcast. Plus, they belong to ALEC.
- No technician visits, no installation costs, really easy to self install, use, move etc. I took it with me when I moved and just plugged it in and didn't have to go through a 'moving fee' or re-installation.
- It isn't Comcast
- Comcast was rude and unhelpful when I tried to order their service.
- Better service than Comcast
- I am living with relatives.
- It's not Comcast
- It is a monopoly, Comcast doesn't care about me
- So much better
- Apartment complex provides service.
- High speed wireless access. Also they aren't one of the companies fighting net-neutrality
- They were cheaper with faster, better internet.
- Free modem that has an integrated router.
- I will never deal with Comcast ever again. Worst customer service of all time.
- Only other option at time
- Better customer service in my experience
- Not Comcast
- Didn't want Comcast to have my business
- Roommates had it when I moved in.
- My friend chose it and my computer is connected to it!
- Because it wasn't Comcast
- Comcast sucks
- Not Comcast; wanted to get away from their service

- The service is faster than Comcast's "high speed" internet
- I did have Comcast when I lived in another part of the city. I moved to an Apartment where the only option is Hotwire. My habits have not changed and I still think Comcast cable TV is a waste of money.
- It's not Comcast
- Only service that wasn't Comcast.
- Better customer support
- Customer Service
- RCN has much cheaper internet costs at much faster speeds.
- Poor Customer Service
- Customer service is really bad.
- Didn't like Comcast, went with only other provider
- Better service and it works
- It's only in when I choose for it to be
- Comcast speed is nowhere near as advertized
- It's not Comcast
- It's not Comcast
- It came with the building
- Lesser of two evils.
- Heard bad things about Comcast internet service
- Provided by landlord
- It's not Comcast
- Have had it since 1999
- Comcast was awful and I kept losing service
- Workers are union
- Because Comcast had terrible service and the cost was too high.
- Want to change, unhappy with cost and service of Verizon, just haven't had time
- I don't like Comcast's business ethics.
- Comcast has terrible prices, terrible service, terrible internet speed
- They don't throttle internet connection speeds, and I'm just waiting until Google Fiber becomes available. ISP's out here are horrible.
- I did not want to deal with Comcast again
- Customer service
- Already included in phone bill.
- Part of family plan
- I don't lose speed during peak hours, like I did with Comcrap
- No horrible installation. No fine print.
- Because they're not Comcast.
- They're not Comcast
- Comcast has terrible business practices and I refuse to support them.
- Only other reasonable option, other than Comcast
- Comcast SUCKS
- Only provider besides Comcast, which is too expensive
- Fixed IP address, better service. more generic internet features not blocked

- Bundle with DirecTV
- Comcast is scum
- The lesser of two evils.
- Either Comcast or Verizon. I hate both. Only can pick one or the other. I hate Comcast more.
- Customer Service
- I switched video providers from Comcast to FiOS so switched Internet at the same time
- Comcast cut out too much.
- Had fairly good speed and could provide split line
- It wasn't Comcast/xfinity
- Read the response to number 10.
- Already provided telephone service.
- Verizon has decent customer service, and they are transparent in their pricing. Given my experience with Comcast for my cable, I would never voluntarily expand my need to rely on Comcast for any service.
- Tether with my smart phone--portable and convenient

Q42 AND POTENTIALLY Q43 ASKED OF THOSE WHO SAID NO TO Q9 AND NO TO Q10.

42. **(IF NO TO Q10 - THEY DID NOT SUBSCRIBE TO THE INTERNET AT HOME).**
Why have you chosen not to subscribe to the Internet at home? (Mark all that Apply)
(N=38)

- | | |
|--|-----|
| a. I get the Internet on my mobile phone. | 53% |
| b. I plan to establish Internet service within the next year | 24% |
| c. I don't own a computer (GO TO Q43) | 18% |
| d. Cost / too expensive | 76% |
| e. High-Speed Internet service is not available | 3% |
| f. Sufficient access elsewhere | 13% |
| g. Nothing on the Internet I need | 3% |
| h. Don't know how to choose a service | 3% |
| i. Don't know how to use it | 3% |
| j. Don't have time to learn how to use the Internet | 0% |
| k. Don't know how to set it up | 0% |
| l. Problems with cable access | 3% |
| m. Can't get the kind of Internet access I want | 5% |
| n. Problems with DSL access | 5% |
| o. Computer safety – viruses, worm | 3% |
| p. Privacy/security/personal information (banking, credit card, identity theft) | 5% |
| q. Don't really know about Internet | 3% |

- r. Other 11%/N=4
- Comcast screwed me big time
 - Don't want it
 - I hate Comcast's monopoly over Phillyscale services.
 - Choices of blended Comcast options too confusing

ALL GO TO Q44, EXCEPT THOSE INDICATING NOT HAVING A COMPUTER IN THE HOME (INDICATED 42c ABOVE).

43. If you indicated that you DO NOT have a computer at home. Why haven't you purchased a computer? (Mark all that Apply) (N=2)

- | | |
|---|---|
| a. Cost / too expensive | 2 |
| b. Sufficient access to computers | 1 |
| c. Don't want one | 2 |
| d. Don't need one | 2 |
| e. Worried about computer safety (viruses, worms) | 1 |
| f. Privacy/security/personal information concerns | 2 |
| g. Other: | |
| - Computer is useless without internet | 1 |

ASKED OF EVERYONE

44. Do you access the Internet in places outside the home? (N=2,696)

| | |
|-----|----------------|
| YES | NO (GO TO Q45) |
| 89% | 11% |

44a. What are other places that you use the Internet? Mark all that Apply (N=2,369)

- | | |
|---|------|
| a. Work | 88% |
| b. School | 26% |
| c. Public Library | 17% |
| d. A relative or friend's house or some other home in the community | 57% |
| e. A retail shop with wireless Internet services | 48% |
| f. Everywhere (mobile Internet) | 70% |
| g. KEYSLOT | 3% |
| h. Other public computer center (Community Center, recreation center, etc.) | 6% |
| i. Don't Know | 0.5% |
| j. Other - 3%/N=66 | |
| • NE Regional Library | |
| • Phone | |
| • Senior Center | |
| • Yeah, you pretty much need it everywhere. | |
| • Anywhere with free wi-fi. | |
| • Career Link. To apply for jobs. | |

- While traveling
- Hotspots
- Train station, but not the train
- Hotels with wifi
- Philly CAM
- Xfinity wifi hotspots
- Occasionally when traveling
- My Verizon mobile hotspot
- Starbucks
- While Commuting (xfinity wifi hot spots)
- Comcast hotspots at 30th st station, etc
- Suburban Station
- MiFi
- Many places
- At motels when traveling
- Hospitals
- Starbucks
- Via smart phone
- SEPTA stations
- Coffee shops
- Office
- Many places
- SEPTA platforms
- Cell phone data service
- Phone
- Starbucks
- Bars, restaurants, coffee shops
- Comcast wifi hotspots
- Philadelphia OIC's Mobile KEYSPOOT
- On my Smart Phone
- Cafe
- Phone
- Coffee shops
- SEPTA stations (suburban station, queen lane station)
- Amtrak
- Anything other than Comcast horrible services
- Hospital
- Xfinity wifi hotspots
- Moss rehab, conicelli Honda service, Jefferson university hospital.
- Other wireless internet service provider
- Public xfinity hotspots.
- Synagogue
- Would like to access in key spots but I don't know where they are located
- Hotel and other public wifi

- SEPTA RR Stations
- THEY EAT THEIR OWN CHILDREN
- Starbucks
- Hotspot
- Xfinity wireless hotspots, wherever available
- Hotel
- Septa stations
- Hotel
- Train station
- Train and bus transit (Amtrak, mega bus, bolt)
- Cafe.
- Septa
- Coffee shop
- Phone
- Coffee Houses, Dunkin Donuts
- Philly cam

ASKED OF EVERYONE

45. If you indicated earlier that you use the Internet, what do you mostly use the internet for?
(Mark all that Apply) (N=2,622)

- | | |
|---|-----|
| a. Look for information about a service or product you are thinking of buying | 88% |
| b. Sell something online | 84% |
| c. Buy something online | 82% |
| d. Do any online banking | 82% |
| e. Work from home (telecommuting) | 80% |
| f. Operate or support a home-based business | 77% |
| g. Look online for information about a job | 72% |
| h. Look for information about a place to live | 68% |
| i. Look online for news or information about politics | 56% |
| j. Look for health or medical information | 50% |
| k. Take a class or do homework | 49% |
| l. Keep in touch with family and friends | 49% |
| m. Visit a government website like the federal government, Pennsylvania's or the City of Philadelphia's website | 48% |
| n. Use an online social networking site like Facebook or LinkedIn | 38% |
| o. Share something online that you created yourself | 37% |
| p. Contribute to a website, blog or other online forum | 37% |
| q. Play online video games | 27% |
| r. Communicate with child's school as parent or caregiver | 14% |
| s. Watch television or other videos | 12% |
| t. Other (5%/N=129) | |

Top Mentions:

- Porn/X-Rated Sites

29

- Download/Listen to Music/Books/Movies 13
- Everything/All of the above 12
- Research 11
- News 9
- Netflix 8
- YouTube 7
- Email 5
- Social media websites (Facebook, Twitter, etc.) 5
- Live streaming video games 3

45a. Do you currently, or want to in the future, use the internet to obtain information or services from the City of Philadelphia? (N=2,669)

- a. Yes (GO TO Q45b) 82%
- b. No (GO TO Q46) 8%
- c. Don't Know (GO TO Q46) 10%

45b. What services or information are you interested in obtaining? (Mark all that Apply) (N=2,135)

- a. Emergency information 86%
- b. Traffic updates 70%
- c. Computer training 16%
- d. City Job searches 41%
- e. Register to participate in a class or event. 37%
- f. Ask questions via chat or e-mail with 311. 54%
- g. Request City services 66%
- h. Pay my water bills, taxes, etc. on line 78%
- i. Get employment information/help 34%
- j. Get a city permit on line 52%
- k. Other 5%/N=110
 - Access city data
 - Access Code, Charter, bills, and City Solicitor opinions
 - Accessing and exploring open data, applications, and GitHub source code repositories from the Office of the Chief Data Officer and Chief Innovation Officer.
 - Alerts for neighborhood street closures, special event interruptions
 - All innovation on a city level is key to compete with the future.
 - All of the above (2)
 - Be able to renew my parking permit online! ridiculous that this needs to be done in person or by mail, especially when these pirates have the most high tech metering, etc., on the planet
 - Benefits, taxes
 - Better understanding of budget
 - City Business News
 - City council and SRC meeting/agenda info, school district info

- City service disruptions (closed offices, delay in trash collection, etc.)
- Communicate with City Hall, e.g., LOOP and AVi issues
- Concealed carry license
- Department information eg. streets
- Everything (3)
- File complaints
- Find and use public (open) data published by the City
- Find info about city services
- Find out about Job Training
- Find out how the City can stop spending more money than it takes in.
- Find out if my homestead exemption was approved
- Find out information about property ownership
- Find out when trash is picked after snow or holiday
- Free classes, job training programs, health events
- Free give-a-ways
- General city information
- Get a copy of my police report that doesn't mean having to wait 3 months!
- Get air quality and health information
- Get building permits and licenses on-line.
- Get info on restaurant health grades
- Get information on Deeds and Permits.
- Get open city data, e.g. OpenDataPhilly
- Get property information: ownership, taxes, permits, zoning, neighborhood plans
- Get trash pickup schedules for holidays
- Government information about bills and hearings
- I want CLIP to have a website. Or make it mesh with 311.
- I want the City to have a central online presence (via a Twitter account or posting on Phila.gov) to inform the 25,000 City employees when there is a snow delay or cancellation. This does not currently happen, and it's mind-boggling that the region's largest employer has no organized way of communicating timely information to their employees.
- I'd like to learn when the city is going to start spending it's money on things other than rich parts of the city and council members salaries. Maybe, pave a road or clean our streets.
- If it can be done in a government office, it should be available online.
- If you can do it on the phone you should be able to do it via email or website with equal expediency.
- Info from L&I, find out what City services are available
- Information on street cleaning during snowstorms
- Information queries
- Knowing when trash pickup is delayed
- Laws and regulations.
- Local events
- Look up real estate information online

- Look up trash/recycling pickup schedules
- Municipal services
- Need place to specifically report pot holes.
- Noise complaints
- None right now (2)
- Olympic bids
- Open data from the city is awesome and I love having access to it, especially the streets data
- Opportunities to volunteer in community
- Parking permit
- Parking permits online
- Pay bills with no surcharge (2)
- Pay my Biz Privilege Taxes until they are phased out for small freelancers like me
- Phone directory
- Police records, crime statistics, etc.
- Policies, pending legislation, surveys
- Print forms
- Public school events, snow days, holidays, etc.
- Public transportation updates.
- Real estate
- Recreation Information
- Recycling Center information
- Recycling info and library info
- Renew my parking permit. Stop charging a fee for payments.
- Renew PPA permit, View Trash Collection Schedule
- Report crimes and issues to police that are non emergency
- Research city services
- Research property ownership, court hearings, and status of gas and water bills
- Septa (3)
- Service updates (not necessarily a request - but something like 'trash pickup' changes)
- Sheriff's Sale notices
- Special city announcements
- Start a petition to allow internet provider competition.
- Streets Dept website is the one I go to most (trash holiday schedule)
- Tax info (2)
- Property info
- The city needs to fix permits department. It's a joke to waste half a day waiting for someone to help you. Once there was a retirement party and I waited for 4 hours while everyone ate pizza and cake. Put it on line and the city will make more money because less people will avoid going down there for the permit.
- The more info and accessibility of it all, the better
- Transit Schedule, Sanitation Schedule

- Trash and recycling information
- Trash pickup after snow
- Trash pickup/schedules (5)
- Trash service holidays
- Trash/Snow Updates (2)
- Updates on city services
- Weather events (e.g., closure of City offices due to snow or cold or extreme heat); Citizen engagement opportunities; City plans for neighborhoods or for schools; City events (e.g., 4th of July, Mummers); Applying for City grants (for individuals or for nonprofits); City business opportunities; Supports for merchants
- Weather
- What recreation and arts programs are available in the city and where and when and how much
- Why the hell can't I pay EVERY city bill online already? What is this 1973?
- Won't use internet when City charges fees to pay for licenses and permits online...this should be free as it should cost the city almost nothing compared to paper billing
- Zoning information!

ASKED OF EVERYONE

46. Is there anything else you would like to say about Comcast's service in your community?
OPEN ENDED (N=2,574) Full list is available with CBG.

Yes 68% (N=1,759) No 32%

Top 9 Most Common Words (represents 69% of responses).

Prices (N=375)
Customer Service (N=316)
Internet Services (N=312)
Pay (N=300)
Monopoly (N=297)
Competition (N=217)
Channels (N=174)
Expensive (N=168)
Internet Speeds (N=152)

Background Questions (N=2,605 Completed Surveys)³

47. How old are you? (N=2,568)

| | | | | | |
|----------|------|-------|-----|--------------|-----|
| Under 18 | 0.2% | 18-25 | 17% | 26-35 | 41% |
| 36-45 | 16% | 46-65 | 19% | 66 and older | 5% |
| Refused | 1% | | | | |

48. Do you own or rent your home? (N=2,558)

| | | | | | |
|-----|-----|------|-----|---------|----|
| OWN | 52% | RENT | 47% | REFUSED | 2% |
|-----|-----|------|-----|---------|----|

49. Do you currently have children under age 18 in your household? (N=2,554)

| | | | | | |
|-----|-----|----|-----|---------|----|
| YES | 18% | NO | 80% | REFUSED | 2% |
|-----|-----|----|-----|---------|----|

50. Do you own a cell phone? (N=2,547) YES 99% NO 1%

51. Do you have a landline telephone? (N=2,560) YES 39% NO 61%

52. What do you consider your primary phone? (N=2,568)

| | |
|--------------------------|-----|
| a. Cell Phone | 83% |
| b. Landline Phone | 10% |
| c. Both are used equally | 8% |

53. What is your race or ethnic background? (N=2,523)

| | |
|---------------------|------|
| a. African American | 6% |
| b. Asian | 3% |
| c. Caucasian | 76% |
| d. Hispanic | 3% |
| e. American Indian | 0.2% |
| f. Biracial | 3% |
| g. Other | 5% |
| h. Refused | 3% |

³ Demographic percentages (unless otherwise noted) have been determined based on the total number of completed surveys submitted in SurveyMonkey. The N number given after each individual demographic question is the number of respondents who provided a response to the question.

54. What is the highest level of education you have had the opportunity to complete?
(N=2,556)

| | | |
|----|---------------------------|------|
| 1. | Some high school or less | 0.2% |
| 2. | High school graduate | 5% |
| 3. | Some college/trade school | 17% |
| 4. | College/4-year degree | 45% |
| 5. | Postgraduate | 31% |
| 6. | Refused | 2% |

55. Are you currently employed, seeking employment, or retired? (N=2,559)

| | | |
|----|--|-----|
| 1. | Employed | 78% |
| 2. | Seeking Employment | 5% |
| 3. | Retired | 6% |
| 4. | Unable to work because of a disability | 1% |
| 5. | Full-time Student | 7% |
| 6. | None of the above | 2% |
| 7. | Refused | 2% |

56. Which of the following broad categories best describes your total annual household income, before taxes? (N=2,444)

| | | |
|----|---------------------------------|-----|
| 1. | Under \$25,000 | 11% |
| 2. | \$25,000 to less than \$35,000 | 9% |
| 3. | \$35,000 to less than \$50,000 | 14% |
| 4. | \$50,000 to less than \$75,000 | 21% |
| 5. | \$75,000 to less than \$100,000 | 15% |
| 6. | \$100,000 or more | 25% |
| 7. | Refused | 6% |

57. What is your gender (N=2,563)

| | | | | | |
|------|-----|--------|-----|---------|----|
| Male | 66% | Female | 34% | Refused | 1% |
|------|-----|--------|-----|---------|----|

58. What is your home zip code? (N=2,499)

| Zip Code | Zip Code | Zip Code | Zip Code | Zip Code |
|-------------|-------------|-------------|-------------|-------------------------|
| 19102 (26) | 19118 (27) | 19129 (41) | 19140 (7) | 19151 (16) |
| 19103 (121) | 19119 (61) | 19130 (153) | 19141 (10) | 19152 (23) |
| 19104 (142) | 19120 (18) | 19131 (32) | 19142 (11) | 19153 (7) |
| 19106 (67) | 19121 (33) | 19132 (7) | 19143 (116) | 19154 (30) |
| 19107 (105) | 19122 (33) | 19133 (4) | 19144 (51) | 99999 (71) ⁴ |
| 19109 (1) | 19123 (79) | 19134 (48) | 19145 (68) | |
| 19111 (67) | 19124 (26) | 19135 (20) | 19146 (213) | |
| 19112 (1) | 19125 (97) | 19136 (35) | 19147 (185) | |
| 19114 (27) | 19126 (9) | 19137 (10) | 19148 (110) | |
| 19115 (49) | 19127 (32) | 19138 (5) | 19149 (28) | |
| 19116 (36) | 19128 (108) | 19139 (26) | 19150 (7) | |

The City of Philadelphia thanks you very much for your time.

⁴ 12 respondents refused to provide a zip code, and an additional 59 provided an invalid zip code.

EXHIBIT B-1

Summary Narrative of
PhillyCAM Focused Discussion
and Interviews



EXHIBIT B.1

SUMMARY NARRATIVE OF PHILLYCAM FOCUSED DISCUSSIONS AND INTERVIEWS

SUMMARY NARRATIVE OF PHILLYCAM FOCUSED DISCUSSIONS AND INTERVIEWS

Several focused discussions and interviews were held with persons involved with the operation, direction and use of the Philadelphia public access organization, PhillyCAM. This included PhillyCAM staff, the PhillyCAM Board of Directors, PhillyCAM members and member producers, and other facility users. Update discussions also occurred subsequently with PhillyCAM staff. In this section, CBG reports what these individuals and groups expressed about PhillyCAM's current operations and its cable-related needs and interests for the future.

Focused Discussions and Interviews with PhillyCAM Staff

PhillyCAM's Mission and Community Impact

Interviews were conducted with the PhillyCAM Executive Director and with three individual staff members concerned with operations, training and online content delivery. Additionally, two focused discussions were held with the entire PhillyCAM staff. The following are CBG's key findings as to these staff members' views regarding PhillyCAM's mission and its value to its members and to the community. Participants' views are summarized in paraphrases of statements made to CBG in the interviews, focused discussions, and update discussions.

- **PhillyCAM is a critical and valuable community asset** – PhillyCAM is unique in that it provides an affordable, welcoming environment including the physical space, the facilities and the staff to support diverse members of the Philadelphia community and successfully create content that both reflects and affects the community at large. Because it is affordable, there are no barriers to being able to produce content. Because it has the appropriate staff, community producers are facilitated and trained to achieve the skill level that they need to successfully produce programming. Because it has the proper physical space and equipment, producers have the tools they need to develop a diversity of content.
- **PhillyCAM provides an important outlet for diversity of speech** – An important and significant attribute of PhillyCAM is the ability to facilitate freedom of speech and enable an “uncensored voice” to reach the Philadelphia community at large. It enables the diverse members of the Philadelphia community to be able to communicate, and disagree at times, in a civil way.
- **PhillyCAM helps with community building** – PhillyCAM's approach to facilitating producers in their development of content is to encourage engagement and collaboration between members by having them work together on each other's productions as crew and gain knowledge from each other based on their varying skill sets. In this way PhillyCAM helps build relationship skills between members of the community. The staff finds that as community members produce, they are synergistic in helping build on the amount and

diversity of content. This ultimately enables PhillyCAM as an organization and as a distributor of content to become more reflective of the community as a whole. Staff indicates that this helps PhillyCAM reflect the culture of the City and that through PhillyCAM people meet, build healthy relationships and continue to help build a healthy culture.

- **PhillyCAM provides a wealth of training that enables community producers, interns and organizations to gain skills, build professionalism, and engage in serious content development** – PhillyCAM workshops and training provide a great deal of expertise, and again are highly affordable. The training materials are detailed and the workshops focus on the use of all PhillyCAM resources, which allow community producers to learn about all the resources that are available to them. The training encourages people to continue to explore and use more of the facilities. As they explore, they gain confidence, become more familiar with the different capabilities of the facility and continue to advance their content development skills.

Over time, PhillyCAM staff helps those with basic field and studio production skills acquired from PhillyCAM workshops, to connect with members and outside television and media professionals with more advanced skills. This enables collaboration among producers and users of the facility which helps support retention and decrease shyness about the use of various forms of technology and the wide range of capabilities available to them. This in turn encourages the use of different cameras, different editing platforms, and different techniques.

PhillyCAM enables learning by a wide diversity of users with different skill levels. This helps beginners to evolve and more advanced users to work with others, learn and collaborate to increase their skills.

- **PhillyCAM's facilities and equipment provide a wide range of capabilities and help contribute to the diversity of content produced** – Because PhillyCAM provides a range of equipment and a variety of facilities, from basic to advanced,¹ but all user friendly, it allows users to gain, maintain and increase levels of professionalism. This engenders a desire in producers to grow, evolve, take their work seriously and focus on doing legitimate, serious content development.
- **PhillyCAM continues to focus on heightening public awareness of both its program content and its production capabilities** – Staff indicates that “the word is getting out there” and word of mouth is bringing new people to PhillyCAM. In addition, there is a focus on heightening awareness through a number of specific promotional techniques. PhillyCAM has an ongoing goal of identifying the potential viewers and users who they are not reaching, and to provide outreach to those groups. Their goal is to get to the majority of people in Philadelphia to be aware of the content on their channels. Even if programming is something that some viewers may not want to watch, PhillyCAM wants them to know it is available, and uses a variety of means to promote this awareness.² The

¹ See Needs Assessment Report, Section B., pp. 80-89 for a description of the facilities and equipment.

² See also Exhibit B.5, pages 14 and 15.

objective is that Philadelphia cable viewers know PhillyCAM is an alternative to the television industry's traditional commercial focus, by providing community-based programming that is largely issue-based.

- **PhillyCAM provides a valuable contribution to workforce development –** PhillyCAM contributes to the development of a technologically trained workforce in Philadelphia through its focus on training, building individual video production skills and building production capability and expertise in member and partner organizations. For example, PhillyCAM had 13 interns in FY 2014 from diverse backgrounds working in its facility.³ The initial goal is to determine what level they are starting at and help them learn and grow at the facility. This includes both college and high school interns. Interns indicate to PhillyCAM staff that they often learn more at PhillyCAM than other interns learn at broadcast production facilities because of all the hands-on work. These hands-on opportunities include, for example, the opportunity for considerable video editing experience and considerable experience in other post production functions such as layering graphics and sound effects, and other audio editing. Interns also have the opportunity to gain experience with professional video production companies, such as documentary and advocacy program producers. Interns are also involved significantly in promotional activities and promotion development, including outreach to community partners and working on short announcements for the channel encouraging people and organizations to join PhillyCAM. Overall, heightened familiarity with a variety of forms of modern media for individuals and organizations helps increase potential job capabilities.⁴
- **PhillyCAM is and aims to continue to play a big role in big community issues –** PhillyCAM provides a platform for a variety of producers to extend the reach of the issues that they are involved in. These issues are often time-sensitive and as such PhillyCAM producers are often providing timely, critical information to the community at large. This includes such programs as Equality and Justice Now produced by the Pennsylvania Chapter of the National Association of Women.

PhillyCAM seeks out opinion leaders in order to help identify what issues currently have a significant focus in the community. These opinion leaders include organizations such as Project HOME (veterans and homelessness), JUNTOS (immigration policy), the Women's Community Revitalization Project (community issues involving women) and many others. They involve organizations and help build video production capabilities, by doing for example, group training for organizations such as the Clean Air Council, so these organizations can get their message across.

Staff indicates that there are many ways for organizations that are issue driven to get support from PhillyCAM, including: PSA development, being a guest on a program that focuses on their specific issue and producing a program themselves.

³ See also Exhibit B.4, p. 37.

⁴ Ibid.

Once topical and timely issues are determined by PhillyCAM, it will focus on a non-profit, such as it has done in the past with Mothers in Charge (PhillyCAM helped develop programs that took on issues concerning violence against children).

By focusing on issues of critical importance to the Philadelphia community, PhillyCAM helps to foster sustainability for the organization, civic engagement and PhillyCAM's important role in providing information to the community on important issues.

PhillyCAM's Future Needs

As part of CBG's focused discussions, interviews, and updated discussions with staff, we focused particularly on PhillyCAM's personnel, equipment and facilities needs over the next 10-15 years that must be met in order to carry out the plans for expanded programming and new channel launches described in the Report. Participants' views on these future needs are summarized in the following paragraphs, which paraphrase statements made to CBG in the interviews, focused discussions, and updated discussions.

- *Live Production and Video Transport* - PhillyCAM must have substantially greater capacity for live video transport from the field and from fixed and variable remote locations such as community partner locations and City parks and other locations in the neighborhoods. At present, PhillyCAM is limited to live transport from PhillyCAM studios and occasional live streaming over the internet from locations planned well in advance. PhillyCAM staff indicated that they want to do more "hyper-local news" and cablecast it live. This will require expanding live production capabilities as well as staffing for producers in the field; including establishing and training a network of neighborhood reporters and producers to cablecast live from the field. Such programming will support both current and planned channels discussed in the Report.

These plans include developing mobile access points⁵ from which producers can go live for breaking news or special neighborhood events. The needed facilities include portable multi-camera production equipment. PhillyCAM currently uses an older model Tricaster unit (which is not as well suited to the live programs planned for field production as newer, more portable equipment). The Tricaster is available to producers who are trained and certified on the equipment. To expand live field production as planned, PhillyCAM needs more portable equipment which allows them to be more agile in the field, such as the "LiveU" backpack mobile video streaming unit. This and similar units generally available in the marketplace use cellular networks for video transport from field to studio, allowing remote production from almost any location in the City.

PhillyCAM plans to implement fixed remote locations from which video can be transmitted to the studio using landline or wireless networks already in place. Examples of remote locations that should be considered for this plan include:

- The basement of the Central Free Library
- Recreation Centers

⁵ A mobile access point is a fixed fiber optic-based connection or a cellular wireless or Wi-Fi-enabled site that provides links back to PhillyCAM's main location.

- The Rotunda at the University of Pennsylvania
- Other locations where there may currently be upstream video connectivity that could be cross-connected to PhillyCAM's master control through City, public school, Comcast or Verizon networks. This could include, for example, events sponsored by the City at City facilities that include PhillyCAM's community partners.

Focused discussion participants indicated that live programming encourages immediate reaction by the viewer since the viewer is seeing an event as it is happening or receiving information as it is unfolding.

Participants also indicated that if the live programming was intended to provide critical information, such as where residents could find help from community partners and non-profits in an emergency, PhillyCAM needs a backup generator

It will also be important to look at development of a mobile studio, such as a "Bookmobile"-like production facility to transport and house the equipment as it is taken on location

- *Master Control and Playback* – PhillyCAM needs expanded server capacity and the ability to "cloudcast" – i.e. providing video so that it can be accessed live, or on-demand, on cable, or over the internet through websites and social media.⁶

PhillyCAM has continued to move towards a fully HD digital workflow and equipment environment, including HD playback equipment. PhillyCAM has recently moved its server room and all of its components completely to HD (PhillyCAM now needs an HD channel and HD transport to Comcast because it is ready to provide HD programming).⁷ This means PhillyCAM must continue to increase server capacity to handle the substantially larger video files necessary for HD programs.

Additionally, PhillyCAM needs to expand their archiving capability so that they have a video library that has the proper meta data and documentation necessary to ensure easy access to an expanding amount of file footage and older evergreen programming when needed. This will mean adding more storage and redundancy (backup) for archiving purposes so that the stored information is also accessible, in multiple formats (high definition, standard definition, MPEG 2, MPEG 4, IP and successor formats in the future PhillyCAM will need to train producers on properly handling these enhanced storage and backup facilities and the multiple formats. PhillyCAM should investigate Internet ("Cloud") based storage, at least for a portion of their storage needs, in addition to or replacing on-site storage.

Potentially, moving to cloud-based storage could give PhillyCAM additional "cloudcasting" capabilities such that producers could dynamically upload their video as it is created or edited at their location or in the field, to then be accessed directly from the cloud for transmission over PhillyCAM's channels for further post-production work. In essence, cablecast-ready

⁶ The TelVue Corporation provides PhillyCAM's server equipment that includes TelVue's proprietary CloudCast equipment and software.

⁷ See 2007 Franchise Amendment, Exhibit E, Section 5, p. E-4.

programming could be transmitted directly from cloud storage to the two cable systems, or to the Internet for streaming from PhillyCAM's website.

PhillyCAM needs more monitoring and control systems in master control, including new digital scopes and an expanded range of test equipment; and further needs to expand routing capability with a larger routing switch in the future.

- *Editing* - PhillyCAM needs to expand its editing capabilities, including development of a full featured networked edit suite with a Mac-based work station, multiple ingestion methods and significant storage. They also need to develop a second, full feature PC-based edit suite. PhillyCAM plans to augment the current sound room to make it into a full PC-based edit suite.⁸ Voice-over work will still be performed in that space. A dubbing area is also needed in order to properly do conversions using multiple formats.⁹
- *Express Studio* - PhillyCAM needs to expand its capabilities in the Express Studio. Participants in the focused discussion noted that the Express Studio was a perfect venue to create more live programming because of its ease of use by just 2 persons. They emphasized, though, that that it required expanded character generator (CG) graphics capabilities and post-production equipment in order to enable fully produced programs to be developed just from the Express Studio.¹⁰ The Express Studio also helps engage people on the street (such as through the window facing the street), which gives a sense of interaction that further enhances live programs. A third camera needs to be added in the Express Studio to provide an expanded field of view and better camera angles. Additionally, this expansion of studio capabilities would allow training to be done in one studio while the other studio was being used for productions, thus facilitating multiple, simultaneous activities and increasing the ability to generate more programming.
- *Mid-level Field Equipment* – PhillyCAM needs additional mid-level field camera equipment. Participants in the focused discussions indicated that both high end and very user-friendly consumer grade equipment is provided by PhillyCAM, but that more of a mid-level camera is needed for producers as they progress through increasing levels of expertise.
- *Lighting* - In the main studio area, more lighting is needed, including 10-12 more LED light panels. This will provide more uniform lighting throughout the studio. They also need “1x1” Fresnels to deploy in various “shooting areas” with presets in different parts of the studio. Participants indicated this would enable more efficient production of programming in

⁸ Similar to laptops and desktops, video editing has developed along the lines of both Apple-based and PC-based operating systems, each with different capabilities and features. Users of large facilities such as PhillyCAM that have prior editing experience, typically may be trained in one or the other, so both are needed to meet user needs. See also Exhibit B.5, p. 25.

⁹ As a community facility, PhillyCAM receives content in a variety of formats and also has a large archive of content in Legacy formats. A dubbing area will allow for PhillyCAM to economically convert video from one format to another in house, such as from VHS or DVCam format to H.264 or MPEG4 format.

¹⁰ The equipment necessary for this upgrade is described/identified in more detail in Exhibit B.11. Additionally, some of this equipment has now been installed. See Exhibit B.4, p. 28.

multiple areas of the studio by facilitating multiple areas of the studio where sets could be placed, allowing productions to occur back to back without repeated setup and teardown.¹¹

- *Facility Space* – PhillyCAM needs to expand its production space in both the near and long term, and may need to move the facility. In the near term, PhillyCAM needs to develop a space to develop new youth-generated and youth-oriented programming.¹² PhillyCAM has the option in its existing lease of occupying and developing space on the second floor of the current building. This space would be ideal for development of a youth programming production area¹³ because it provides space for multiple production and post production areas and because of its proximity to PhillyCAM's other operations.

An accent on the youth programming, especially the educational component, would allow them to develop youth partnerships, such as with the Philadelphia Youth Media Collaborative, or fellowships for youth and would also engender funding for such programs.¹⁴

PhillyCAM has also looked at developing social gathering places, which would then allow live or recorded programs to be produced from these locations, including both the basement and the roof at their current location. These locations would need a fit out, including baffling and other renovations, and would require additional capital funding.

PhillyCAM has a conference and community room on the second floor where it currently produces programs, but must now bring in remote production equipment for every program because there is currently no permanent production installation. With the amount of programming that could be generated from the community room, based on the nature and number of meetings held there, PhillyCAM needs to install permanent production equipment in the space.

PhillyCAM's lease on its current facility runs out in late 2021 and it may need to move. Specifically, participants indicated that PhillyCAM could reduce its operating costs significantly by acquiring its own facility and fitting it out consistent with the current facility, including current studio, post production, office, master control playback, field checkout, and related facilities, plus the anticipated youth production space and other facility upgrades described above). Discussions indicated that 10,000 square feet of space in a new facility would be needed for PhillyCAM to accomplish such a move.

- *Audio* – PhillyCAM needs additional audio capabilities. PhillyCAM has the ability to layer multiple audio tracks but currently doesn't use it because the access channels provided by the cable operators do not deliver Multiple Audio Program (MAP) signals to subscribers. They do provide all productions in stereo. Going forward, they want to pursue Second Audio

¹¹ See also Exhibit B.5, p. 25. Additionally, enhanced lighting was subsequently installed in the main studio earlier this fiscal year.

¹² See also Exhibit B.5, p. 12.

¹³ Ibid.

¹⁴ Ibid.

Program (SAP) productions and will need this audio capability, as well as facilitation by the cable operators.¹⁵

Additional microphone mixers are needed as well for remotely produced programming.

- *Distribution* - PhillyCAM needs to distribute its programming in multiple formats, including those described above. PhillyCAM currently provides programming over its cable channels and through its cable-based video on demand and this needs to continue.¹⁶

As described above, PhillyCAM also provides some programming through live streaming, but wants to increase this as well as to a full online, streaming and on demand platform.¹⁷

PhillyCAM needs to develop mobile apps for access to their on demand and live stream platforms as well as their website. PhillyCAM also wants to pursue closed captioning in the future to ensure that the deaf community is properly engaged in PhillyCAM content.

PhillyCAM further wants to develop a radio station, much like some other public access organizations have found to be effective in other parts of the country.

PhillyCAM also needs to expand its channels and programming focus in the near term.¹⁸ It is important to note that more than 75% of their existing programming is locally generated (not imported). As noted by staff, there is a role for imported programming, since such programming is not available through other media outlets in the City.

- *PhillyCAM needs to continue to grow and evolve and be a community force* – Overall, staff indicated that they wanted to build on their current success¹⁹ and continue to develop a healthy, collaborative, content development culture and environment with an accent on training and education, facilitating serious, locally-focused, issue-based content development that will have an impact on and be reflective of all the various segments of the Philadelphia community.

¹⁵ Many programmers use SAP capabilities, especially to provide translations of program audio in other languages (such as a Spanish language translation of a program produced in English).

¹⁶ See also Exhibit B.4, pp. 3-4 and 9.

¹⁷ See also Exhibit B.5, p. 17.

¹⁸ See also Exhibit B.5, pp. 10-11.

¹⁹ See also generally Exhibit B.4.

Focused Discussion with the PhillyCAM Board of Directors

A focused discussion was held with the PhillyCAM Board of Directors, who represent a wide range of organizations. Some also are PhillyCAM-certified producers, which they indicate enables them to better understand the issues of the end users of PhillyCAM's services. Overall, the Board echoed a variety of themes found in the discussions with the PhillyCAM staff. Key information obtained from the group discussion included the following points (Board members' comments are summarized and paraphrased):

- **PhillyCAM is a resource center for the community in helping to create media** – The Board indicated that PhillyCAM serves a critical role in providing highly accessible access to technology facilities and equipment that facilitates media content production. It fosters collaborative programs, along with training and education that enables individuals and organizations to do things they otherwise wouldn't be able to do. Overall, the whole of PhillyCAM is greater than the sum of its parts.
- **PhillyCAM is community building and community oriented**– Board member participants in the focused discussion indicated that PhillyCAM builds community by enabling people to come together, learn from each other and engage in an interactive dialogue. PhillyCAM promotes sharing since the facilities and equipment are shared by a diverse group of people and organizations and the channel time is shared to provide a diversity of programming.

It is a very democratic organization which promotes participation in public/community access by diverse individuals and organizations. It is focused on fostering a sense of community among users, and as such is a space where everyone feels comfortable and welcomed.

It provides a reflection of the diversity in the community, which results in diversity of programming.²⁰ PhillyCAM facilitates all that come to the access center, regardless of age, capabilities or gender. It showcases a variety of talent in the City, each with a different background and focus.

Regarding non-profit organizations, it allows them to have access to high quality production facilities and production work at a very reasonable and affordable cost.²¹

- **PhillyCAM serves as an outreach vehicle to the community** – One of PhillyCAM's critical missions is to enable messages and information to be provided to City residents about the missions of other organizations. PhillyCAM also focuses on the community as a whole with the outreach that it does and programming that facilitates a wide range of outreach.

²⁰ See also Exhibit B.4, pp. 3-4.

²¹ Recent cost figures for FY 2014 show 84 active organization members paying a combined total of \$9,165, or an average of \$109.11 per organization.

PhillyCAM already makes efforts to get youth involved and is enhancing its efforts programmatically to do so.

- **PhillyCAM enables a variety of issue-oriented programming and other content to be produced and distributed** – Board member participants in the group indicated that content producers are able to talk about the issues that they want to cover. Programming on PhillyCAM promotes interest in issues, where both producers and viewers can learn about things that they didn't know before.

PhillyCAM enables bringing together different groups with diverse opinions on issues, and therefore builds understanding between different groups.

A recent example of issue-oriented programming was several voter ID programs. Because these programs were uncensored, they were able to shed light on real problems and issues surrounding voter ID requirements (under Pennsylvania's recently enacted law requiring a photo ID to vote in elections).

Groups such as Disabled American Veterans (DAV) were able to create programming cost effectively and distribute it on PhillyCAM, as well as stream it over the internet, thus expanding their outreach capabilities.

PhillyCAM focuses on issues that their producers care about and allows viewers to be educated more broadly on such issues.

Board member participants indicated that PhillyCAM wants to be involved in "big conversations" and help further dialogue on issues that affect the Philadelphia community as a whole. All opinions are welcome, which again promotes diversity and understanding

- **PhillyCAM is focused on increasing media literacy** – Board member participants in the focused discussion indicated that PhillyCAM wants to increase education on how to use various media tools. An example was given in ensuring that PhillyCAM would be able to provide information and education on how to access its programming (through smart phones, if that is all that a viewer had available).

PhillyCAM provides a positive reinforcement model in this area and focuses on ensuring access to both the production of content and the distribution of content,

- **PhillyCAM provides valuable hyper-local programming** – Board member focused discussion participants indicated that PhillyCAM was the only video outlet in the City that was truly focusing on local programming down to the neighborhood and organizational level, and as such provided content that would not be seen on any other media outlet in Philadelphia.²²
- **PhillyCAM provides several critical attributes that are beneficial to producers and the community at large** – Board members named the following attributes as the most critical benefits to both producers and viewers of public/community access content:

²² See also Exhibit B.4, pp. 3-4.

- PhillyCAM is open to all
- The location of its facility is convenient and accessible to residents
- There is a high quality of equipment
- There is a strong staff
- There is a strong base of support for PhillyCAM that has been established among individuals, organizations and institutions in the community.²³
- **PhillyCAM needs a variety of facility, equipment, distribution and operational enhancements to best serve the community going forward** – Board member group participants noted a variety of key needs for the future. Their comments are summarized and paraphrased by category below.

Operational enhancements:

- Ensuring that detailed listings for PhillyCAM programs continue to be available on cable program guides and menus
- Hiring and training more staff, so that PhillyCAM can be open longer and on weekends
- Making sure that the education and training component continues to be well supported.
- Ensuring that an adequate amount of financial support continues to be provided. The Board indicates that this should be a fixed dollar amount each year for Capital and Operating needs that should include a cost of living increase, commensurate with the rate of inflation or another table such as CPI.
- Ensuring that PhillyCAM continues to work to combine and share resources with other entities (such as the Free Library) to gain even greater capabilities and efficiency.

Distribution method enhancements:

- Ensuring signal quality is on par with commercial channels
- Ensuring HD transport and delivery over the cable platform for all PhillyCAM channels
- Ensuring the continuation of video-on-demand capabilities for PhillyCAM programming
- Developing more remote program production and distribution capabilities, including:
 - Finding ways and methods to produce and originate programming from more neighborhoods in the City

²³ See also Exhibit B.4, pp. 13-15.

- Providing accessible fiber infrastructure to facilitate live programming remotely
 - Continuing to review the possibility of the development of satellite studios
 - Providing access to any institutional networks so that PhillyCAM is interconnected with the other access organizations and other potential video origination sites.
- Ensuring cross-platform distribution.
- Ensuring access to interactive television capabilities, including continuation and expansion of the use of social media.²⁴
- Ensuring that the right number of real-time channels for distribution of programming is provided going forward.
- **Regarding facility and equipment needs**
 - Ensuring the ability to keep up with high quality technology, including regular upgrades and flexibility in the procurement and use of equipment.
 - Ensuring that there is always expansion capability for facility space and the nature, type and amount of equipment

²⁴ See also Exhibit B.4, p. 16.

Focused Discussion with PhillyCAM Program Producers

CBG conducted an evening workshop with more than fifty PhillyCAM, individual and organizational program producers to review their equipment, facility, training, staff support, and other needs concerning PhillyCAM. Key information obtained from this focused discussion included the following comments, which are summarized and paraphrased by category:

- **PhillyCAM provides a creative media outlet for both individuals and non-profit organizations (NPOs)** – PhillyCAM offers a “voice” to video and other content producers. It encourages creativity and is a significant asset to the music and arts community. It provides a platform to show programs that people might not otherwise see. Overall, it “enables dreams to be met”.
- **PhillyCAM offers access to professional level education, training, facilities and equipment** – PhillyCAM provides substantial professional development opportunities²⁵ including instruction from PhillyCAM video and multimedia professionals, and facilitation and hands on, “real-life” experience where producers can also learn from those around them with more experience and expertise. In short, newcomers to PhillyCAM see what is being done and understand that PhillyCAM is “a serious outlet”.

Participants indicated that PhillyCAM provides “many stepping stones” along the way to learn skills and to gain confidence. It provides an opportunity to work in an excellent facility with professional grade equipment

It is a place where everyone “can take their programs to the next level”.

- **PhillyCAM provides real outreach to the community** – Producers indicated that PhillyCAM provides information to, by and for the community at large and the Non-Profit Organization (NPO) community specifically, based on the diversity of issues covered by PhillyCAM programs, organizational outreach enabled by the ability to provide programs for non-profits via PhillyCAM and PhillyCAM’s own outreach to the community to become involved in producing programs. Its programming focuses on “real reality” (as opposed to the created “reality” of today’s so-called reality TV shows).

It provides a critical service that is unique in the City. It helps tell the stories of both independent producers and non-profit organizations.

- **PhillyCAM provides interaction between diverse communities** –Workshop participants noted that PhillyCAM provided many opportunities to discuss issues, voice concerns and help develop community solutions.²⁶ As such, it was both a hub and a resource for diverse communities to come together, generate focus and energy and help move the community forward.

²⁵ See also Exhibit B.4, pp. 23-26.

²⁶ See also Exhibit B.4, pp. 3-4.

- **PhillyCAM is a very participation-oriented organization** - Producers described PhillyCAM as very democratic and an organization that promotes camaraderie. It is member/volunteer²⁷ driven and because each member has a voice in how PhillyCAM is run, it “makes you want to participate more fully”.
- **Participants expressed a variety of immediate and near term needs for PhillyCAM –**

Regarding operations, this included:

- Expanded hours of operation including longer nighttime hours and weekends.²⁸ Participants noted that this would require more staff than PCAM’s present staff of 7 fulltime staff members and part-time independent contractors.²⁹
- More meetings with the membership at large. Members indicated that at-large meetings (including the workshop) allowed for a diversity of opinion to be registered on a number of topics, so staff and the Board could see whether there was consensus among the membership. Participants indicated that the demonstrated success of these meetings among members contribute to a positive climate at PhillyCAM. They currently are infrequently scheduled; increasing their regularity would be beneficial to maintaining the positive climate.
- Parking made available for producers at a reduced rate.
- There needs to be continued focus on sustainable funding from multiple sources. This will help ensure continued support as an organization that will continue to support community building. Participants indicated they understand that the lion’s share of funding for PhillyCAM comes from the cable franchises and that it would be important to continue to focus on this in franchise renewal. They also indicated their understanding that it is important to continue to develop other sources of funding, including building on the seminal efforts made thus far.

Participants expressed the following facility needs:

- New curtains are needed in the existing studio
- Another large studio is needed
- There needs to be expansion in the building overall, to include a bigger space for set storage, an expanded green room, and a separate space for youth. Participants also indicated that it was important to continue having a sound booth/area for audio, voiceover and music work, even if a full second edit suite is developed in the existing sound booth area.
- The space for education and training needs to be expanded. Education and training is currently provided in all production areas and in the community

²⁷ See also Exhibit B.4, pp. 13-15 and 16.

²⁸ See also Exhibit B.4, p. 29. Members can access PhillyCAM from 11 am to 8 pm Monday through Friday. There are no regular weekend hours.

²⁹ See also Exhibit B.4, p. 36.

meeting room. Producers noted that it would be useful to have more space specifically devoted to training, so that space that is “common” to other functions could focus solely on those other functions.

Participants indicated the following equipment needs:

- There are a variety of audio issues that need to be corrected. Participants noted that many of these are related to the cable channel itself, including low audio level and bad audio quality (e.g. frequency dropouts, noise, distortion)/ (One participant noted that the programs sounded better on YouTube). Overall, there needs to be crisper audio with a greater dynamic range.³⁰
- Greater archiving capabilities are needed. Specifically, additional archiving capacity is needed at both PhillyCAM and “in the cloud” to provide greater and more efficient access to stored raw footage and file footage.
- Regarding software, workshop participants noted that software was moving towards the “cloud” where it would be downloadable and where it would be important to use open source products that may be more versatile and have a lower price point. One participant noted that if PhillyCAM were to be certified as an educational institution, the price for software would be reduced. Overall, participants noted that it would be important to keep up with technology such that producers and organizations could have continuous access to high quality equipment.
- Regarding remote production capability, participants indicated the following: Participants noted that it was important to have the ability to do both live and recorded productions from a number of other locations throughout the City. These could include concerts in the park for example or wherever the producer wanted to go out into the community such as on-the-spot interviews in various neighborhoods on issues particular to those. This could include a production van dedicated to producing programs from locations in the neighborhoods, such as coverage of street fairs, musical concerts, town hall meetings and other community events; programs that PhillyCAM could promote ahead of time to increase its visibility in the community. Participants noted a number of venues that could be developed for remote program production of concerts, lectures, and other events, including:
 - The Painted Bride Art Center
 - The Free Library’s Parkway Central location at 1901 Vine Street and the Benjamin Franklin Parkway
 - The Community College of Philadelphia campus
 - Cheney University/Lincoln University
 - Kimmel Center
 - Franklin Institute
 - Constitution Center

³⁰ Improved signal transport equipment, recommended by CBG, would be instrumental in resolving the issues noted. See also Needs Assessment Report Section B., p. 86.

- The Penn Rotunda
- The Barnes Foundation
- The Community Education Center at 3500 Lancaster Avenue

Additional advanced forms of video distribution are needed or need to be continued

- Participants noted the need for high definition channel space, since most producers were producing in HD now and this has to be downconverted to SD
- Video on demand for both the cable and internet platforms needs to be expanded from the present amount.³¹ Additionally, finding the on-demand programs on the cable system needs to be easier than the current multi-menu screen method. Specifically, the viewer must go through four (4) screens before getting to PhillyCAM's on demand programming, which is more than for many commercial offerings.
- Regional distribution of programming is needed which will help build an audience since some programming has both a local and regional focus.

More cross-platform distribution needs to be developed.

- More cross-platform distribution of programming is needed including development of PhillyCAM cross-platform apps.³²
- Workshop participants also envisioned program producers and distributors (those members that sponsor programming produced outside the PhillyCAM facility by others) creating content out in the field and then uploading it to PhillyCAM over traditional broadband or internet connections.
- **Program producers identified longer term needs** - These included:
 - Additional sustainability mechanisms need to be employed – Workshop participants talked about the need for more funding opportunities for PhillyCAM, including hiring a grant writer and developing a grant opportunity repository so that PhillyCAM and its members could pursue a wider range of funding sources and thus be subject to less risk should funding from one source end.
 - Opportunities for producers to obtain more underwriting³³, sponsorships and more support for developing content. For example, royalties for distributing PhillyCAM programs outside the public access cable channels. In this vein, producers asked whether Comcast could provide additional support related to broader distribution of producers' programs.
 - Additional operations enhancements are needed – Participants noted that this includes investing in additional staff to help facilitate and accelerate what is

³¹ See also Exhibit B.4, pp. 8-9, for current on demand program totals.

³² See also Exhibit B.5, page 17.

³³ Underwriters typically help fund a particular show or topic, while a sponsor may fund all of a producer's projects.

currently envisioned³⁴, as well as implementing targeted programming and technologies, such as closed captioning, for special needs populations.

Participants recommended that PhillyCAM continue to create events that PhillyCAM would sponsor itself to provide outreach to the community.³⁵

Producers also want to see promotion efforts that stress the benefits of both access to PhillyCAM's facilities, equipment and services as well as watching PhillyCAM-created programming (one producer noted that it is important to let viewers know that they can "go to PhillyCAM to get the real story" on issues of importance to Philadelphians).

- PhillyCAM will need to continue to expand its reach into the community – Participants foresaw the need for more Spanish language programming and increased use of social media. They also foresaw the need for regional distribution of PhillyCAM's programming because the content of many programs is important to the wider metropolitan area.
- Regarding facilities and equipment, workshop participants indicated the following longer term needs:
 - Continued development of partnerships that would help facilitate more productions occurring out in the community.
 - A kitchen in the main PhillyCAM studio for cooking shows - Cooking shows are popular (as evidenced by the number of them distributed on public television and commercial networks) and there are local chefs and cooks interested in doing programs. If a kitchen were available, such shows could be produced at PhillyCAM attracting more producers to PhillyCAM because they would not be required to also secure outside, third-party kitchen space for their production.
 - Greater more efficient access archives.
 - Expanded ability to do animation and voiceovers.
 - Overall, keeping up with technology, including the education and training that goes along with such new technology.
- Participants want to develop their ability to "tell their story" in the programs they produce. They want to have a greater emphasis on storytelling in their programs and they want training in story telling techniques. By storytelling, they mean weaving a narrative that brings the viewer along, holding their attention and investing them in the subject matter. Participant suggestions included classes taught by experienced storytellers and developing a comprehensive documentary video on storytelling techniques. Participants also want to know what other access centers are doing related to increasing the emphasis on storytelling.
- Maintaining relevance – Overall, workshop participants indicated that the key going forward was to maintain relevance in the community and to continue to be

³⁴ See also Exhibit B.5, p. 30.

³⁵ See also Exhibit B.4, pp. 20-22.

able to shape the culture or dynamically adjust the public/community access model over time, to best meet the needs of the producing and viewing community.

EXHIBIT B-2

Summary Narrative of
PhillyCAM Public Access
Program Providers/Producers
/Users Online Survey



EXHIBIT B.2

SUMMARY NARRATIVE OF PHILLYCAM **PUBLIC ACCESS PROGRAM** **PROVIDERS/PRODUCERS/USERS ONLINE** **SURVEY**

SUMMARY NARRATIVE OF PHILLYCAM PROGRAM PROVIDERS/PRODUCERS/USERS ONLINE SURVEY RESULTS

In another effort to efficiently collect feedback from all parties with an interest in PhillyCAM, CBG developed an online survey. The survey included many questions that allowed for a free-form narrative response in order to best survey the diverse community of PhillyCAM stakeholders. The stakeholders include individuals and organizational representatives that develop, produce and/or are involved in some way with production of programming at, or for distribution through, PhillyCAM. A link to the survey was distributed to all members of PhillyCAM. Responses were received from nearly 100 individuals. The following is a summary of the results of the PhillyCAM Public Access Program Providers/Producers/Users Online Survey. The summary is provided by question as presented on the survey.¹

Length of Affiliation -- Respondents to the survey indicated a varying length of affiliation with PhillyCAM from a few months to "since its inception" (in 2008), with the most common response being one year.

Average Hours Per Month of Involvement in PhillyCAM -- The range "1-4 hours per month" was the most common response at 40%, followed by "5-10 hours per month" at 26%, "11-15 hours per month" at 10%, and "16-20 hours per month" at 9% ("more than 20 hours per month" received 14%).

Nature of Affiliation -- Survey respondents showed the highest representation from Program Producers (52%). There is also a good representation from members who were non-producers (22%), PhillyCAM Board Members (15%), volunteers (5%) and others. Nearly 30% of respondents represented a non-profit or community-based organization varying from arts and cultural entities such as the Moonstone Arts Center, DP Arts Consortium and Philadelphia Dance Project to religious organizations such as the World Mission Society, Church of God, BMF Church and foundations such as the Free Library of Philadelphia Foundation.²

Overall Satisfaction Level -- The majority of respondents (67%) are "very satisfied" with current PhillyCAM operations, with 24% reporting that they are "satisfied". A small minority indicated that they are "somewhat satisfied" (8%), and only one respondent was "not at all satisfied".

Many reasons were given for the high satisfaction level, including sentiments expressed such as "well run organization with strong management, committed Board and an important public mission," "excellent classes, camera, media resources and support", "super organized friendly staff", "excellent training", "community engagement and diversity and activity level of membership is outstanding" and "I think PhillyCAM is a blessing to Philadelphians".

For the eight percent that were somewhat satisfied, sentiments were expressed such as "unnecessary strict rules with unprofessional results", "The hours and location are absolutely

¹ See Exhibit B.3 for full survey results.

² See Exhibit B.3, p. 2 for a list of the community-based and non-profit organizations represented.

horrible", "I expected more outreach, higher membership goals and more classes and such during the day", and "there should be additional facilities: at least one more additional studio and control room, comparable to the main studio for taping, a fully equipped kitchen/studio with seating for an audience, broadcast capability beyond Philadelphia extending to the counties".

Interest and Involvement in Producing/Providing/Distributing³ Public/Community Access Programming -- Respondents were highly varied in the types of programming that they were involved in, interested in, produced, provided or distributed, indicating a high degree of diversity of interest in Public Access television. For example, the largest response (78%) was regarding involvement in arts and entertainment programming. This was followed by a strong involvement in public outreach programming (44%), public empowerment and community engagement programs (42%), and training and education programs (40%). All remaining categories⁴ varying from sports coverage at 9% to community events programs at 38%. Thirteen percent (13%) of respondents also indicated other program types not included in the list provided in the survey and 20% indicated other reasons for being involved in public access, including a primary interest "in serving my community", "use the facilities to help students with all phases of production", "share real human stories and struggles" and "the advancement of literacy".

Respondents went on to provide descriptions of the programs that they distribute, produce and are otherwise involved in.⁵

Television Production, Media Training and Education -- The majority of respondents (68%) indicated that they had received television production, media training or other form of education at PhillyCAM. The highest level of response was for basic field production (72%). Beyond this, studio crew production was next at 59% followed by both intro to Final Cut Pro and producing & directing for the studio at 39% each. Every other form of training provided by PhillyCAM⁶ was identified by respondents and varied from youth media training at 3% to production management and planning at 36%.

Other types of training and education were also listed by respondents including the provision of general education through a "college internship", "a member produced program on low power radio opportunities," and "advanced final cut pro" training.

The vast majority of respondents (96%) indicated that PhillyCAM training and/or education met their needs and expectations, and explained that they gained new technical skills (89%), met new people (89%), produced a program for public access television (51%), became part of a production crew (48%), and got a job in part because of the training (8%).

³ The survey provided a list of traditional categories of public/community access programming and also gave the respondents an opportunity to list other types that they were involved in. Involvement could range from producing a program, or assisting in the production, such as being part of a crew, to providing a program produced by them outside of the PhillyCAM facilities or distributing a program not produced, but sponsored, by them that was developed outside the PhillyCAM facility.

⁴ See Exhibit B.3, p. 8.

⁵ See Exhibit B.3, pp. 9-16.

⁶ See Exhibit B.3, p. 17.

Three of the 100 respondents indicated that the training did not meet their needs and stated what they thought should be improved or added. Specifically, respondents said the class on editing techniques should focus more on editing styles and types of transitions, and that it would be better if tutorials were available. One respondent indicated that they did not want to be a "production person" because they are a "producer/writer."

Fifty-four percent (54%) of respondents indicated there were other types of training and/or education they needed. This included producers who needed additional courses not offered by PhillyCAM in "multimedia" software and applications, such as Photoshop, web design, and special effects. Some indicated there were PhillyCAM classes they would like to take but could not because of work conflicts or that the courses were only offered during the day.

Assistance Received During Program Production -- Nearly all respondents indicated that the assistance they received during the actual production was either "very helpful" (63%) or "helpful" (22%)⁷. Specifically, respondents indicated that "the staff is very knowledgeable and patient", "the staff arranged for coverage of a live event that went flawlessly", "the staff is always there to answer questions", "The assistance helped shaped my work to prepare it for a broader audience", and "PhillyCAM helped facilitate the logistics and technical needs for the pre-production and production of my short film".

No respondent indicated that assistance in production was not helpful, and only one respondent indicated that such assistance was only "somewhat helpful," further indicating that it was somewhat helpful because the assistance was late for starts. Fourteen percent (14%) of respondents indicated that production assistance was not applicable in their case.

Training and/or Assistance that was Helpful in Seeking or Gaining Employment - More than a third of respondents (36%) indicated that the training and production assistance they received at PhillyCAM has been helpful to them in seeking or obtaining employment. These respondents said that PhillyCAM has "given them opportunities to freelance jobs with various media outlets", that they have "been asked to assist on TV show productions based on my TV crew training through PhillyCAM", that "now that I can edit I've been able to get work editing", and that "I now film and edit independent weddings, church services and social events".

Has the Training and/or Assistance Provided at PhillyCAM Been Helpful in Other Ways - Eighty-five percent (85%) of respondents indicated yes to this question. Many specific descriptive responses were given, including "motivation, inspiration and creativity have increased", "networking and meeting others with interests similar to mine", "learning and information opens one up for better communications and possibilities", "learning new skill set", "social interaction with creative people is a plus", and "connections with community are beyond measure".⁸

⁷ In many areas of the survey, including this one, the survey utilized four point scales to determine the level of respondents' positive or negative attitude towards a given subject. For example, in this question, the answer options were "Very Helpful", "Helpful", "Somewhat Helpful" and "Not at all Helpful". For more detail on this particular question, see Exhibit B.3, p. 19.

⁸ See Exhibit B.3, pp. 24-26 for verbatim responses to this question.

Use of PhillyCAM Facilities and Equipment – Respondents were asked if their use of PhillyCAM facilities and equipment was Weekly, Monthly or Occasionally, and for each, were asked which facilities and/or equipment they used weekly, monthly or occasionally. The highest weekly uses were of the Large TV Studio Control Room and Recorded Program Playback over Cable System at 11% each, followed by Single Camera Field Equipment at 10%, and Multi-camera Field Equipment and Editing Equipment at 9% each. Weekly use of Live Program over the Cable System was 4%, and weekly use of the Express Studio was 1%. The largest monthly use was Large TV Studio and Control Room at 17%, followed by Recorded Program Playback over Cable System at 15%. These were followed by Single Camera Field Equipment (9%), Express Studio (8%), Editing Equipment (6%) and Multi-camera Field equipment at 5%. One respondent indicated that they used Live Program over the Cable System monthly.

The highest number of respondents reported Occasional use varying from 42% for the Express Studio, 40% for Single camera field equipment, 38% for the Large TV Studio and Control Room, 28% for Editing equipment, 25% for Live program over cable system, 23% for Multi-camera field equipment and 13% for Recorded Program Playback over Cable System.

Usefulness of a Mobile Production Unit - Respondents were asked whether a mobile production unit (truck or van-based, portable multi-camera system) would be useful to them if it was available at PhillyCAM. If they indicated yes, then they were asked to explain why. Sixty (60) of the respondents indicated it would be useful. Respondents offered reasons such as "there are live cultural events that such resources could help bring to the air", "I would be able to do more professional work in the street", "it would enable recording site specific performance work", "it will bring PhillyCAM's message to outlying parts of Philadelphia's communities", "it would be great for news gathering and events" and "we could take more equipment to locations and not have to struggle with them".⁹

Ratings of PhillyCAM Facilities and Equipment -- A majority of respondents rated highly nearly all categories of PhillyCAM facilities and equipment. The highest Excellent rating was for the Large TV Studio and Control Room (51%); 33% gave it a Good rating. This was followed by the Express Studio which received an Excellent rating of 34% and a Good rating of 31%. The highest Good rating was for Editing Equipment at 34% (this functional area also received a 33% Excellent rating). The majority of respondents gave every functional area a rating of either Excellent or Good, with the exception of Recorded Program Playback over Cable System, which received a combined Excellent and Good rating of 49%.

The highest percentage of Fair ratings was given to Recorded Program Playback over the Cable System at 8.5%, followed by the Express Studio and Single Camera Studio at 8% each. Two respondents indicated a Poor rating for Recorded Program Playback over Cable System.

Respondents were asked to explain why they gave a Poor or Fair rating. Concerning the Express Studio, responses indicated "limited capabilities", "the broadcasts are in "SD" and "the rather poor quality". Concerning Recorded Program Playback Over Cable System, respondents indicated "the audio playback on several shows were extremely low", they would like to "see and hear the productions better on the stations," "we record all of our programming in HD but have

⁹ See Exhibit B.3, p. 27-29 for verbatim responses to this question.

to downgrade the quality to SD for playback on the channel", "this is very disappointing" and "our signal quality is not equal to that of commercial stations".

Use of Non-PhillyCAM Equipment and Facilities -- A little more than half (52%) of respondents indicated that they used equipment or facilities besides that available from PhillyCAM. When asked whose equipment or facilities they use and why, most respondents indicated "use my own equipment". Many indicated they use their own camera for field production but use PhillyCAM's studio facilities. Others indicated they produced their program with their own production equipment (such as lights, cameras, microphones and recording devices). Some indicated that they use their own editing software and hardware. Some indicated they use their own equipment because of the limited hours that PhillyCAM is open, or for convenience, or for "personal familiarity with the equipment".¹⁰

Rating of PhillyCAM Facilities, Equipment and Services Overall -- The majority of respondents rated PhillyCAM's Facilities Overall as either Excellent or Good (60% Excellent and 35% Good). This was followed by PhillyCAM Facilities Staff (73% Excellent and 19% Good), the PhillyCAM Office Location (63% Excellent and 26% Good), the Studio Location (59% Excellent and 28% Good), PhillyCAM Hours of Operation (37% Excellent and 40% Good), and PhillyCAM Training (49% Excellent and 27% Good).

The hours of operation also had the highest Fair rating at 11%. This was followed by Studio Availability and Programs/Facilities Promotion, with a Fair rating, of 9% each. The highest Poor rating was Multi-camera Production Unit Availability and Studio Availability, indicated by 4 respondents each.

Since not all respondents were familiar with all facilities, equipment and services, there were a significant number of No Opinion/Don't Know/Don't Use responses for certain categories. The highest was for Multi-camera Production Unit Availability (49%), followed by Playback Scheduling (45%), and Editing Assistance (42%).

Respondents giving Fair and Poor ratings were asked for additional information. For example, in regards to hours of operation, one respondent indicated that "sometimes due to artist availability, later evening hours are needed". Others indicated "the limited pickup/drop-off hours can be difficult to work with" and "hours should be extended into the later evening to accommodate those that have daytime work".¹¹

Regarding promotion of PhillyCAM's facilities and promotion of programming shown on the PhillyCAM Channels, one respondent indicated "I would like to see a promo all over the City, be all kinds of media, maybe do barter deal with other organizations, like art groups, museum". Another respondent said "when I talk with friends and relatives who operate outside of existing community media circles, I've noticed that there is not a high level of awareness or understanding of what it [PhillyCAM] can do". Another respondent said "I think we could do more and better overall promotion of our services and facilities."

¹⁰ See Exhibit B.3, pp. 30-32 for verbatim responses to this question.

¹¹ See Exhibit B.3, pp. 33-35 for verbatim responses to this question.

Problems with Scheduling Facilities and Equipment - Eight-six Percent (86%) of respondents indicated that they had *not* encountered any problems in scheduling facilities and equipment necessary for their productions or with the operability of equipment. For those that reported problems with scheduling or operability (14%), examples provided included:

- The Community Room is often booked when I need it - and there's currently no equivalent meeting/rehearsal space available.
- Sometimes you have to wait for things to become available
- Mixed-up dates because of old scheduling program
- The computer system is clunky and not intuitive to follow sometimes....Stuff isn't necessarily ready to go though you have reserved it. You have to wait for them to get it together. What was the point of reserving it then?
- The recorder didn't work one time and gave corrupted files.
- Sometimes there are too many concurrent events at PhillyCAM and members are turned away (EX: use of Community Room).
- Sometimes equipment or space is scarce or unavailable because it is being used to teach a class or do a demonstration rather than being used for production.
- If you aren't a certified "producer" in order to book the main studio you need someone on your crew who had taken the course and gotten certified. Sometimes that's hard. I have a show going into its 3rd season that I created but I can't use the main studio because of a technicality. I also haven't been able to take the course because of a work conflict but I know the majority of the info
- Just schedule problems. Large studio was reserved then given away to someone else.
- No one ever told us if we had the studio for the day we put in for it. When we call to check after we filled out the forms if everything was a go, they said they would check, then we call back, leave messages and never get called back.
- It is always a challenge to coordinate a multitude of schedules and I think we do well - that said, problems can arise with conflicting needs. We usually work them out amenably.

Additional Capabilities and Services – In response to this open-ended question, more than half of the survey respondents (N=53) indicated the need for additional capabilities or services not now available from PhillyCAM. Fourteen respondents (26%) identified the need for a high definition channel, primarily because programs are now produced in HD and must be down-converted for cablecast on PhillyCAM's standard definition channels, because viewers are used to watching HD, and because it would provide a better product to viewers. Additional capabilities and services respondents indicated they need included¹²:

- additional cable-based video-on-demand capacity,
- a better process to access PhillyCAM programming on-demand,
- closed captioning, which PhillyCAM does not now have,
- more channels,
- a PhillyCAM mobile device app that would allow quick access to PhillyCAM content through a smartphone or tablet ,

¹² See Exhibit B.3, pp. 36-38 for verbatim responses to this question.

- an additional studio,
- on-line streaming,
- better program information on the Comcast program guide,
- PhillyCAM use of interactive television and social media,
- polling equipment for studio audiences,
- phone call-in capabilities,
- over the air broadcast of PhillyCAM programming,
- a mobile truck unit,
- lower price classes/workshops,
- higher level of promotion on the Comcast system, and other additional capabilities and services.

Problems with Getting Programs Aired – The vast majority of respondents (95%) indicated they had not had any problems getting their programs cablecast on PhillyCAM. Respondents who did report such difficulties indicated that their program(s) had not been cablecast because “thru bad editing by a PhillyCAM camera guy, he left commercials in our show”, “the channel and programming have nothing to do with Philadelphia”, and “though my information is 'now info', when it gets played the 'now' is then”.

Viewer Awareness of PhillyCAM and Promotion of PhillyCAM Programming -While nearly half of respondents (49%) indicated that PhillyCAM’s promotion, and viewer awareness, of programming is adequate, 51% indicated that it was not. Respondents who thought PhillyCAM needed stronger promotion described additional promotional techniques and activities that they believe would improve viewer awareness.¹³ These included:

- The Channel numbers should be a common component in most of the literature and should be put on the windows that face 7th Street.
- Outreach about PhillyCAM should be provided to new groups of potential viewers and others, along with advertising and branding to make PhillyCAM a known entity.
- Promote PhillyCAM and the services/courses they offer at events in remote and under-represented neighborhoods in the city .
- There needs to be a stronger internet presence.
- More emphasis on collaborative, cross-community engagement to expand audiences of different programs across PhillyCAM viewership
- Place Public Service Announcements on commercial channels.
- Advertise on SEPTA bus shelters.
- Advertise on billboards, in magazines, and on radio
- Promote PhillyCAM at large public events such as the July 4 Welcome America celebration.

One respondent said that “PhillyCAM needs the resources to launch a coordinated, professional communications campaign to increase visibility and membership.”

¹³ See Exhibit B.3, pp. 39-40 for verbatim responses to this question.

Importance of PhillyCAM to the Fulfillment of Individual Goals and Organization

Missions – Sixty-two percent (62%) of respondents indicated that PhillyCAM was very important to fulfilling their personal goals or the missions or goals of the organizations they represent as PhillyCAM members. This was followed by 18% that responded “important”, 11% who responded “somewhat important”, and 3% who indicated “not at all important. Five percent (5%) indicated “Don’t Know”.

Respondents were given the opportunity to indicate their importance of PhillyCAM.¹⁴ Of those that responded (N=65), many indicated that PhillyCAM helps them as program producers, or helps their organizations, with visibility; and for organizations, it provides a way to get their message out. Others indicated that media access and audience diversity is critical, that PhillyCAM helps to “bridge the digital access divide” for them and for their organizations, and that PhillyCAM enables access to a creative community by providing technical training and equipment access and a pool of talent to use in productions. PhillyCAM also helps them to meet their organization’s core mission to “educate and advocate”, that it provides resources to entities that otherwise don’t have the budget to access such resources independently. Some indicated that PhillyCAM helps to facilitate public empowerment by providing a service to help people meet their goals, it enhances “literacy and learning goals of the library”, and they are able to see “the impact that freedom of expression, community connection and civic engagement has on the wellbeing of our City’s citizens”.

Contribution of PhillyCAM to Individual and Community – More than half of the respondents indicated that PhillyCAM significantly contributes to their life, or to the life of the Philadelphia community. They indicated many ways in which it does this¹⁵, including:

- PhillyCAM provides “more exposure to diverse groups, perspectives and artistic content that I both enjoy and learn from”
- It provides “awareness about how I can achieve my creative goals”
- It gives “voices to people who would not have them if not for them”
- There is nowhere else where you can see and learn about the many community efforts to change, educate and entertain
- PhillyCAM members “prosper and contribute to their communities in a positive way”
- The fact that PhillyCAM “gives everyone access to these skills, trainings and channels is a huge service”
- PhillyCAM provides “empowerment, awareness, education, advocacy, skill building”

Some respondents indicated that “[PhillyCAM] has the potential to contribute more” than it does now, and that they “believe that it has had a good start but needs to expand its reach to serve and reflect more of the community”.

How Respondents Watch PhillyCAM – Respondents were asked how they currently watch PhillyCAM and were presented with multiple answers concerning the several PhillyCAM distribution methods. Seventy-one percent (71%) indicated that they watched PhillyCAM in real

¹⁴ See Exhibit B.3, pp. 41-43 for verbatim responses to this question.

¹⁵ See Exhibit B.3, pp. 44-46 for verbatim responses to this question.

time on PhillyCAM's cable channels . Fifty-three percent (53%) indicated that they watch via PhillyCAM's website, followed by video on demand on the cable system (24%), and by internet TV player (20%). Six percent (6%) of respondents indicated other ways of viewing PhillyCAM programming, such as Vimeo, "in-person gatherings" or at a friend's or family's house.

Home Internet Access – Survey respondents were asked what type of internet access they have at home. The majority (62%) indicated that they had internet access through the cable system. Twenty percent (20%) indicated that they use a DSL connection, and 9% that they use cellular wireless (3G, 4G) connectivity. Three percent (3%) indicated that they do not have internet access at home. For those that did not have access at home, they indicated that it was "not relevant" to have at home, that they had no computer, or that it was too expensive. Forty-two percent (42%) said they also access the internet at the PhillyCAM facility.

Diversity of Respondents -- Respondents reported geographically diverse residential locations throughout the City, as well as diversity in education, income, ethnicity and age. The large majority (57%) were employed, with the next highest number (11%) not employed but seeking employment, and 10% retired.

Fifty-six percent (56%) of the responding sample was male, 43% female and 1% transgender.

Additional Comments -- Respondents were provided with a final opportunity to comment regarding PhillyCAM, and a little more than one third of respondents did so. Many comments were about the outstanding job that the PhillyCAM staff is doing, and said, in one example, that PhillyCAM overall is "vital to me, my fellow members and our community". Other comments focused on funding and sustainability, indicating that "more needs to be done to develop other streams of revenue". Still other comments talked about additional facilities and equipment that are needed including: kitchen space for chefs to do first rate cooking productions; accessories for serious documentary projects; and better hours to take out and return equipment.¹⁶

¹⁶ See Exhibit B.3, pp. 46-48 for verbatim responses to this question.

EXHIBIT B-3

PhillyCAM Public Access
Program Providers/Producers/
Users Online Survey Mark-up



EXHIBIT B.3
PHILLYCAM PUBLIC ACCESS PROGRAM
PROVIDERS/PRODUCERS/USERS ONLINE
SURVEY MARKUP

PHILLYCAM PUBLIC ACCESS PROGRAM PROVIDERS/PRODUCERS/ USERS SURVEY MARKUP (N=100)

The City of Philadelphia is conducting this survey of current and former users/program providers/producers of the Philadelphia public access television facilities and services which support local community access programming provided to Philadelphia cable subscribers. The survey is designed to enable you to describe your experiences with the public access facilities provided by PhillyCAM and whether and how you believe enhancements or improvements could be made to existing operations. It is being conducted as part of the cable franchise renewal process with Comcast.

This survey should take you approximately 15 minutes to complete. Please complete the survey by December 20, 2013. Contact Tom Robinson at 6108867470 or robinson@cbgcommunications.com or Mark McLaughlin at 2156889950 or Mark.McLaughlin@phila.gov if you have any questions regarding this survey.

Thank you for your assistance!

PUBLIC ACCESS RESPONDENT AFFILIATION

1. How long have you been affiliated with PhillyCAM (Philadelphia Community Access Media), the City's public/community access television station/video production facility?

Range 3 months – 7 years; Median = 2 years; Mode = 1 year

2. What is the nature of your affiliation?

| | |
|---|-----|
| PhillyCAM Staff | 2% |
| PhillyCAM Board Member | 15% |
| Member - Program Producer | 52% |
| Member - Non-Producer | 22% |
| Partner | 1% |
| Volunteer | 5% |
| Other, please explain: | 3% |
| • Organizational partner | |
| • PhillyCAM Board member and Certified Producer | |
| • Producer and board member | |

3. If you represent a Non-Profit or Community-based organization, please provide its name.
(N=27)

1. Obama EduVision Community Media
2. PhillyNOW
3. Philaposh
4. Leeway Foundation
5. Happy Feet SLD Network
6. "Philadelphia Scriptwriters Network
7. PIFVA"
8. BMF Church
9. Lil'Filmmakers, Inc
10. tax report- the Philadelphia graffiti journal
11. Philadelphia History Museum
12. Clean Air Council
13. DP Arts Consortium, Radical Faeries
14. Lil Filmmakers
15. Moonstone Arts Center
16. Disability Pride Philadelphia
17. DP Arts Consortium
18. Christian Credit Development
19. Sayre High School
20. Philadelphia Dance Projects
21. Scenic Philadelphia
22. Free Library of Philadelphia Foundation
23. DP Arts Consortium, Inc.
24. Community Legal Services, Inc.
25. World Mission Society Church of God
26. GriotWorks
27. 3RD U.S. Colored Troops Civil War Reenactors

4. Your email address: (N=96)

5. Overall, how would you rate your satisfaction level with current PhillyCAM operations?

| Answer Options | Very satisfied | Satisfied | Somewhat satisfied | Not at all satisfied |
|----------------|----------------|-----------|--------------------|----------------------|
| PhillyCAM | 67% | 24% | 8% | 1% |

Please describe the reasons for the satisfaction level you indicated. (N=91)

1. I need a TV production crew to help facilitate the development of the Divine Diva TV Talk Show!
2. PhillyCAM has quickly found a home and developed a wide range of services. In a short period of time, the organization has identified and responded to the needs and wants of public access viewers and producers in the area.
3. Philly Cam and staff have done a great job letting the public know about the station and all it has to offer.
4. Proud of all that is being done but don't get to watch much

5. I expected more outreach, higher membership goals and more classes and such during the day. I know that other centers have done well serving seniors who are available during the day.
6. Staff and quality of services provided.
7. In a fairly short period of time PhillyCAM has become an important media facility and community space in the city. I believe it's because of the quality of the programming and the open and welcoming atmosphere the staff and volunteers created and continue to foster. PhillyCAM's membership and people who participate in tapings and come to events at the facility cross every demographic.
8. This is a well run organization with strong management, a committed Board and an important public mission.
9. -High quality content on the channel that is locally produced, informative and entertaining
-A well run facility that has state of the art equipment that is accessible to members
-A well run organization that is fulfilling its mission and achieving its vision
10. Excellent classes, camera, media resources and support that ultimately teaches us how to use our Media to keep us Connected to our Community our Groups and individuals! Our Voices and contributions from Fitness to Politics should remain accessible to the citizens of Philadelphia and the AREA COMCAST SERVICES! We need this open source for us to communicate and stay connected and support the people of our great Phila Community!
11. The staff and resources here are phenomenal!
12. It's a friendly, energetic place to meet interesting people and learn about digital video production.
13. Open access is a valuable asset that can benefit people caught in the digital divide.
14. The genuine support and encouragement I get from members and staff that I receive in the technical aspect as well as creativity.
15. Very professional attitudes, openness and fairness.
16. I send in my programs and they are uploaded - I've even received feedback from some of my programs!
17. The courses have "real world" applications and the staff is SUPER Talented and helpful.
18. PhillyCam has been very useful in supporting my growth as a video content producer. Although I think certain aspects may be improved, especially in education and availability of certain types of equipment, I believe that it's an excellent place to foster growth of people interested in this field, and steps have recently been taken to shore up educational program and access to higher end equipment.
19. We shoot our shows in HD. Comcast coverts it to standard
20. The lack of community media in a city the size of Philadelphia should be an embarrassment to the political leadership in the city. PhillyCAM is a crucial piece of Philly's community media future. Due to the ridiculous legal struggle to get the city to do the right thing and get the station on the air, it is still in its nascent stages but there is already amazing potential there and they are definitely going to have a big impact in the city.
21. Great classes, great people
22. Super organized friendly staff.

23. getting everything I need
24. Access to facilities is pretty good at this juncture. Staff is helpful and encouraging. Training classes were more than adequate.
25. It's a great program to allow non-profits to create video media.
26. Terrific programming - particularly Talk the Talk, Unsolved Philadelphia, Class Warfare, and Decarcerate Philadelphia.
27. The organization is dedicated to the cause of public access TV and the communities served.
28. I am disappointed that we film our shows in HD but have to compress it to SD to view it on TV.
29. they do a great job in training community people in the new technology of communication - and supply the only means for ad hoc communication with the greater community -
30. They helped us make a great film for our event and worked very hard
31. All my expectations have been met.
32. I am satisfied with PhillyCam. However due to my schedule I have not been able to attend some of the workshop since most are held during the evenings.
33. the assistance PhillyCam provides to small independent content providers, and skill assessment classes for various production jobs
34. Staff very friendly
35. I am very satisfied with PhillyCAM's operations because I came in knowing very little and now have knowledge I never thought I'd have, at an amazing cost. Everything is run like a fine oiled machine.
36. The equipment is great and the staff is very helpful and well trained
37. PhillyCAM and its staff are here to teach interested individuals the field of television networking and they are committed to doing so. I have experienced professional teaching and an experience unsurpassed.
38. The staff is very helpful with production. This is my first time ever to produce some quality work. However, I have made some mistakes, but the staff was very helpful to walk me through and provided assistance.
39. Well put together
40. I have been able to learn about studio production and basic field production based on the affordable low cost fees for the workshops. The staff members at PhillyCAM are extremely helpful and friendly.
41. PhillyCam provides a perfect opportunity for independent producers to get there product to viewers who may not have the option to view them otherwise. As part of the Philly music community PhillyCam has truly helped to promote the music arts in this city

Thank you PhillyCam

42. Good access, great training and production opportunities.
43. I enjoy the fact that films, TV shows and programs can be express without any interference from mainstream media. The people control their own media. My interest is Hip-hop. In main stream media the net works like NBC, ABC, etc. can display one style of hip hop with Philly Cam I can produce my own style of program promote it to people who watch public access.

44. We have been able to create programs and introduce artists to PhillyCAM programming, services and their facility
45. Have Not Used Programs But They Seem Very Useful
46. PhillyCam's classes have been great. There is a real need for the service they provide. People want to be able to tell their stories through this creative medium and PhillyCam provides the medium to do that.
47. I am very satisfied with the services PhillyCAM provides for me they are very informative as to the everyday functions of television production their workshops provide the education I needed to complete my projects and their facility is a great place to network
48. Excellent training. Strong support staff. Excellent way to reach a diversified viewer community.
49. Friendly environment. Can do attitude. Helpful staff.
50. The staff have been very welcoming and have provided me with many training opportunities. I have acquired several new skills and I am constantly finding new opportunities to volunteer on shoots.
51. PhillyCAM has allowed me to produce a project that normally would have cost tons. The membership fee and accessibility is second to none
52. I got a lot of opportunity and experience working here as an intern.
53. Philly Cam gives me the opportunity to produce my cooking show the CHEF TREK ADVENTURE SERIES
54. There is a thriving and inclusive community of like-minded producers, community members and organizations. It provides an opportunity for anyone to learn how to create and distribute media which is priceless!
55. PhillyCam gave me opportunity at a local level with complete insights, details and air-time to be a professional amongst professionals as an artist needing to grow in my film making field.
56. Community engagement and diversity and activity level of membership is outstanding
57. very professional and friendly
58. I believe this is a necessary staple of our community. It gives the people a voice.
59. I have learned so much about television production because of PhillyCam. The staff there goes out of their way to help us learn and guide us. PhillyCam is a community, like family. The classes are very thorough and push us to participate and tell our stories and points of views as Philadelphians. I feel that PhillyCam is a blessing and have taught me so much and help me with their classes in following my dreams of working for television.
60. I believe the basic concept of PhillyCam is great. However it seems that there should be additional facilities: at least one more additional studio and control room, comparable to the main studio for taping, a fully equipped kitchen/studio with seating for an audience, broadcast capability beyond Philadelphia extending to the counties, Montgomery, Delaware, Bucks and S. Jersey. Additionally, the availability for programming to be on-demand for use in venues as schools, nursing home facilities etc.
61. PhillyCAM has achieved so much in such a short time during a particularly difficult time economically. PhillyCAM is a vital, active media resource destination.
62. It's understaffed and not conducive to producers who want to "produce" programming

- and not become a "production person." Waste of time to be forced to work equipment and package a program.
- 63. Very professional environment
 - 64. Optimal planning, great management and organization, enthusiastic and expert leadership, high degree of commitment to mission and great follow-through, terrific recruitment and training of producers from the community, amazing support in such a short-time of operations, ready to take off with expansion into more channels and broadened support.
 - 65. Very professional environment. Members are satisfied with the services and resources we provide.
 - 66. Whenever I need help they quickly help me and I get to use the space and equipment for free
 - 67. PhillyCAM is an essential part of the community in Philadelphia. Members have access to otherwise unaccessible equipment, training, and broadcast capacity allowing for a voice from all members of Philadelphia to be shared amongst its people. The staff is proficient and attentive as well. In these facts, I am completely satisfied as a community member of this city. Personally though, I only rated a "satisfied" because there is a higher level that can be reached with regards to every facet of the facility and production value. A larger studio space would be useful for larger audiences to attend events. Additional "advanced" training classes and professional development classes would be useful to help community members improve their skill set to the point of entering the broadcast and film industries as employees. This is a clear benefit to the city as well.
 - 68. quality equipment
 - 69. The programming is accessible, affordable and quality. The staff is knowledgeable, friendly and supportive.
 - 70. We do not have HD programming which lowers the quality of my show when broadcasting.
 - 71. Operations are adequate but not ideal.
 - 72. It has allowed me to produce and enabled me to take the next step in my career.
 - 73. Unnecessary strict rules with unprofessional results
 - 74. The PhillyCam staff is wonderful at assisting members with learning and production needs of members as well as create an environment of creativity and community.
 - 75. They first provide a very valuable service. They are professional and educate the public with courses that may not be available otherwise. They also make each member feel as part of a team.
 - 76. Very professional staff; Excellent facilities; Excellent training opportunities; Great access to airtime; Incredible diversity of programming created
 - 77. PCam provides an amazing array of experiences and opportunities for volunteers interested in media and media production.
 - 78. There were times we put in to use the studio, and when we would call to find out that the date we picked was set they said they would check and call us to let us know, but they never called, and we would call again, and they said oh we will check and call you, but again no one called. This happened a few times. And we never did get called!
 - 79. I am very satisfied with everything PhillyCam has to offer Producers and film making in Philadelphia.

80. The only down side of membership for me is the inability to run commercials on your program. I do however, understand the reasons.
81. Very satisfied, [REDACTED], accommodated when we made mistakes and helped us rectify the errors and get our program on the air on time....
82. I am satisfied with the current PhillyCAM operations and having seen them evolve, improve and expand their operations over time, I am certain that additional funding and related support such as services and accessibility could help PhillyCAM make an even more positive and productive impact on the citizens and content producers in Philadelphia.
83. I learned how to use equipment and was able to produce a show using PhillyCAM equipment.
84. Workshops are great. Fosters atmosphere of learning and collaborative participation.
85. The hours and location is absolutely horrible.
86. As a member of the Philadelphia media making community, PhillyCAM has consistently engaged its membership, viewership and the overall community with programs, educational opportunities and events. The membership seems to be developing and expanding in proficiency and as a result are able to cover pressing issues with in depth coverage and pertinent conversations. PhillyCAM's operations are organized, specific and welcoming. While I am currently a board member, prior to being elected, I was a general member. My respect for the organizations operations and work peaked my interest in becoming more involved.
87. I think PhillyCam is a blessing to Philadelphians. I hope that PhillyCam grows and more people join.
88. I've taken the orientation and a production course and I learned a lot in both. The sessions were informative and the instructors very knowledgeable and helpful.
89. We are aiming to serve the needs of the Community at large and we are establishing good policies and programming and building on them toward further goals.
90. Too much partisan political programming. Lack of diversity.
91. Excellent staff and a great community! I don't know any other organization that brings together such a diversity of Philadelphians. For a very affordable fee, anyone can make their creative vision and message a reality. I only wish that Philly Cam had more equipment and staff to provide more classes.

6. What is your interest and involvement in producing/providing/distributing the following type(s) of programming on local Public/Community Access television? (Please check and then explain below for all that apply):

| Answer Options | Response Percent |
|--|------------------|
| PUBLIC OUTREACH (informational programming about your or your organization's programs and services for viewers in their homes, etc.) | 44% |
| COMMUNITY EVENTS (programs, live or recorded, that cover speeches, presentations, fairs, parades, other public gatherings, etc.) | 38% |
| PUBLIC EMPOWERMENT AND COMMUNITY ENGAGEMENT (programs produced by local residents, community groups, etc., providing their perspective or advocacy on a wide range of topics and issues) | 42% |
| COMMUNITY NEWS AND PUBLIC AFFAIRS (local news programming and public affairs shows focusing on current events and topical issues in the Philadelphia area) | 34% |
| ARTS AND ENTERTAINMENT (programs, live or recorded, such as plays, music performances or videos, comic skits, poetry readings, etc.) | 78% |
| PUBLIC MEETINGS AND CIVIC ENGAGEMENT (programs, live or recorded, that cover community forums and other meetings, neighborhood group meetings, advocacy groups, etc.) | 27% |
| TRAINING AND EDUCATION (child or adult education, how-to programs, workforce development, lifelong learning, etc.) | 40% |
| RELIGIOUS/FAITH-BASED (televangelism, cablecast of local religious worship services, other locally-produced or procured/imported religious oriented programming) | 13% |
| SPORTS COVERAGE (local sports programming covering amateur, community and other athletic events and issues) | 9% |
| OTHER PROGRAM TYPE | 13% |
| OTHER REASON FOR BEING INVOLVED IN PUBLIC ACCESS (interest in volunteering, social interaction, vocational training, community involvement, etc.) | 20% |

7. For all that you checked above, please describe the specific programs you've produced/ provided/distributed or other reasons for your involvement in local Public/Community Access television: (N=97)

1. I have co hosted several shows with [REDACTED] from Red Hen productions! Obama EduVision and Divine Diva Productions will be a 2014 Educational and Infotainment TV series!
2. I am primarily interested in serving my community. My involvement in PhillyCAM allows me to combine community service with political activism and social justice. While my areas of expertise are outside of the media field, the other areas in which I am knowledgeable - education, youth services - are in the scope of PhillyCAM's mission.
3. I have co produced two programs both dealing with Public engagement,
4. Would like to see more labor oriented films on PhillyCAM
5. The city needs an outlet for the range of voices in our city.
6. My organization produces short video profiles of artists and public events like panel discussions and symposiums which have aired on PhillyCAM. We will continue to produce programming to air on the station.
7. I am not involved in producing or distributing
8. I'm currently producing a program about a Philly native, who has had a successful career in television and theater, putting up his first play in about 30 - 40 years in Philadelphia.
9. I have not yet produced, provided or distributed any programs but I wish to in the future in order to promote community development and policy issues related to revitalization in Philadelphia. I also want to help community development corporations integrate content production (arts, culture, civic affairs, etc) in their neighborhood-based work.

I watch the channel and enjoy seeing that kind of content (and others) from other producers.

10. Dancing for Fitness...Combat diabetics and other disease that are crippling our communities.

Youth in Movement and Creativity...

Entertainment and Entertainment History about the Phila and Surrounding areas

Educate public on Health benefits and association with Physical and Mental Health

11. Xtra-Ordinariness with [REDACTED]
12. Working on screenwriting workshop for presentation on PhillyCAM as well as edited version of our "meet the writer" events with the screenwriters group.
13. I have not yet produced any programming on PhilaCam
14. Assistant for filming, producing and editing, content for religious outreach, and community outreach for Bible Ministries Fellowship Church.
15. Diamond Eye Sports is an exclusive online, and print (now television) magazine that's "for the students by the students". Diamond Eye was created with the goal of bringing

to the surface a sports market community that seldom gets the recognition it warrants.

Diamond Eye Sports magazine will give high school athletes and their coaches the exposure it deserves by highlighting their sportsmanship and efforts. Diamond Eye will also give parents, friends, and neighbors a media outlet (television, video, photog. and editing) that will afford them the opportunity to witness the accomplishments of the fine young athletes they know through this creative, eye catching, and inspirational sports magazine.

But it doesn't end there. Diamond Eye Sports' ultimate mission is to draw national attention to our student athletes so that more opportunities become available for them giving them a chance to build their brand and reputation before high school career ends.

One distinguishing character of Diamond Eye Sports is that it is, in part, a magazine crafted "for the students by the students". What better way for young athletes to express their game highlights of the day, just the way they want to, than through a magazine that can appreciate the sport and raw talent of each individual. Part of the makeup of Diamond Eye will be current and fellow students.

There is also another side to Diamond Eye Sports that include educating athletes about the potential of pursuing careers in the field of sports media and management. Presently, the business of sports is estimated to be a \$210 billion dollar industry. According to "Sports Business Journal", that figure is twice the size of the United States Auto Industry and seven times the size of the movie industry. As the number of national sports venues and athletes increase there will a greater demand for employment in the broadcast and print media sector. Diamond Eye will prepare these future athletic leaders by shaping and molding them through education and participation.

Diamond Eye student participants will conduct the reporting of games, perform team interviews, and write feature stories granting them real life experience in the sports business. Perks for our students consists of planning and hosting various events, participation in training clinics, tournaments, all-star games, invitational sports camps, award ceremonies and other exclusive social events while potentially getting school credit, adding to their college transcript, and resumes.

Moreover, Diamond Eye executives will be putting in place a program that provides workshops and tutoring for future media students. We will consistently encourage and invite special guest speakers from the industry to come out and speak with our media students. Special guests may include professional athletes, professional sports team representatives, and media commentators.

Our youth will forever be vital to our community and future. Its time they have their say and a venue to do it in. Diamond Eye Sports Magazine, for the students by the students.

- Check out the site DiamondEyeSports.com
16. Not yet produced anything
 17. A community voice in media production is important to counter corporate monopoly control of access to information.
 18. I produce a show in which people submit films and music videos for airing. I also include interviews as well as 'walkarounds' at interesting exhibits or events.
 19. I've done various Voice over work for PhillyCAM which include: PSAs, Studio Production, and Narration for PhillyCAM videos.
 20. I have produced a number of short 4-7 minute profiles about interesting people and activities in Philadelphia.
 21. Salima Speaks Talk Show (15 shows)
Unwanted Behavior(1 hour movie)
 22. Tax report is a community based media outlet that produces content in a variety of formats, but not video. We joined PhillyCAM as members with the goal of doing some video production and have found the program staff to be very welcoming and informative. Thus far, we have been able to take advantage of the community bulletin board- we submit images and info on a quarterly basis that will raise the profile of our project among the PhillyCAM viewers.
 23. Food Not Fad and other shows that I have crewed on.
 24. Hosted PhillyCAM's annual board meeting. Partnered on providing Philadelphia history content to PhillyCAM programming.
 25. looking to do program in these areas
 26. I'm interested in producing programming that addresses cultural issues in Philadelphia.
 27. I've assisted and viewed music programming shows by local musicians in my community which is very beneficial to the music community and our youth without the opportunity or access to music in their schools.
 28. Information on our organization and the individuals within. Our vision is to create more programs based on the work we do. Something that goes in-depth and helps convey the importance of the air quality issues we work so hard on.
 29. I've been really moved by some of the public empowerment programs. They are an invaluable resource for our community, providing education and awareness about some serious crises that the City of Philadelphia is facing, despite the lack of information available through the mainstream media sources.

I produce arts and entertainment programming, performing live and broadcasting that live footage on PhillyCAM. These shows are satirical and take a comedic approach to raising awareness about social and political issues and pop culture.

30. The team at inSightOut TV and the Steve Green Show (a PhillyCam TV show) believes that "the world becomes a better place when we let our insight out".
31. I have crewed and produced several programs that have be beneficial to Comcast viewers
32. we tape a monthly presentation of poetry where a teacher and two students both discuss the process of teaching/learning poetry as well as reading their poetry - these programs are both a multi-generational presentation and a discussion on how art is passed on from one generation to the next - having these programs broadcast and then on demand is a great boon to the poets and to Moonstone - we also have, on demand, two series

that are of historic and contemporary political interest - four presentations on different aspects of the life and work of Martin R. Delany (an important but not well known figure in American history) and an 8 part series on the social/economic issues raised by the economic collapse of 2008 call Class Warfare in Philadelphia

- 33. Disability Pride Philadelphia
- 34. Dumpsta Players Presents
- 35. For access to resources whenever I need to produce a project.
- 36. I am currently in development of original programming to be aired on public access TV for exposure to larger networks.
- 37. Have not distributed yet. Plan to in 2014
- 38. I am in pre-production with a show titled Words2Action, on which I will be producing and directing. Ken Gordon, Jr, president of So Burlington County NAACP is the host.

I've worked 1st and 3rd camera, done make up, kept time, and will now be performing on the TV Production, Conversations Across Time.

I plan on starring in my own production which is not fully coordinated, but will involve other actor, model, artist, guests in many areas. It will be a very fun and funny show!

I've been asked to play a role on another production and to model clothing on yet another. This just came about, so I'm unable to even say what shows they are.

- 39. The Accentuate Show; Talk the Talk; Verbally Loose; The Buzz Club; The Hype
- 40. I'm currently in production on a upcoming entertainment show.
- 41. I provide faith base/social justice sermons.
- 42. Franchise Live music videos celebrity guest
- 43. I hope to produce shows which highlight the non-traditional roles of modern women such as women firefighters, auto mechanics, and pilots, how they balance family and work responsibilities, and how they overcome the criticisms of these stereotypical roles. I am also interested in producing a kid's cooking program that focuses on how much fun it is to cook or bake a snack with healthy reminders to stay fit and to select healthy choices to avoid obesity and health risks such as diabetes.
- 44. The Record Shop TV show
- 45. Use the facilities to help students with all phases of production.
- 46. Hip-hop base programs are the type of programming I provide when I'm producing properties for people who are interested in Hip-hop base programming. My productions are art; entertainment and knowledge base topics for hip-hop enthused or hip hop fans.

For example I produced a hour film with [REDACTED] program called "Sunshine Elementary" about students achieving in school and if they 'vet done well they would receive a hip hop concert as a reward rewarded with a Hip-hop concert. .

- 47. dance talk show
- 48. Produce Shorts that I will like to start showing on PhillyCAM
- 49. PhillyCam 's producers scheduled a one month showing of Billboard War, a documentary produced and directed by an affiliate organization which tells the stories of local citizens in other parts of the country who are dealing with similar challenges and inspires our citizens to get involved in the public processes impacting their

communities. The showing of this documentary served as public outreach and public empowerment and community engagement. We also showed a locally produced documentary which examines the start of a grassroots organization that removed over 1000 illegal billboards from neighborhoods of low wealth.

Scenic Philadelphia has also sent one of our staff members for training and education and we hope to produce our own show if we can get the resources.

50. My involvement in Philly cam is to learn how to professionally create television programming and PhillyCAM has provided me with the tools I need
51. I am in development with a series of program regarding the benefits of connecting with nature through local parks and other outdoor venues.

All that needs to be done is to go outside, take in your surroundings, notice the color of the sky and if it has any clouds, how many trees are around you, is there any grass; what does its texture feel like? As these things are being taken in, give gratitude for them. Inhale and exhale slowly, this can be done while standing, walking or sitting. Imagine becoming one with nature while listening to the birds and crickets in the background singing. If possible close your eyes and continue to breathe in and out slowly, try to be in that moment for as long as possible. If only for a minute, it will help!

For those who simply cannot go outside due to the weather or other reasons, there's another option, bringing nature to you through nature sounds cd's and tapes. Nature sounds can be purchased from any stores that sell music cd's, purchased or obtained online for free. There are several online radio stations that offer a variety of Nature sounds, for example rain, thunderstorms, bird singing, wolves howling, crickets, wind blowing, ocean waves, etc. While listening to the sounds of nature close your eyes and in your mind picture what's being heard, place yourself there and become one with your surroundings. Do the same breathing techniques and stay in the moment for as long as you can as mentioned in the second paragraph?

52. To share real human stories and struggles. To help others (or us all) overcome. One particular area of interest on mine is stories of living with an invisible disability.
53. I have taken the Final Cut Pro, Studio Crew, Advanced Final Cut Pro, and Advanced Cinematography workshops. I don't have a show that I am producing just yet, but when I do finally find a subject to film, I am confident that I will be able to produce it at a high quality. I am hoping to study documentary film at a graduate level, and learning new skills at PhillyCAM is helping me become a better candidate.
54. I just shoot a pilot entitled "I Still Do, the Marriage after the Wedding" The show has a twofold mission; we allow newly married couples the opportunity to attend their own wedding. IN addition, we highlight local vendors giving them the opportunity to showcase their talents.
55. I haven't personally produced anything that has gone on the station but I do plan on airing some of my short films in the future.
56. As for me being a chef cooking is a art a GIFT FROM GOD My life boils down to several key things

My 4 F'S FAITH FAMILY FRIENDS AND FOOD
MY LIFE'S MISSION IS TO TEACH LEARN SHARE AND LOVE

This represents my show.

57. Public outreach - work with a non-profit to help tell their story and how they impact local residents.

Arts & Entertainment - Onset behind the scenes of local independent filmmakers

Training & Education - Working on a children's program to help expose elementary and middle school age children to careers.

Other - Social interaction

58. I produced a feature film called Oops! To entertain audiences locally and abroad who loves drama/comedy.
59. Talk show featuring local artists to connect others in the city and show that talent exists on a local level too.
60. Essentially literacy and the advancement of literacy
61. I like that it lets me to be able to use the equipment to engage my equipment
62. entertainment and civic engagement
63. I am currently working on an education TV show for television. Also I am working on a show about people who may have started off on the wrong track but are now pursuing their dreams. I also work on a lot of other programs and help other members to produce their shows which range from public outreach programs, empowerment to arts and entertainment.
64. I am currently producing an unscripted entertainment/educational programming regarding historical characters played by actors discussing current and past events. The show is entitled "Conversations Across Time."
65. Philadelphia is a widely diverse metropolitan area with a rich history. Reflecting that diversity is key to PhillyCAM's success.
66. Programs not completed because of crew issues.
67. To bring awareness to the public
68. All of the above reflect community media needs not met by other commercial and non-commercial media in the area; they involve empowerment of people who have not had a voice, and giving them skills and the vehicle to be heard, express themselves and form stronger communities
69. I've produced a lot of youth media work with youth ages 12-21. I have shown their programs on PhillyCAM, and it's been exciting for them to see their work on TV. I have also produced a documentary about the history of the Mexican Community in South Philadelphia, where I live, and I have heard from people that they have seen it on the channel.

At PhillyCAM, I help organizations produce public service announcements, as well as cover local events related to arts, culture, politics, and news. We are increasingly doing more live stream coverage as well, and there is a lot of demand for this type of service.

70. a Christian talk show and a children puppet show

71. Arts & Entertainment - My main project at the station is to produce the Philadelphia Music, Dance, & Modern Arts show to help promote local artists and their crafts. The shows program is designed to be both entertaining but also educational as we show how many people create their art.

Public Outreach - I volunteer my time at the station for live broadcasts and program and station promotions. Specifically their one year anniversary and annual meeting.

Community events - I volunteered as videographer at the 2nd street fair for an upcoming film featuring mummies members and the band New Sound Brass Band.

Public Empowerment and Community Engagement - I helped produce the video voter guide for PhillyCAM this year to help members of the community meet the judges that were up for election.

Community News and Public Affairs - I was videographer for the station at the recent mayors roundtable to discuss reclaiming vacant land.

Public Meetings and Civic Engagement - I volunteered as videographer for a meeting of the Philly Jazz Project.

72. I first started out as an individual member after realizing the benefit PhillyCam has to our city; I now have now involved my non-profit organization to become members as well. We look forward to affecting the lives of those in need through our programming.
73. guitar shows
74. I haven't yet produced any shows, but I hope to as some point soon. I collaborated with PhillyCAM on a youth media project for girls, and I've taken a couple of their classes.
75. My talk-show is called The BuzzKlub now going into its 3rd season. It is a young variety styled show that focused on community issues, artistry, entrepreneurs, music, fashion, and hosts panel discussions on various topics and one-on-one interviews.
76. Interviews for NOW, sustainability programming from Academy of Natural Science, Poetry from Moonstone series, health and nutrition from Food Trust, Meet the Producer Roundtable, Right to Vote Programming, others.
77. InSightOut TV; the Steve Green Show
78. Sports forum for television and radio hosts.
79. 1) a kids show (8 to 14 years old)
2) a talk show about various topics
80. I have produced Health Time TV which informs the public of health and healthy living....Voices in the Community which highlights struggles in the Black community.....Documentary on the effects of brown fields in the community.....Heart of Philly which highlights culinary arts, entertainment and fashion.....
81. Miles of Music; I have also help in different capacities with other PhillyCam member programs.
82. Philly CAM is an essential resource for Philadelphians as it allows them access to the city's television viewers via the dominant system that Philadelphians use to watch TV.

Without PhillyCAM it would be nearly impossible for average Philadelphians to get

access to time on Comcast's system.

In addition to allowing many voices to be seen and heard, it also gives Philadelphian's excellent training opportunities in video production which can lead to employment opportunities across a wide range of industries.

83. I still need to have training to become a producer. The above reflects some of the areas I would like cover in a show I would produce.
84. Half hour TV variety shows.
85. The theme of my show "Heart Of Philly" is about Food, Fashion, and Fun in Philly!. This show helps Independent business owners, designers, artists, it highlights the Fabric of our City!
86. I started the production of "Salima Speaks", in terms of editing, camera operation and training, graphics and animation, and deployment. Because of the current size and limited capacity of the facility, it is difficult to secure studio time.
87. I am the creator and producer and one of the many stars of "Race Riot A Culture Challenge" A racial comedy in which racially diverse bigoted friends are egged on by a kid to compete in a variety of challenges and contests....in addition to being funny we like to put an end to bigotry through humor.....all the racial stars are great friends
88. I have produced short films and music video shows for local Public/Community Access television for the purpose of entertaining citizens as well as encouraging dialogue about addressing certain issues that matter to them such as positive reinforcement, violence prevention, criminal justice and conflict resolution. My involvement in local Public/Community Access television stems from interests in giving a voice to those in the community who are often forgotten or ignored. It also comes from my interest in educating local residents on the opportunities available to them by encouraging continuing education, fiscal responsibility and social health.
89. I produced two shows. Artist Talk and CrossTalk
90. In planning stage for pilot piece but hope it will come to fruition and become the first of several projects produced for PhillyCam.
91. I haven't because the hours and location is not conducive to my schedule
92. Through PhillyCAM, I've produced a series which is currently broadcast every Saturday. The program covers a city-wide storytelling program which took place in 5 Philadelphia neighborhoods on the same day, at the same time.
93. I am involved in so much. I'm a Civil War Reenactor, a student, a photographer and much more.
94. I'm still working on my program but I truly endorse the concept of public access programming. It gives the voiceless a way to get their stories told, much the same as blogs on the web but in a more visual environment. It is a great asset to the community.
95. All of the above apply to the opportunities through PhillyCam
96. Financial support. Technical crew.
97. I have not yet produced my own program, but have worked crew for Moonstone Poetry and Miles of Music; two excellent arts programs.

TRAINING AND OTHER EDUCATION

8. Have you received television production/media training or other education at the PhillyCAM Public/Community Access facility?

YES 68% NO 32%

9. Please indicate which television production/media training or other education opportunities you received at PhillyCAM:

| Answer Options | Response Percent |
|--|------------------|
| Basic Field Production | 72% |
| Intro to Final Cut Pro | 39% |
| Studio Crew Production | 59% |
| Producing & Directing for the Studio | 39% |
| Production Management & Planning | 36% |
| Intro to Mac/Computer Basics | 7% |
| Advanced Camera | 20% |
| Special Topic Workshop (Copyright, Lighting) | 20% |
| Youth Media Training | 3% |

Other (please specify) (N=11)

1. none
2. College internship
3. I am self taught and independent but I grow and learn by associating with various members involved in projects.
4. Introduced to new forms to fill out in order to have things aired.
5. advanced editing techniques
6. member produced program on low power radio opportunity
7. I began the Advanced Camera workshop but had to stop due to something that happened to my husband. I will be taking it as soon as it's available.

I also plan on taking the workshop on using The Express Studio as soon as it is formulated.

8. I also had a chance to use what I've self-taught on these other topics.
9. Advanced Final Cut Pro
10. I never receive my certificate.
11. I have been involved in developing some and getting up to speed on any training provided to the members to better support the learning process

10. Did the training and/or education you received meet your needs and expectations?

YES 96% NO 4%

11. Please describe how PhillyCAM's television production/media training or other education opportunities met your needs:

| Answer Options | Response Percent |
|---|------------------|
| Gained new technical skills | 89% |
| Produced a program for public access TV | 51% |
| Became part of a production crew | 48% |
| Met new people | 89% |
| Got a job | 8% |

Other (please specify) (N=6)

1. NA
2. Philly cam motivated me to return to school and proceed with requirements towards obtaining a degree in video production
3. Learned about how audience reacts to programming from feedback received.
4. I'm sure as I go on, I will be able to help others come to fulfill their own dreams. Perhaps teach an Acting Class or one of the workshops I've taken.
5. We sent a staff person to learn this skill and we hope to produce a film.
6. I have previously learned through volunteering & training in Community Media and PEG organizations and most of my work is a result of that

12. Please describe why PhillyCAM's television production/media training or other education did not meet your needs and what needs to be improved or added: (N=3)

1. I am currently taking advanced editing. I think the class is too short in overall duration (only 3 sessions long), and at this point lacks focus. It's clear that the teacher is knowledgeable and has the experience to teach well, but I think PhillyCam needs to figure out what the important concepts are that need to be taught. At this point, some of the content seems more like it should be in a class on how to use Final Cut instead of a class on "editing techniques", which I would expect to focus more on editing styles and types of transitions, etc...
2. It's very basic training and it is helpful. It would be better if there were tutorials available. You have to learn and relearn this stuff to commit it to long term memory. We all have busy lives. I think we could have better study tools (and re-study) tools. Also, I think there should be a help desk with a live person always available (or at least available 2-3 days a week) to assist with technical and craft questions. I always feel like I am bothering someone and taking them away from their job when I ask questions now. Staff IS helpful but the system isn't set up to encourage us to ask questions, to nurture projects along, to improve our craft. With little support, I feel people fall out. With a little more institutionalized ongoing support, I think we could go a long way.
3. I don't want to actually be a "production person". I am a producer/writer.

TRAINING/EDUCATION

13. Is there any type of training and/or education you need?

YES 54% NO 46%

If YES, please describe: (N=15)

1. I'd probably take production and editing classes, as well as other multimedia (photoshop, web design etc) if they were offered during the day.
2. I need basic training on video production, would like training on podcast production as well. I know they are available to me at PhillyCAM but I have not yet found the time to sign up.
3. Final Cut Pro and Producing a show Effectively
4. PhilaCam has classes that I will take in the future
5. Production
6. I should be able to tape our programs myself but just have not had the time to learn
7. editing
8. more editing
9. editing training
10. More details to come
11. editing classes
12. I've been a producer by learning and researching on my own but I haven't been able to take the production class because of work conflict
13. more training on equipment
14. Hopefully more opportunities will open up regarding training.
15. I would like to be trained to know how to edit footage for my show and add special affects.

FACILITY ASSISTANCE

14. Indicate whether the facilitation or assistance you received during the production of your program or other multimedia content at PhillyCAM was:

| Answer Options | Very Helpful | Helpful | Somewhat Helpful | Not at All Helpful | N/A |
|----------------|--------------|---------|------------------|--------------------|-----|
| PhillyCAM | 63% | 22% | 1% | 0% | 14% |

15. How was the facilitation or assistance helpful or not helpful to you? (N=71)

1. We volunteer for TV production if some shows!
2. It was very helpful, it provided me a source of valuable experience to confer with to discuss how things would work out.
3. The staff arranged for coverage of a live event that went flawlessly.
4. Not applicable. I have not yet taken advantage of the production assistance or training.

5. She was experienced and offered concrete experiences when apply the techniques for utilizing the camera apparatus
6. The staff has been very knowledgeable and patient with me through the process of creating my show and editing my content. Special thanks to [REDACTED] and [REDACTED]!!
7. It's good but limited on time.
8. Helpful
9. Philly cam motivated me to return to school and proceed with requirements towards obtaining a degree in video production.
10. By giving hands on answers to questions I have as well as understanding the multiple options to the questions I have.
11. Warm, informative
12. The staff is very open minded and they give abundant attention to the various needs of participants who are developing their skills.
13. Program director directed me to correct forms.
14. The facilitation was helpful because the staff provided hands on regardless of the students grasp of understanding.
15. I often received technical assistance from [REDACTED] on how to use editing software and process videos so they could air on PhillyCam. He was very generous with his time and helpful. He also made time to help on use of some sound equipment, which was very useful.
16. Gained new Skills
17. We produced the content, but PhillyCAM provided all of the direction and technical support for the production of the program. We would not have been able to do it on our own.
18. meeting the right people and creating marketing opportunities
19. Production was timely and allowed for great collaboration with other members of the PhillyCAM membership/community that I otherwise wouldn't have worked with.
20. Provided a medium to share content and a venue to record segments.
21. The staff is always there to answer questions and help with any challenges that may arise
22. the taping, editing and broadcasting of our programs would not have happened without this
23. They listened and made a great film
24. Studio crew was very professional during shoots.
25. It was very helpful when I need it. I received additional training in school.
26. very helpful
27. Every person with whom I've had contact, on every level of teaching the workshops, giving advice, dealing with computer issues, and honestly, from ringing the bell and being greeted by amazing people throughout the entire time and every process I've encountered has been on a first class level. I'm greatly appreciative of each person.
28. New Technical Skills
29. I know know how to operate the video cameras correctly, and to edit properly.
30. The facilitation is helpful. It allows me to meet new people and meet with friends and family members in center city, and work on upcoming projects.
31. very helpful
32. I had always wanted to a part of a production but thought it was hardly possible to be

- able to work on the equipment such as the studio cameras and the monitor/control room. I was looking for a video editing class and luckily I stumbled upon PhillyCAM. I feel like I have found a jackpot! The assistance from PhillyCAM training and staff allowed me to do what I thought was impossible before.
33. The instructor was very well versed and answered all questions
 34. By making the facility available to me if I need to use the equipment. Keeping me up dated on the latest through e-mail.
 35. Learning new skills
 36. The facilitation was helpful because it educated me on professional production
 37. The assistance helped shaped my work to prepare it for a broader audience.
 38. Again, the people are helpful but PhillyCam doesn't have a helpdesk so that kinda makes it a bit weird to ask for help.
 39. I have learned new skills that one would normally have to learn in a college classroom.
 40. During one of the editing projects I worked on I had a problem with one of the titles. It took about three days to get it to work. I couldn't have gotten it to work without the help I received
 41. Extremely helpful
 42. When I come across technical difficulties with my footage or have a gap in understanding of using the editing software a staff member can usually be there to assist me.
 43. Final cut pro was useful to me because after I was able to complete my project Oops! I am now able to submit it to grant programs and film festivals for hire.
 44. Learned new skills.
 45. The classes are helpful
 46. It was there to help me with all of my production needs
 47. Everything that I know today about television production I learned from PhillyCam. I learned so much from the guys at PhillyCam and they allow me with the opportunity to tell the stories that I want to tell and what means most to me.
 48. The classes taught me basics. The technical staff is available and always ready to assist our efforts.
 49. PhillyCAM's staff are dedicated to hands on explanation and nurturing to accomplish fine production values in studio productions.
 50. Basic review.
 51. The staff was very helpful and very knowledgeable
 52. Very knowledgeable staff and members, always willing to help.
 53. Simply having the equipment and staff available is beyond helpful but necessary. The staff is very good at helping people understand how to use the equipment.
 54. not helpful by being late for starts
 55. We get help from other producers and like minded people.
 56. Operations are adequate but not ideal.
 57. It gave me some supplies, but not all.
 58. The PhillyCam staff as well as other members are great at community collaborations.
 59. People were great.
 60. The instructors where very interested in the members actually learning the equipment with great care.
 61. Excellent staff and good access to facilities.

62. Very helpful, Antoine is a excellent teacher!
63. The producers and directors were extremely helpful in making it possible for my show to be aired.
64. when our media was brought in the wrong format, the people of Philly Cam corrected it for us
65. PhillyCAM helped facilitate the logistics and technical needs for the pre-production and production of my short film and without this public access television station, I would not have been able to produce my screenplay when I did.
66. From knowing nothing about producing a show I was able to produce, shoot, and edit a series that aired on TV. Any technical questions I had the staff was available to help me with.
67. NA
68. The instructor was knowledgeable, committed to learners of all levels and organized. The specific nature of the training assures that all people wishing to produce a show have a core competency before even touching the equipment.
69. Everyone at PhillyCAM from staff to member is always
70. I have not produced a program yet but I've taken a basic field production class. I'm sure the staff at PhillyCAM will assist me when I am ready to do so, and will be as helpful as the instructor in the class.
71. Learned new skills with current technology.

16. Has the training and/or assistance you received or provided at the PhillyCAM Public/Community Access facilities been helpful in seeking or gaining employment?

YES 36% NO 64%

If YES, please describe: (N=37)

1. Upon completion of the Production class and TV Producer class I will be eligible to launch a Video business! I want to continue to produce documentaries about the great citizens in our area
2. Am now part of crew through work-study for filming airing content.
3. Has given me opportunities to get freelance job with various media outlets
4. disabled
5. I've been asked to assist on TV show productions based on my TV Crew training through PhillyCAM.
6. Having an outlet to produce content for has motivated me to produce several short profiles, and that gave me the portfolio to be able to be considered a serious candidate for several part time positions. It also provided me with the beginning technical foundation on which equipment I would need to produce videos of a certain quality, both in terms of video and sound equipment. The staff at PhillyCam was also helpful in directing me towards a couple of job and volunteer opportunities that led to some work as well.
7. Working at PhillyCam as an independent contractor
8. I've made a lot of close friends and professional contacts through crewmembers and producers that are interested in expanding their networks and opportunities as well.

9. Increased my marketability by sharpening by ability to work with and coach various different skill levels.
10. I have worked in the field with Philly cam staff
11. ...but I wasn't exactly looking for a job
12. I will be working as Producer/Director for Words2Action, in which there will be some pay.
13. I'm involved in paid sound film productions.
14. not applicable
15. The person was already an employee.
16. The training and assistance I received prepared me to bid on work in the private sector.
17. It helps me to feel and be more media literate. I've been invited to join projects as a result.
18. The work I completed while I was here as an intern helped me complete my portfolio and my demo reel, which as a film student made my life and job search a million times easier.
19. supporters and sponsors
20. Now that I can edit I have been able to get work editing.
21. I now film and edit independent weddings, church sermons and social events.
22. Because I have been certified in Crew, Producing and Directing and Basic Field it has allowed me the opportunity to film a children pilot which I was paid for.
23. I am not sure if I can fully answer this in that I and my team have the desire to have our programming presented to a broader audience. To the extent that that happens in the future, definitely my PhillyCam experience would have led to a new career.
24. As an instructor, I have gained experience teaching which has added to my resume and qualifications.
25. Although, I haven't obtained a full time job with the skill set I have but I have earned small one-off contracting jobs sporadically. As my skills and experience increase I see opportunities for full employment being attainable very soon.
26. I've assisted on video projects and used the skills I learned from class.
27. I have been able to advance my resume.
28. The training has been helpful in opening up opportunities with assisting in bigger projects.
29. I have not taken courses for this purpose.
30. Staff have been very helpful about any inquiries I may have
31. I was not looking for employment
32. this is for entertainment only
33. I was offered an opportunity for employment at a local business, based on a short film that PhillyCAM/Public Community Access facilities helped me produce.
34. I already work in the field but I'm sure the additional television producing skills I've gained will shine as I move ahead.
35. I am the main editor and contributor for my organization the 3RD U.S. Colored Troops
36. I work here! The skills I continue to learn & practice further my abilities
37. I was not looking for a job.

17. Has the training and/or assistance you received or provided at the PhillyCAM Public/Community Access facilities been helpful in other ways?

YES 85% NO 15%

If YES, please describe: (N=67)

1. The training at PhillyCAM has helped me learn the steps involved with TV production and planning and working with a Television crew!
2. Prior to coming to PhillyCAM, I was relatively ignorant of the need for and means of distributing community-produced content. I have learned about the process for video production and ways to gain access to the training necessary to enact that process.
3. It has helped me help others with giving them insight on how to produce a good project.
4. Yes, in terms of the profiles and other media we produce in house.
5. PhillyCAM has assisted in helping me complete my current project by allowing leniency in certain areas so I can complete the project around my work schedule.
6. yes, while on a community video shoot the Secretary of the organization said that I was the most professional videographer they have ever worked with...I smiled so hard that I'm still smiling now...I attribute these new found skill to the PhillyCam instruction I rec'd in my BASIC Field Prod Class!
7. It has provided a great deal of hope and encouragement for me to make my dream come true.
8. Helped with the production of 3 short movies in the past year.
9. Able to present what it is like within the area of television.
10. Motivation, inspiration and creativity have increased
11. Meeting and developing contact and friendships with fellow media enthusiast.
12. I love the mission & intention & service of PhillyCAM
13. The social interaction with creative folks is a plus.
14. I gained a better understanding about broadcast and corporate expectations.
15. Based on my training, I've been able to understand TV Crew, on air and all-around camera work.
16. Produced and crewing on shows
17. another means of distribution and connection to a wider audience in the city
18. Continued studies in video production
19. learning new information opens one up for better communications and possibilities
20. Networking, gaining higher awareness of Philadelphia's cultural and social environment.
21. I have had a chance to see other people's content on PhillyCAM and have been inspired to help with their endeavors.
22. An effective medium/venue wherein to network.
23. With networking
24. networking and meeting others with interests similar to mine
25. some of our members are using the group fee so more people are learning about Philly cam
26. Community Outreach resources
27. was very informative

28. Any time one is in a position of learning a new skill, it can only be of profound affect for the pupil for obvious reasons. Besides which, I am a professional actor and plan on taking full advantage of all I've learned from PhillyCAM, in front and behind the camera.
29. It has given me the opportunity to meet many talented fellow artists...
30. I know more and I know better than I ever have.
31. It allows me to produce better work in the future.
32. The training and assistance I received from PhillyCAM facilities are like the kick start for the beginning of a new journey and adventures into filming and entertainment.
33. Was able to refresh knowledge and was instrumental in my teaching at school.
34. The more people see my productions they inquire about my hip hop books on haakblast1.blogspot.com
35. I've been able to better connect with my friends on the qualities of nature that bring stress relief.
36. It's fun. It builds self esteem. You learn about...poetry, domestic violence, music, cooking, community groups, community involvement, social justice, civic engagement...It's a great way to engage constructively in community and ultimately even in the democratic process.
37. I'm a socially awkward person by nature and I have a rough time talking to people I don't know. They always kind employees and members definitely helped we concur part of that.
38. producing a fantastic pilot
39. I am able to support other individual's productions with confidence. I am also more thoughtful and strategic about how I plan my content. I am not rushing to grab a camera. I now understand the importance of planning and am realizing where I still have deficiencies. The Advanced Editing class is helping address one area of deficiency.
40. As other friends and family see the help I received from PhillyCam some of them want to and have join PhillyCam to future or start their own careers in Art.
41. Made me better at working with people. Also boosted my self-esteem.
42. created the opportunity for program collaboration with library, youth organizations, etc.
43. learning new skill set
44. to produce my own show
45. PhillyCam has help me build my confidence and make friends.
46. I feel more assured of my creative ideas.
47. Training from PhillyCAM facilities includes network opportunities and a variety of personal growth experiences where one is exposed to a multitude of new skills and point of view.
48. I have learned a lot about TV production and the process of producing a television show- before working at PhillyCAM, I had very limited knowledge of the studio and how it operated.
49. Yes, I've been able to help other Philadelphians share their creations and voices with the region.
50. not yet
51. It will help me moving forward with media project ideas I have, collaborating with

- other people and facilitated a deeper understanding of video, lighting and editing.
52. It has allowed me to pursue my dreams of becoming a national talk-show host.
53. Helped to introduce me to others and cooperate among all kinds of people
54. I have been able to have professional experience.
55. The PhillyCam environment is an excellent experience in community collaborations.
56. Yes. It has helped me to be a better instructor in my own music instruction.
57. Exposed me to new technology
58. Yes, I've been able to directed others to come down to PCAM and see the opportunities to volunteer or become a member.
59. Giving me the training that I was seeking, and put to good use in helping other film makers at PhillyCAM on there projects.
60. It has helped the community!!
61. great getting our show out there
62. The training and assistance I received at the PhillyCAM Public/Community access facility is helpful in terms of me being able to find the resources that are necessary to see my goals come to fruition. This is done in various ways including finding crew members to help produce my projects and also learning about laws and policies that affect how I conduct business as well as being able to produce a body of work that can help me gain employment outside of PhillyCAM.
63. I have the skills to use video as a tool
64. Yes, I've met good people and had the honor of supporting their programs and shows.
65. The connections with Community are beyond measure
66. The training made me more familiar with the video equipment and made me more comfortable in using it.
67. Professional connections

FACILITIES AND EQUIPMENT:

Have you used any of the following facilities and equipment at PhillyCAM?

18. PhillyCAM

| Answer Options | Weekly | Monthly | Occasionally | Never | N/A |
|---|--------|---------|--------------|-------|-----|
| Large TV Studio and Control Room | 11% | 17% | 38% | 19% | 15% |
| Express (store front) Studio | 1% | 8% | 42% | 33% | 16% |
| Single Camera Field Equipment (Portable equipment and lighting packages) | 10% | 9% | 40% | 21% | 21% |
| Multi-camera Field Equipment | 9% | 5% | 23% | 32% | 31% |
| Editing Equipment | 9% | 6% | 28% | 34% | 23% |
| Live program over Cable System | 4% | 1% | 25% | 36% | 34% |
| Record Program Playback over Cable System | 11% | 15% | 13% | 32% | 29% |

Would a mobile production unit (truck or van-based portable multi-camera system) be useful to you if it was available? If so, why? (N=67)

1. Yes
2. We could cover more events.
3. Yes, community event coverage
4. No
5. Yes it would I'd Like to be The Frist to Use it! YEAHHH
6. Yes because I often need to meet my guest in a place where they need to show or demonstrate their talent.
7. No. Too much for the level of experience that I'm dealing with.
8. Available and access to technology is important to bridge the digital divide gap.
9. Increase the professionalism & scope of work
10. Yes, absolutely. Live events should also be included.
11. no
12. Not at all
13. yes
14. yes, I was just thinking who great it would be to be a roving reporter for the program I have in mind to do
15. I believe so. There are live cultural events that such resources could help to bring to the air.
16. Yes so that we can broadcast live on location from different events.
17. YES - we film most of our content off-site and would benefit from having more cameras and more camera operators to produce better content.
18. Provides the ability to streamline multi-cam operations in the field.
19. Yes because I would be able to do more professional work in the street
20. the ability to record programs outside the studio would be great - we do many programs at venues around the city and the ability to video them would be very helpful
21. yes for live events
22. Yes, allows production team find locationsvif needed
23. good to know how to operate higher end equipment
24. Yes!! It would be useful to engage in pre-editing as opposed to post.... and other obvious reasons.
25. Yes, It would make live events easier to produce
26. For myself at this junction no, but in the future maybe if I wee going love feed.
27. Yes
28. Yes, a mobile production unit would be extremely useful for field production because it would make it easier to shoot a production with access to all the equipment in one mobile location.
29. Yes, it would help. The problem is student transportation
30. Yes, I would love to film in multiple locations in and entire day and or week. I could really get the locations and have better mobility.
31. Yes, for recording site specific performance work
32. A mobile production unit would be useful because it would avail the possibility of a broader option of production
33. Yes. I could interview people in the outdoors.

34. Probably. It can be difficult to move equipment around w/o transportation. Also, we could do remote live programming.
35. If I ever did a field shoot, I would need a mobile production unit.
36. YES, When I worked here as an intern I had to carry equipment from the station to city hall and then to the library on the Ben Franklin Parkway to cover the Make Music Philly festival. If we had a mobile unit I could have just drove it there.
37. Yes, it would allow for more B-Roll shoots
38. to be able to follow a STORY AND BRING IT BACK ALIVE
39. Yes! We could cover live events and be able to charge and quickly move to new locations.
40. yes, in the near future I will shoot a major motion picture and would need a portable truck
41. yes would be able to do events on the go
42. cover live action news and events
43. Yes because it would allow us to do more shoots outside of the building and we wouldn't have to carry heavy equipment around to cover events in the city. Being more mobile would allow us to cover more things that goes on within the city.
44. The programming I produce is strictly in-studio.
45. Yes! A mobile unit will bring PhillyCAM's message to outlying parts of Philadelphia's communities.
46. I would be able to get more footage to help my projects
47. Yes. There is much need outside of Center City and on the streets, this would help us reach more people, and cover more events.
48. Definitely, we could cover more major live public events with multiple cameras and a multicaster.
49. Yes. We often host community events and we record each event
50. yes
51. Yes for in the field shots or when capturing interviews on the street
52. Sure. On site public events
53. Yes, provided there are not a multitude of hoops to jump through.
54. Yes....It would be great for news gathering and events....
55. for taping how to do it shows (carpentry/ electrical)
56. Yes. More possibilities for the best production.
57. Yes, this way I would have more flexibility to produce in the field.
58. Yes because then we would be able to do more shows and interviews at other sites!
59. Yes!!! I have guests on air who are not in the studio
60. yes, we are a sitcom and would love to film locally
61. Yes, a mobile production unit would be useful in helping me produce local game shows in a safer environment and thus, preventing the possible robbery or theft of equipment that I would otherwise have to carry on public transportation, since I do not currently own a car.
62. Because it's portable
63. No, a waste of money.
64. Absolutely. There are production needs that require it.
65. Yes, we could take more equipment to locations and not have to struggle with them.
66. Yes - we are streaming more and could better serve neighborhood events

67. Yes. It opens new possibilities for news and arts production.

Please rate the quality, condition and/or capabilities of the current PhillyCAM facilities:

19. PhillyCAM

| Answer Options | Excellent | Good | Fair | Poor | No Opinion/Don't Know | N/A |
|---|-----------|------|------|------|-----------------------|-----|
| Large TV Studio and Control Room | 51% | 33% | 2% | 0% | 9% | 6% |
| Express (store front) Studio | 34% | 31% | 8% | 1% | 18% | 8% |
| Single Camera Field Equipment | 32% | 32% | 8% | 1% | 18% | 9% |
| Multi-camera Field Equipment | 27% | 25% | 6% | 1% | 28% | 13% |
| Editing Equipment | 33% | 34% | 4% | 0% | 21% | 8% |
| Live Program over Cable System | 24% | 29% | 7% | 1% | 29% | 10% |
| Recorded Program Playback over Cable System | 25% | 24% | 8% | 2% | 27% | 13% |

For any of the facilities or equipment listed above that you gave a Fair or Poor rating, please explain why. (N=22)

1. I would note that I watched Philly CAM on Channel 66 and the audio playback on several shows were extremely low. The volume on the audio needs to be balanced to effectively present a program on TV.
2. I have been in the large TV studio and express studio but not as a producer of content.
3. It would be nice to have better camera for the Basic Field Prod class
4. My only complaint about PhillyCAM's equipment has been that there was nowhere to grow as far as video recording equipment if you wanted a better quality image than the introductory vixia handheld camcorders. They recently began offering training on their larger cameras for use, which I believe is a welcome addition. There may be other opportunities for equipment to learn on in terms of what kind of video camera equipment to secure, such as DSLR cameras, or different types of camcorders that are not as bulky as their mid-range camera equipment but still give a high quality image....
5. Limited capabilities in Express Studio. The broadcasts are SD and of rather poor quality.
6. I have had several problems with TelePrompTer camera lighting and the kipro recorder
7. Everything is good. However it would be very helpful if programs like Adobe CS6 was available to members.
8. I have no complaints about the condition or quality of their equipment
9. It's fair. I would like to see and hear the productions better on the stations. But of

course that's up to the executive, producers and directors. But the better the signal and equipment that would be a big help.

10. Express studio -- we need more instruction on how to use what's there. What's there doesn't always work but this may be a technical support problem.

Field equipment is always changing so we are already out of date.... I'd like to see us have and be taught how to use camera stabilizers.

11. PhillyCAM is currently bursting at its seams. There are dozens of new constituents attending PhillyCAM's orientations which will lead to more membership and hands on use of equipment.
12. The fact that we record all of our programming in High Definition, but have to downgrade the quality to SD for playback on the channel is very disappointing.
13. Everything is good but could be better. The studio could be larger; our single field cameras could be updated.
14. Not only do we need the latest Final Cut Pro but we also need other editing software for non Mac users.
15. Large studio has multiple integration and system problems. Express studio not operational yet.
16. I would like the programming to be more timely.
17. Have not used them yet. but plan to in the future
18. The sound on the air is sometimes poor
19. Size and what's offered in it is limited
20. I'm not happy because the cameras in the express studio don't work. Also even though we are shooting in beautiful HD. Comcast has given PhillyCam SD channels. PhillyCam needs HD channels to upgrade its programming.
21. The playback system could be improved in terms of tech support from Cable Company - our signal quality is not equal to that of commercial stations.
22. I'm new to this, so I haven't used any of the equipment or facilities for my own program yet.

20. Do you use your own or someone else's equipment or facilities besides, or instead of, that from the PhillyCAM Public/Community Access facility, to produce your programs?

YES 52% NO 48%

If YES, whose equipment or facilities do you use, and why? (N=48)

1. I use my own equipment for videotaping concerts and events on a tablet!
2. Sometimes I may need more lighting equipment than is available.
3. For some of the profiles the filmmakers used their own equipment.
4. Scribe because it's so difficult to get the Philly camn Cameras
5. I post ads for crew online and ask them to bring their own equipment.
6. Edit room
7. Facility where I am working as a work study student.
8. DSLR Canon 7D. Adobe Premiere and After Effects. Self built home computer workstation.

9. I own my own cameras and I have access to my own editing facilities.
10. I own a DSLR, wireless lav, and a prosumer camcorder. I wanted the flexibility to produce videos for commercial purposes. I still plan on producing content for PhillyCam when applicable.
11. We mainly produce content for print and web based media. We use our own equipment for that. We would like to do more video and will definitely be working with PhillyCAM resources as we explore that medium.
12. My home
13. we present almost 100 programs of poetry and history each year at many venues some of which are recorded by others - should PhillyCAM be interested and able to be the primary production facility with the ability for off-site work - we would be overjoyed
14. My own, a friends just because portability and not concerns about returns. However for big projects PhillyCam equipment is needed.
15. I use my own equipment and facility, the frequency of using the equipment depends on the amount of classes a person takes in which I haven't taken the Final Cut class because I currently edit on Final Cut (waste of time for me) so I'm not eligible to use the equipment as of this time
16. My own. For convenience
17. Own
18. Franchise Live private studio
19. we use indie camera people at various locations, but use PhillyCAM studios whenever possible
20. I have friends that have equipment.
21. Cameras from a volunteer and lighting equipment from a Temple intern. Staging in a house.
22. My own
23. My personal equipment. Ease of access. Personal familiarity with the equipment
24. I have my own camera and editing software that I acquired before I joined PhillyCAM.
25. I use my own camera for field production
26. I have my own and I use a Mobile Production Company for my COOKING AT HOME Series
27. If I am producing content for festivals or broadcast I contract freelancers who have their own equipment.
28. I had equipment already.... camera's
29. I have some equipment as well.
30. Some that I own
31. I use a combination of my own equipment and PhillyCAM's. I currently use a PC based software for some editing and MAC based for others.
32. I have my own production equipment which I use to produce programming.
33. I have my own consumer camera, digital recorder, and microphone. All of which are less refined than the stations commercial equipment.
34. We just joined PhillyCam as a non-profit. We will determine if we will use PhillyCAM's equipment on an as needed basis.
35. I have my own production team outside of PhillyCam and my own videographer. We shoot at various locations because Philly cam has limited hrs and I work 9-5 which limits my ability to use their equipment and space.

36. My own equipment. More convenient
37. I use my own camera and production equipment.
38. Since I don't have the producers certifications yet; I use a friend's site to begin producing shows I would like to appear on PCAM.
39. My camera person has own camera. I have also used the studio and am planning to air more segments from the studio.
40. Premium Studios and the Art institute's studio..... our associate producer has access to them as he is a teacher there
41. I use my associate producer's equipment that I borrow in Mt. Airy and that of my friends because I have not yet been able to afford the fees to take one of PhillyCAM's production classes to become a certified producer. Only certified producers are allowed to checkout equipment such as cameras and audio recording devices, which is a policy that I understand has to be in place for safety and liability reasons.
42. My editing
43. My own equipment, because it's more convenient
44. My own. Too much politics with PhillyCam
45. I have my own.
46. I use a mixture of both. The last production I was the only person authorized to use PhillyCAM's gear.
47. I collaborate with others and am always trying new things
48. I will use the PhillyCAM equipment once I'm ready to produce my program.

FACILITY SERVICES/CHARACTERISTICS:

Please rate the following:

21. PhillyCAM (please click one rating circle for each item):

| Answer Options | Excellent | Good | Fair | Poor | No Opinion/Don't Know/Don't Use |
|---|------------------|-------------|-------------|-------------|--|
| Training | 49% | 27% | 1% | 0% | 22% |
| Assistance During Actual Production | 42% | 31% | 2% | 0% | 25% |
| Editing Equipment Availability | 36% | 26% | 2% | 0% | 36% |
| Editing Assistance | 30% | 24% | 3% | 1% | 42% |
| Playback/Scheduling | 32% | 19% | 5% | 0% | 45% |
| PhillyCAM Facilities Staff | 73% | 19% | 1% | 1% | 7% |
| Overall PhillyCAM Facilities | 60% | 35% | 0% | 0% | 5% |
| Hours of Operation | 37% | 40% | 11% | 3% | 9% |
| Portable Single Camera Field Equipment Availability | 30% | 30% | 0% | 1% | 39% |
| Multi-camera Production Unit Availability | 22% | 22% | 1% | 4% | 49% |
| Studio Availability | 23% | 35% | 9% | 5% | 28% |
| Studio Location | 59% | 28% | 2% | 0% | 11% |
| PhillyCAM Office Location | 63% | 26% | 2% | 2% | 7% |
| PhillyCAM Programs/Facilities Promotion | 39% | 35% | 9% | 0% | 17% |

22. For any of the PhillyCAM Public/Community Access services or characteristics listed above that you gave a Fair or Poor rating, please explain why. (N=30)

1. We would like to get more TV production crews to help facilitate my Divine Diva TV Talkshow!
2. Need to accommodate more different schedules and make full use of facilities throughout the day to serve a greater volume of people.
3. My studio location rating is based on the express studio. The location is neat when you want to shoot out of the window. However, when you don't want to use the windows, it's somewhat annoying to shoot in the room when loud trucks, busses, and sometimes cars drive pass. Also, in spite of the door being closed, when guests are talking in the commons it affects the audio of what's being recorded in the express studio.
4. Hours are limited. I have to take off work to get there. Evening classes work well, but weekend hours would be great.
5. More small studio rooms would be helpful. I have the opinion that DSLR accessories and a few DSLR camera's in the \$500 range and at least two premium DSLR's like the

- Canon 7D, along with a few prime lenses, shoulder stabilizers, a GOPRO Cam for action shots, etc. I'd like to write a proposal for funding in that area.
6. It's not really clear why or how certain time slots are awarded, be nice if there was a mix of time slots instead of running at the same time/day on a series of weeks...
 7. Parking
 8. Because I am a community media producer, I was already well aware of PhillyCAM, its existence and capabilities. But when I talk with friends and relatives who operate outside of existing community media circles, I've noticed there is not a high level of awareness or understanding of what it can do.
 9. Hours should be extended into the later evening to accommodate those who have daytime work schedules and cannot get to the facility early in the day. The studio should be open long hours on Saturday, and, perhaps, for some duration on Sunday. I realize this shortcoming might be a budgetary issue.
 10. The limited pickup/dropoff hours can be difficult to work with...but also I understand the limitations on PhillyCAM's side.
 11. Most producers at PhillyCam are developing and are at early stages of development and at this point the overall production value of the various programs needs improvement.
 12. More space more options for members to reserve or have a mobile unit for outside production
 13. PhillyCAM's location, hours, training, and availability of staff help and support in my book is #1
 14. sometimes due to artist availability later evening hours are needed
 15. Our organization would like to use all of this equipment in the future when we have the resources. We have excellent content that cry out for coverage and we know this s the best way to educate the community. Currently, we just do not have the resources.
 16. We need help desk. Possibly two -- one for editing and one for studio and field production.
 17. I would like see a promo all over city
- via all kinds of media, maybe do barter deal with other organization, like art groups, museum
18. sound acoustics in main studio is poor
 19. Playback/Scheduling - There seems to be a lack of time for scheduling. Original programming should have better rotation.

Studio Availability - As more graduates begin producing programming it is difficult to have access to the studio and ancillary space needs.

PhillyCam Facilities - Because space is so limited it is necessary for the Community Room to double as a classroom.

TV producers necessarily need on site storage space. I spend an excessive amount of time downloading and reloading items for my set. In that we use the green room facility also for makeup and wardrobe the space is small and cramped. There is no "loading dock" area.

20. Studio availability is a concern as there are more and more multiple, concurrent requests for studio time.
 21. I think we could do more and better overall promotion of our services and facilities.
 22. Although the staff is knowledgeable about editing there isn't anyone that's solely an editor that is on staff. There is normally help available but only to a certain degree and at certain times when the staff isn't busy with productions or other tasks. As far as Multi-camera production unit availability there are no classes available to train members on the tricastor nor are there any rules, qualifications, or processes to establish a "multi camera team" which is certified on the equipment to work together. This is something that we could use to improve production value.
 23. The studio has been booked more with incoming members. If we could have extended evening hrs to film (maybe a separate night crew) it would help a lot. We also need a crew connection to help people who haven't taken the production class but are members and still need to use the studio. There's only one lab and it has all MACS
 24. Hours of operation and operations in studio needs improvement.
 25. Because when we needed it no one ever calls us back to let us know if it was available on the day we wanted to use the equipment and studio.
 26. I don't use the facilities
 27. Location location location
 28. I don't see PhillyCam openly promoted anywhere.
 29. We continue to build out our systems and are a small staff due to budget. We strive to continue to serve the needs of the public within our means
 30. It seems that some of the equipment needs to be upgraded.
23. Have you encountered any problems in scheduling necessary facilities and equipment for your production?

YES 14% NO 86%

If YES, please describe the problems. (N=12)

1. The Community Room is often booked when I need it - and there's currently no equivalent meeting/rehearsal space available.
2. Sometimes you have to wait for things to become available
3. Mixed up dates because of old scheduling program
4. The computer system is clunky and not intuitive to follow sometimes....Stuff isn't necessarily ready to go though you have reserved it. You have to wait for them to get it together. What was the point of reserving it then?
5. The recorder didn't work one time and gave corrupted files.
6. I believe my answer to the previous item (20) reflects my answer to this item.
7. Sometimes there are too many concurrent events at PhillyCAM and members are turned away (EX: use of Community Room).
8. Sometimes equipment or space is scarce or unavailable because it is being used to teach a class or do a demonstration rather than being used for production.
9. If you aren't a certified "producer" in order to book the main studio you need someone on your crew who had taken the course and gotten certified. Sometimes that's hard. I

have a show going into its 3rd season that I created but I can't use the main studio bc of a technicality. I also haven't been able to take the course bc of work conflict but I know the majority of the info

10. Just schedule problems. Large studio was reserved then giving away to someone else.
11. I did in the beginning of this survey. As I said no one ever ever told us if we had the studio for the day we put in for it. When we call to check after we filled out the forms if everything was a go, they said they would check then we call back leave messages and never get called back.
12. It is always a challenge to coordinate a multitude of schedules and I think we do well - that said., problems can arise with conflicting needs. We usually work them out amenably.

24. What additional capabilities or services need to be provided at the PhillyCAM facility (Please note especially any recent and emerging technologies such as an HDTV channel, interactive television, cable-based on-demand video, IPTV, etc. that you believe would be useful)? (N=53)

1. I would like to have a phone to call in during the Divine Diva Talk Show and people can air their concerns on Facebook and Tweet right away on the show!
2. we should have HDTV channel,
3. The original plan for the facility was to include an auditorium civic space that groups could book for events that could also be televised. The city desperately needs such a space as most venues are costly and hard to book. It would also serve well for PhillyCAM's own membership events.
4. HDTV channel and cable-based on-demand
5. I'm not sure of the name of the system, but it is basically a way for multiple people to respond to a series of questions using individual, handheld response pads. This would be ideal for a studio audience that is responding to questions in a poll format.
6. Webisodes, how to.
7. Not sure at this time.
8. Nothing I can think of off hand
9. Over the air antenna is a must!
10. HDTV channel without a doubt, as I think the quality of the video broadcast is very poor. Otherwise as stated before I think more variety in the field-based video recording equipment would be helpful. I think the Vixia cameras are good to start off with, but anybody who is seriously interested in developing in this area will outgrow the image quality of those cameras very quickly. I think offering training on the mid-range (Panasonic??/Sony??) cameras for field work was a step in the right direction, but I think at this point technology has improved that there are better options available that should be explored, such as offering access to DSLR cameras, or some of the prosumer camcorders that are out there (such as the Canon Vixia HF G30).
11. everything that can be secured would add to the overall experience and production
12. Interactive television would be great to interact with social media.
13. More On Demand content, iTV, live streaming content
14. HDTV channel, interactive television, cable-based on-demand video

15. They can up grade the station provide more than on main studio ect
16. More chrome key technologies for action filled projects. Robotic technology. Interactive TV.
17. None.
18. All of the above would of course be helpful.
19. Definitely more studio lights and maybe some rolldown backgrounds...And maybe a better control room Hardrive...
20. HDTV is defiantly needed. That's all I can think of rite now
21. The equipment that is provide at PhillyCam is very helpful and professional. As the time change new equipment is always welcome to keep up with time.
22. Philly Cam should be shown also in the Delaware county
23. I would like Comcast to promote their access channel on may net works. Give people the option to watch by telling them. Allow a random production up date on shows. Not just on the scroll. Update random show. Show clips and tell TV audience to watch.
24. I would recommend a shorter gap between the mandatory introduction session and the classes, particularly in the summer when we often have interns who would benefit from this work. Having to wait for two months to sign up for a class has not been helpful.
25. An HD TV channel would help present my work more effectively.
<https://www.youtube.com/watch?v=LG9NtjAFb3s>

An easier way of viewing content on the web is needed.

26. HDTV, on demand.

We also need classes/workshops to be a little lower in price. \$75 is reasonable but most of us are low income and becoming media literate requires a lot of workshops, not just one. It adds up! I think we lose a lot of people because of the cumulative cost.

27. An HDTV channel would be useful, because most people shoot in 16:9.
28. Adobe Creative Suite, an HDTV channel
29. An additional studio would be helpful
30. Lighting class
31. HDTV Channel
32. HD CHANNEL!!!!
33. HD
34. streaming online and mobile app
35. HDTV channel, cable based on-demand
36. HDTV channel, and a RedOne camera, Mobil truck unit
37. Throughout the survey I have articulated answers to the above with the exception of HDTV which of course is a necessary component for quality programming.
38. Any cutting edge technology that keeps PhillyCAM Studios "State-of-The-Art" is important.
39. HD channel, more on-demand, mobile livestream recording capability.
40. The most important need we all have as producers is technologies with viewing demographics. We have no clue if people are watching and if we had access to these numbers it would help us improve our productions. New editing software like adobe's premiere and after effects products can dramatically improve production capacity as well. Live TV streams are needed to allow for more coverage of live city events.

41. more computers for editing
42. HDTV programming would definitely be useful. Live programming to be streamed as well to make the viewers more interactive.
43. On demand, streaming, HD...These should be easy and standard. Also audience/viewer info from cable service should be available.
44. n/a
45. Yes...PhillyCam needs updates in HDTV, newer technologies etc....It is all useful....As well as updates in the Main Studio room and Express studio....Different programs have different needs and looks....It would be also great to have audio production..... PhillyCam should go solar.....It would save lots of money.....
46. cable-based on-demand video
47. I believe there should be more channels for Everyone to be able to view the programs!!!
48. no
49. Maybe closed captioning would be useful for the hearing impaired. I believe that having a dedicated broadcast channel would be useful.
50. Web based and mobile app training
51. Definitely HGTV and the ability for day off programming.
52. HDTV
53. HDtv channel as we are producing in HD. Cable based on demand video should be a better process.

25. Have you encountered any problems in getting your program aired on the PhillyCAM Public/Community Access Channel 66 (i.e., playback scheduling, acceptable time slots, etc.)?

YES 5% NO 95%

If YES, please describe the problems: (N=5)

1. I have made my complaints known to staff and have responded within this survey. My main concerns have to do with rotation, the channel airs programming having nothing to do with Philadelphia. Why are PhillyCam producers competing with programming from other countries? I certainly could understand other public access TV programming, but some of the programs being aired leave me wondering WHY? It is difficult to drive viewers to the channel if they tune in on an off occasions and see such programming. You are judged by the company you keep.
2. yes, thru bad editing by a Philly Cam camera guy, He left commercials in our show, we did not know this, and Philly Cam shut us down for 3 months. Camera/ editing guy was not reprimanded
3. nope great ppl at Philly Cam
4. Being as though my information is "now" info when it gets played the now is then.
5. Programs with commercial content are not allowed on the station. PhillyCam is based in Freedom of Speech and timeslots are coordinated with individual producers depending on who is the audience and what is available at the time. Timeslots are reviewed on a seasonal basis if the allotted time is not satisfactory to the producer. Primetime is not always the best time for everyone!

IMPORTANT OF PUBLIC ACCESS

26. Do you believe that current awareness/promotion of local Public/Community Access programming is adequate?

YES 49% NO 51%

If NO, please describe additional promotional methods and activities: (N=38)

1. Promotion at events in some of the remote or under-represented neighborhoods in the city might be beneficial. There are a number of community centers which service both adults and children which may be great sites for promotion of both the channel and the services/courses which the organization offers.
2. The 66/966 and the 29/30 info should be in most of the literature and the windows that face 7th street.
3. Outreach to new groups, advertising and branding to make PhillyCAM a known entity along the lines of WHYY.
4. I think PhillyCAM works hard at creating awareness about the station, through public programs and partnerships.
5. this is a challenge. Marketing this opportunity to the constituencies that could/should take advantage of access is difficult
6. I'm not fully aware of everything PhillyCAM is doing to raise awareness, so if they don't already have flyers at local high school, middle schools, and colleges I think they should look into doing that.
7. PhillyCAM needs the resources to launch a coordinated, professional communications campaign to increase visibility and membership. Although many people know about PhillyCAM, most of it is through word of mouth and one-on-one outreach of the staff and board. They have done a great job, but it is not sufficient particularly to reach into key neighborhoods and constituencies.
8. I heard about PhillyCam through word of mouth but I will be having events not only to promote my show but the actual channel. More social events in the community would be nice to attend and to hear about in the area.
9. There should be more done within the local media to promote Public access television
10. Could increase visibility & awareness
11. Comcast should be required to list specific PhillyCAM programming in the cable guide it produces for subscribers. this is step one.
12. Advertising
13. I found out about philly cam from a friend who is part of it...needs to be neighborhood canvassing to get the word out along with more advertisement about it
14. Stronger internet presence. Traditional advertising initiatives (newspaper ads, public postings, hand out of hand bills, etc.), more public events at the studio, more partnering with cultural and community organizations.
15. There could be a more collaborative, cross-community engagement work done to expand audiences of different programs across PhillyCAM viewership. I would like to see more outreach and increased awareness of PhillyCAM programming.
16. Funding for signage and billboards would be helpful.
17. promotion is an endless process and without massive amounts of money you just

- cannot reach the general population
18. Promotion on other channels about the hot shows on our station
 19. I'm unsure, but I would think that whomever is the parent company, (I believe Comcast) may want to provide information via its own airwaves?
 20. Promoting PhillyCAM at or during public events such as July 4th celebration and the Thanksgiving Parade may be helpful to increase awareness to the community that there is assistance, equipment, and a facility for any one interested in filming, producing, and watching public community programs.
 21. I have talked to many people and they have no idea that PhillyCam exists
 22. Public Service Announcements should be made on commercial channels promoting the unique work that PhillyCam programs provide when similar programs are not available on commercial channels.
 23. The regular cable channels should have advertisements for PhillyCAM.
 24. When I applied as an intern here I had never heard of PhillyCAM until I researched and looked into it. I don't live in Philadelphia I only go to school here so I didn't even know that we had a public access station.

I wish more people knew about it.

25. Need to service a bigger area, such as the Tri-State area
26. More people need to know about what this place is and why it is important.
27. We always use more promotion
28. I cannot answer that because the programming is so content scattered.
29. Advertising on SEPTA shelters, front door signage and 7th Street awareness would be a good start.
30. Improved outdoor/sidewalk signage. Maybe offsite orientation/info sessions. Encouraging members to become official ambassadors of PhillyCAM and help promote to their communities.
31. More promotion is always helpful for any non-profit organization to reach the community it serves.
32. Better job at using available means.
33. It has the potential to be a great studio, but people have not heard of it. More promotion needs to be done. The shows on air needs much more promotion.
34. I believe Bill Boards, magazines, radio....should be promoting more awareness!
35. Additional promotion on local radio stations and television stations at University campuses would be beneficial as well as in regular, mainstream media, such as announcements about new programs on the local news broadcasts (KYW-3, etc.)
36. It's like a hidden secret.
37. Word of Mouth has been amazing - social media is being used more and more. An outreach campaign is growing as PhillyCam grows. Not everyone knows what public is and the value of it. It need not be compared to commercial TV.
38. More promotion by the city.

27. How important is PhillyCAM to the fulfillment of your individual/organization's Mission or Goals?

| Answer Options | Response Percent |
|----------------------|------------------|
| Very Important | 62% |
| Important | 18% |
| Somewhat Important | 11% |
| Not at all Important | 3% |
| Don't Know | 5% |

If you indicated “Very Important,” “Important” or “Somewhat Important”: (N=65)

1. PhillyNOW has historically produced content for PhillyCAM which addresses women's issues.
2. It provides a way to get your message out. Without Philly Cam that would not be possible.
3. ultimately PhillyCAM can get film on the air about Philaposh,,Workers Memorial Day,Labor day, may Day, Local strikes, picket lines, Demonstrations, etc. We haven't scratched the surface yet of Labor History and other issues that PhillyCAM can play a vital role in educating the public about.
4. Media access and diversity is critical for social justice movements
5. they help us with visibility, e.g. airing profiles of our constituents.
6. I work at a Community College which shares many of the same goals around public education and access
7. Working on projects at PhillyCAM helps me keep up and enhance skills I would otherwise not have the resources to nurture.
8. It Is" Very Important" that our Program Mission comes to fruition. We have been planning and developing our program mission to Inform, Educate and involve the Public about our Dance for Fitness and Health information /Fun Program for all Ages! Entrepreneur opportunities are possible in this field.
9. Although my organization has not yet used PhillyCAM, I very much want it to. We have zero skill, ability or capacity to produce media content and I think that makes our advocacy and organizational development lacking.
10. The resources here help me actualize me dreams and get the appropriate training that makes them viable. I am immensely grateful for PhillyCam.
11. Bridge digital access divides.
12. gives the programs I do, and want to do so much more of a polished look
13. It is an access to audience, irreplaceable!
14. As a "creative", it is important to have a community like PhillyCAM available for film makers, TV producers, and media personalities to create and produce programming that matters and allows people to share their vision with the world.
15. It's not just for entertainment purposes. It's also educational. Public access offers an alternative to the regular type of programming where certain issues and/or entertainment would not have an outlet.
16. Exposure

17. From my perspective as a content producer, it is crucial to have a community controlled television outlet in the city since commercial outlets do not cover issues of community importance very well, if at all.
18. Getting our show to the TV viewer.
19. They are very helpful in spreading the word about the Museum and upcoming exhibitions and providing help with video content for exhibitions.
20. I can see something new for my ideas to be conveyed
21. Providing me with technical training and equipment, advisement and a pool of talent to use in productions. It is my hope to produce my first mini-documentary in mid-2014.
22. Our irreverent content uses humor to provoke our audience and encourage civic engagement - PhillyCAM is our way of reaching audience members that are unable to attend live shows.
23. Outreach and creation of new, more engaging materials.
24. It is a strong medium to share content.
25. we are an art/educational organization and having phillycam broadcast some of our programming helps our mission of education
26. helps us involve wider community in Disability Pride
27. We wouldn't be able to broadcast our material without PhillyCAM.
28. It helps me brush up on skills and have access to the equipment and community.
29. Currently have some good programs completed
30. PhillyCam is VERY important in helping me meet my missions and goals because it not only offers the education at an amazing cost, it also provides the equipment and facilities for free in which to bring forth any creation I may choose to do.
31. They provide the opportunity to enter the world of television.
32. It provides away to share and propagate our message to the community.
33. PhillyCAM is a like a powerhouse for community members like myself who did not have access to the training and expert advice and assistance from media professionals.
34. provides a outlet to the Phila viewers we are trying to reach
35. I have no other out let to have my program aired as quily as Philly Cam. I love it. it's the best way to get your production aired.
36. With the ever tightening budget of the school district there are no funds available to provide students with these resources.
37. Our core mission is to educate and advocate. PhillyCAM provides an opportunity to do this.
38. The goal of my work is to create improved public awareness of schools and related instruction that is available, especially for the poor. PhillyCAM exposes my work to a broad audience.
39. I'm a film student. The main part of getting a job is getting yourself out there and what better way to do so then put your work on television?
40. It allows aspiring producer and directors an opportunity to showcase their ideas
41. As a 39 year old woman who is not currently enrolled in a college program, the classes and producing opportunities that are available to me here are unlike anything else out there (other than Scribe.) PhillyCAM provides me an opportunity to improve my skills so I can get work, share my unique voice and create jobs for others.
42. Every person has goals and phillycam provides a service and need for public empowerment

43. I'm all about community and getting people together.
44. provides resources that enhance the literacy and learning goals of the library
45. I think Public Access TV is the best thing a community can have
46. I received a master in television programming and need this experience to build my career and network
47. Without PhillyCam I don't think that I would have the opportunity to pursue my goals because I don't have the resources to make the shows that I want to make or the resources to pay for an education at college. Also PhillyCam is like a family of people who want to make television media content and I have done a lot of networking because of my involvement with PhillyCam.
48. I am working hard to produce programming that I believe in, without PhillyCam I may not have been able to fulfill my dream of producing my show. Could PhillyCam be more supportive? An answer would depend on what the aim/goal of the station is. If the idea is to occupy a band with random programming produced by Philadelphia residents, trained at PhillyCam, then PhillyCam fulfills its function.
49. DP Arts Consortium, Inc. considers PhillyCAM a "big sister" on which we piggyback many of our art/education activities.
50. I would not be able to afford the studio and cameras that are available
51. Distributing needed information
52. It is more than very important it is absolutely essential for so many people. Without PhillyCAM, I could not help people of Philadelphia to see so much more of their city than they could by any other means. My show and more importantly skill set only exist as a result of PhillyCAM's existence
53. PhillyCAM provides training, equipment, facilities and access to cable channels for all Philadelphians.
54. Helps focus mission and energy for orgs.
55. The opportunity is tremendous.
56. PhillyCam allows the public access to equipment as well as an outlet it would not otherwise....
57. it allows us to fine tune our show to make a quality show for all to see.
58. I believe there is a wealth of untapped information about Philadelphia and its people yet to be told.
59. we love that Philly Cam is broadcasting our show to the Philadelphia region
60. Without PhillyCAM, I would not be able to see my goals come to fruition in the sense that my screenplays would not be produced and put in front of an audience. PhillyCAM makes it possible for me to show my work to residents as well as potential employers, which helps in building and reaching my career goals.
61. Access to facilities made it possible to produce my show
62. Access to training you would otherwise not have access or be able to afford.
63. My organization is a media and storytelling based organization. PhillyCAM and its accessibility has expanded our reach and our programming plans.
64. Yes, the 3RD USCT teaches about blacks and the Civil War. We need PhillyCam to get that message out.
65. I see daily the impact that freedom of expression, community connection & civic engagement has on the well-being of our City's citizens

28. If you believe that your use of PhillyCAM facilities, services and channels has significantly contributed to your life or that of your community, please describe how. (N=56)

1. We created a show on Voter ID with [REDACTED] NAACP, and Philadelphia Unemployment Project!
2. It has given me the tools to get video media out over multiple social media avenues.
3. I believe it has had a good start but needs to expand its reach to serve and reflect more of the community.
4. Yes, we are able to enhance the lives of the people we serve and we are also benefiting by creating programs the good of the Mind Body and Spirit! interaction and exchanging ideas and on a community level is a sorely need form of Communications...In this world of Technology ...Self gratification and individualized selfish forms of communication experienced from Commercial -TV may contribute to many different types of Stresses ,Physical illnesses, loneliness and or a feeling of being disconnected.... to issues and environments that direct impact ones life. via.. text ,email computers, and commercial
5. As a board member, being involved in PhillyCAM has allowed me to make connections and form relationships with other board members who are important community leaders. It has also allowed me to learn more about constituencies that are outside my normal work, broadening my understanding of Philadelphia, its problems, its opportunities and the richness of its culture.

I very much enjoy watching the channel as well, and get more exposure to diverse groups, perspectives and artistic content that I both enjoy and learn from.

6. I have a had the dream to make my own show for many years now and it is actually happening. It's like the Law of Attraction really worked!! I said it daily that I would have my own show and not it has happened. I am beyond excited to see where I will be in the future with the upcoming episodes and all the collaborations I can make at PhillyCam.
7. That's a leading question, particularly for a survey, but yes it's a great community center that I benefit from every time I go there.
8. Awareness about how could achieve my creative goals.
9. Provides another stage for my market to see my work.
10. Great community, support, service!
11. I feel like a whole human being, with dignity, having access to such an important organization that does not discriminate in any manner whatsoever.
12. PhillyCAMs services and training will allow me to build my skills to become proficient in production.
13. Plain and simple - people have been enlightened by it. I've also given a LOT of satisfaction to independent film and video producers!
14. yes, gave me the introductory, knowledge, skills, contacts and equipment to provide an early platform for my growth as a producer of video shorts, and to be able to have the experience to confidently apply for freelance work in editing and shooting video. just as an example, I would never have understood how important good quality sound is to the production of videos had I not been able to use PhillyCAM's sennheiser wireless lavalieres in my earliest productions, and hear the difference for myself. Being able to

- access that equipment in the early stages of development, and figure out what worked best as far as the quality of what I was looking for, was critical to my growth..
15. Allowed me to produce quality shows
 16. Yes, wouldn't be active without PhillyCAM's help.
 17. yes. I look forward to the airing of my first show and the impact it will make to the public that views it
 18. Philly CAM and the people involved has encouraged my oldest daughter to attend college in the arts.
 19. It allows our team to bring experiences, art, music, education, information, various forms of entertainment and inspiration into the homes of the community.
 20. there is nowhere else where you can see/learn of the many community efforts to change, educate and entertain -- from the community to the community - it is very significant
 21. Philly cam have voices to people who would not have them if not for them
 22. It has allowed me to meet some brilliant acquaintances and learn more about production.
 23. PhillyCam allows small independent producers the ability to become competent in the field as well as competitive and knowledful
 24. I believe the use of PhillyCAM had the potential to significantly contribute to all our lives. I can't quite answer this fully, because I've only learned of its existence in the last 8 months.
 25. Yes I do, Being an creative it provides a means of like minded talents to make positive contributions on many levels...
 26. By giving its members access and opportunity to make something of themselves and gives a unique experience.
 27. It allows us to share our message with community at-large.
 28. Philly inhance Philly
 29. I believe that PhillyCAM has provided me with the opportunity to explore my abilities to be creative, productive, and perhaps entertaining in field and studio productions.
 30. I can show the Philly audience what I'm thickening. If I'm able to provide a look into my brain to others it could change their mind on issues and art I deem important. Do to my programs being aired I'm now able to build new contacts with people who may have not been interested in my productions. .
 31. It has the potential to contribute more.
 32. I think that having a public access TV station is very important to the community.
 33. By improving life in our community, I benefit with great connection and awareness.
 34. yes. see previous comments.
 35. It allowed me to fulfill a dream of production
 36. I have made friends and production partners that I believe I will be with for life. I have already become a technician in many areas and I believe that if I were to look for work with my current resume that I would be able to find it.
 37. PhillyCAM not only made a believer out of me but my other friends feel they can prosper and contribute to their communities in a positive way.
 38. Yes - It gave me a voice and confidence that I can do something with little or nothing. I have many friends from there also.
 39. I gives the community a voice.

40. Philly cam helped me find a community where I was accepted for who I am in the field I want to work in. I found a new family in Philly cam and community
41. PhillyCam has gave my the tools that I need to pursue in my goals of working for television and film.
42. This is redundant.
43. PhillyCAM facilities have vastly improved my scope of capabilities both on an organizational and personal level.
44. It gives people a voice
45. It has given skills and training to many that will be life-long for careers or community empowerment.
46. There are so many people in this city that are talented and creative and amazing but they have no clue how to share their vision with others. I help them do that and in turn help the community become aware of their own people and arts and culture of the city.
47. giving everyone access to these skills, trainings and channels is a huge service.
48. It has changed my life and opened up a world of media that I didn't know anything about or how I could be involved. PhillyCAM makes you comfortable to go out there and try things out
49. Silly, leading question.
50. It has provided me with training and a springboard in my career.
51. PhillyCam is great for communities to have access to information and entertainment that is created within the community.
52. They have kept my dream alive. Also, they help to promote music/arts that otherwise would not be promoted because of funding options.
53. PhillyCam made it possible for me to have a place in Philadelphia! To have a voice !!
54. PhillyCAM provides a place where people can address and explore topics of interest that are not being given fair attention in the mainstream media. It also helps local residents of all ages learn how to use new technologies, in an ever changing landscape.
55. Same as above
56. empowerment, awareness, education, advocacy, skill building

29. Please provide any other comments or concerns regarding PhillyCAM : (N=35)

1. It is far too reliant on cable funding, more needs to be done to develop other streams of revenue.
2. I would encourage Comcast to allow the PhillyCAM broadcast to be accessible on internet and cable stations in the tri State AREA.
3. One of the reasons I have not taken advantage of the training at PhillyCAM (even though I need and want it) is I'm just too busy to sign up and get out of the office. I wonder, if staff resources were available, if PhillyCAM could go out to organizations and do mini-trainings in their offices on how to do very basic video production using equipment we already have on hand? For example, I have video footage of an event, and recorded interviews with interesting people on my smart phone, but I have no idea how to edit them together. If someone came out and taught me, that would be a service my organization would pay for.
4. Keep up the awesome work!
5. Very vital to me, my fellow members and our community.

6. The DSLR equipment availability...mainly accessories for serious documentary projects.
7. Philadelphia should NOT have had to wait 30 years to get public access!
8. it's time for the political leadership in the city to take responsibility for their role in the shameful years and years of delay in getting PhillyCAM on the air. they have an important role to play in these upcoming negotiations with Comcast and should be working very closely with the amazing organizers and producers at PhillyCAM to ensure the future growth of the station and ongoing service to the diversity of communities here in Philadelphia.
9. there needs to be a kitchen space for chefs to do first rate cooking productions out of... this could lead to employment and other business ventures
10. Let's expand.
11. Philly cam is a very good asset to the community
12. I love this place and I love the people in it. I've learned much and plan on learning more.
13. Give PhillyCAM what is needed to continue their growth.
14. Shown be shown all of Pa
15. Thank you so much to the staff and instructors like [REDACTED] [REDACTED] [REDACTED] and [REDACTED] for sharing their knowledge, expertise, and patience for new learners like myself.
16. Thankyou [REDACTED] and everyone that has supported our program for the past 3 yrs
17. I would like to see more transportation promotion, bills billboards promotion access channels
18. I especially like the support from the people at PhillyCam
19. see previous comments.
20. It is a great incubator for aspiring producer/directors
21. Philly cam needs be affiliated with more local and cable channels (i.e. Dish etc.)
22. I think the staff at PhillyCam is doing a outstanding job
23. I would like to see Philly cam to expand staff to further help expand the networks support for members
24. The staff here are great.
25. Why be satisfied with such "minimal" facilities and services.
26. In such a short time it is extraordinary how PhillyCAM has emerged as a significant media player in the City.
27. Thank you to PhillyCAM and the people that help us to be such a great community asset, including the surveyors!
28. better hours to take out and return equipment. They only offer day time hours and if you have a full time day job it is hard to get to the studio.
29. It's my home base, like a family
30. PhillyCam is a necessity in the community.
31. They are nice people that truly want to help others.
32. We need more channels and support; also ...we should be able to know how many viewers we have!
33. The staff at PhillyCAM works hard to provide a robust slate of services to its members and the community at large and I think it deserves all of the support that it can get.

34. Jobs. Where are the jobs for the qualified producers??
35. Maintain the funding. It's an excellent opportunity for the community to create its own stories.

30. In the last year, estimate how many hours per month on average you have been involved in the production or distribution of programming at PhillyCAM.

| Answer Options | Response Percent |
|------------------------------|------------------|
| 1 – 4 hours per month | 40% |
| 5 – 10 hours per month | 26% |
| 11 – 15 hours per month | 10% |
| 16 – 20 hours per month | 9% |
| More than 20 hours per month | 14% |

If you indicated "More than 20 hours", please specify below. (N=12)

1. field recording, events, planning, editing, encoding and delivery
2. I can only get equipment on the weekends so that's my busy time and it takes hours of recording. So between Friday's pick up and Monday's equipment drop off I do at least 25 to 30 hours of traveling shared with recording.
3. My final time sheet for my internship said I clocked around 185 and a half hours of working on productions
4. My work demands have increased, but otherwise I would have spent more time here.
5. 40
6. 80 hours a month
7. helping others make their shows and working on my own, and often I just hang around and ask questions about television production and the staff here always take the time out the help me.
8. I am producing a show. To do such requires a great deal of time.
9. I am working on a career change as a result of the bad economy. I've immersed myself in production at the station in order to earn a job in the industry.
10. we promote our show and your channel through social media, and one on one contact. as well as many hours filming editing etc
11. I haven't used it at all
12. Daily

31. How do you watch PhillyCAM? (Select all that apply)

| Answer Options | Response Percent |
|--|------------------|
| Cable TV Channel | 71% |
| Video on Demand on the Cable System | 24% |
| Internet TV player (ex: Roku) | 20% |
| PhillyCAM's website | 53% |
| Other (please specify) | 6% |
| <ul style="list-style-type: none"> • Vimeo • CHEFTREK.NET • I do not have cable TV, so I travel to a friend or family member's house to watch PhillyCAM • Don't watch it, most of the shows do not interest me • in-person gatherings | |

INTERNET ACCESS

32. What type of internet access do you have at home?

| Answer Options | Response Percent |
|-------------------------------------|------------------|
| Cable | 62% |
| DSL | 20% |
| Cellular (3G, 4G) Wireless | 9% |
| Do not have internet access at home | 3% |
| Don't Know | 2% |
| Other high-speed | 4% |

If Other (please specify): (N=4)

1. and cell 3G
2. FIOS
3. Cell phone
4. FIOS

33. If you don't use the internet at home, why not? (Select all that apply)

| Answer Options | Response Percent |
|----------------|------------------|
| No computer | 30% |
| No Access | 20% |
| Too expensive | 20% |
| Not relevant | 40% |
| Other | 10% |

If Other (please specify) (N=3)

1. Divine Diva owns the Universe and the entire Samsung Galaxy!
2. Only enet on my phone.
3. N/A

34. Have you used the PhillyCAM facility for internet access?

YES 42% NO 49% N/A 9%

If Yes, How (please specify): (N=27)

1. I have a Samsung Galaxy! I own the entire Galaxy and the Universe!
2. in the lab
3. Wifi on laptop or phone
4. what IS THE ACCESS ADDRESS?
5. WiFi for my laptop while editing
6. Lobby
7. I've used the WiFi service
8. briefly researched information for one of the other shows that I appeared on.
9. no internet at home
10. For learning Final Cut Pro me other relevant issues needed for production and setting up what it takes to prepare for
11. Laptop
12. Reserve space and equipment for practice as a student and to register for workshops.
13. It was in regards to a project I was working on on the station.
14. To check email while here, to upload photos, etc.
15. Film called Oops!
16. Checking email, browsing, making reservations.
17. wireless via laptop and smartphone
18. To book the studio.
19. Guest services in Community Room and Commons.
20. Computer
21. When I work on editing at the facility I use online for necessary tasks.
22. To check emails and post videos to my Youtube channel

23. Research
24. For access of information
25. I needed to use the internet at PhillyCAM to organize and contact the actors and crew members for a production that I aired on the channel.
26. WiFi
27. It is the only way I can effectively upload programs. The connection at home is too expensive

DEMOGRAPHIC QUESTIONS

The following questions will help us reflect the diversity of the PhillyCAM community. Please indicate the following:

35. What is your home zip code? (N=83)

36. Are you (N=92)

MALE - 56% FEMALE - 42% Transgender - 1% Omitted - 1%

37. What is your work status? (N=92)

| | |
|-------------------------------------|-----|
| Employed | 57% |
| Not employed | 3% |
| Not employed but seeking employment | 11% |
| Student | 4% |
| Retired | 10% |
| Omitted | 15% |

Other (please specify) (N=11)

1. self employed
2. Under-employed
3. disabled
4. Freelance
5. part-time employed
6. not employed but seeking employment
7. SAG/AFTEA actor. I work when I choose.
8. freelancer
9. disabled
10. Self Employed
11. I own a sign company Martino Signs Inc

38. Highest grade completed (N=92)

| | |
|-----------------------------|-----|
| Some high school or less | 1% |
| High school graduate | 4% |
| Some college / Trade school | 25% |
| College / 4-year degree | 33% |
| Postgraduate | 37% |
| Prefer not to answer | 0% |

39. Estimated Annual Household Income (N=92)

| | |
|------------------------------|-----|
| \$0 - \$25,000 | 9% |
| \$25,001 - \$50,000 | 20% |
| \$50,001 - \$75,000 | 9% |
| \$75,001 - \$100,000 | 8% |
| \$100,001 - \$125,000 | 7% |
| Omitted/Prefer not to answer | 49% |

40. Ethnicity (N=92)

| | |
|-------------------------|-----|
| Caucasian | 29% |
| Latino/Hispanic | 1% |
| American Indian | 0% |
| Asian | 2% |
| African American | 33% |
| More than one ethnicity | 9% |
| Prefer not to answer | 26% |

Other (N=8)

1. Black
2. Moor
3. African American
4. Offensive question
5. Filipino
6. Italian
7. African-American/Native American
8. Jewish

41. What age group are you in: (N=92)

| | |
|-----------|-----|
| Age 14-17 | 0% |
| Age 18-25 | 3% |
| Age 26-35 | 17% |
| Age 36-45 | 22% |
| Age 46-55 | 22% |
| Age 56-65 | 24% |
| Age 66+ | 5% |
| Omitted | 7% |

The City of Philadelphia greatly appreciates your cooperation in completing this survey!
THANK YOU!

EXHIBIT B-4

PhillyCAM Fiscal Year 2014
Annual Report, dated
November 10, 2014



EXHIBIT B.4

**PHILLYCAM FISCAL YEAR 2014 ANNUAL
REPORT DATED NOVEMBER 10, 2014**



Fiscal Year 2014 Annual Report

Prepared for: City of Philadelphia, Office of Innovation & Technology

November 10, 2014

Executive Summary

As per the Philadelphia Public Access Corporation's operating agreement with the City of Philadelphia we are to present a report for FY 2014 covering our activities from July 1, 2013 – June, 2014.

This report will show that PhillyCAM's organizational growth during FY 2014 has kept pace with prior years. We experienced significant increases in the hours of new, locally produced content submitted to the channel, a growing presence and organizational recognition at public events in the community and more educational opportunities for members. This success is evidence of what many have recognized for a very long time – the area's demand for a community media center is strong and growing. Philadelphians are hungry for communication vehicles enable them to share their voices. They are eager to be part of a value-based and member-driven organization whose mission and actions are aligned with the needs and interests of the neighborhoods and communities that fuel the vitality and unique richness of life in Philadelphia.

PhillyCAM's services support the creation and distribution of locally produced media that reflects the diverse social, political, ethnic, and artistic communities that can be found in Philadelphia. We offer video production training, community meeting space, free access to High Definition TV studios and equipment, media production project support for non-profits, youth programs, producer networking events and cable television timeslots. Our programs provide opportunities for everyone, regardless of age, background or experience, to use media to amplify issues that matter to them most.

At the end of fiscal year 2014 PhillyCAM's total membership was 509, made up of 425 individuals and 84 organizations. Analysis of our membership demographics remain consistent. Demographic survey info shows that 52% of our members self identity as male, 47% female, 1% transgender, 49% African American, 5% Latino, 3% Asian American, 39% Causasion and 4% mixed race. Members are from all parts of the city as seen from their zipcodes from 19101 to 19153 and everywhere inbetween.

PhillyCAM operates two non-commercial cable channels – Comcast 66/966 and Verizon 29/30, with a potential reach of over 1 million people. Content is also available online via live streaming and web-based on demand players. From July 1, 2013 through June 30, 2014, PhillyCAM debuted 915 hours of original series and 57 hours of works produced by young people. We presented 3700 hours of independently produced documentaries and short films and 1440 hours of community interest programming was shown in prime time. On average PhillyCAM is premiering 9.32 hours of new, original, locally produced programming each week.

PhillyCAM provides members access to state of the art television HD production studios and digital media production equipment. Members used PhillyCAM equipment and facilities to create public access content that reflects local issues from the point of view of poor and working people, students' response to the education crisis, and unique perspectives on arts and culture and social issues by independent filmmakers.

PhillyCAM's facilities (studios, meeting rooms, media lab) were used over 1700 times throughout the year for not only studio shoots but workshops, meetings, events and editing. The studios were used over four hundred (400) times to record programs. The total number of equipment reservations during FY 2014 is more than double the reservations made by PhillyCAM members in FY 2013. The Media Lab was reserved by members over 950 times for 2-3 hour editing sessions.

Two hundred fifty (250) PhillyCAM members enrolled in workshops that resulted in two hundred twenty-nine (229) of them becoming certified to either check out field production equipment, use the Final Cut Pro editing systems or use the main studio production equipment. Certified producers able to check out equipment and use the production facilities now number over 300.

In FY 2014 PhillyCAM hosted or participated in 60 events and activities that served a total of 8119 people. We hosted screenings, discussions and networking opportunities for members. We also carried live streams from our studio and out in the field of important community conversations. Highlights included the PhillyCAM's 4th Year Anniversary Celebration; a networking event, STRIKE, presented in partnership with the Greater Philadelphia Film Office and PIFVA; the Mashed Media Awards at the Kimmel, showcasing the best in youth media in Philadelphia; and our very popular Holiday Potluck. New this year was the addition of Member Picnic.

PhillyCAM continues to work towards operating a vibrant community media center that is welcoming and provides Philadelphians access to and training in the use of digital media to express themselves. PhillyCAM is committed to creating an environment that fundamentally promotes public discourse, explores issues in-depth and redistributes power within the realm of communications media so that all people have the opportunity to make and share programs about themselves, their lives, and interests. It is exciting to be realizing this longstanding vision of a community media center that expands beyond the idea of public access as just a television channel to create a place where people can come to learn, collaborate and interact around ideas through the production of independent media.

We hope this report gives a clear picture of all the milestones reached and new projects initiated in fiscal year 2014.

Programming Summary

Anyone who lives or works for a non-profit or community organization in Philadelphia can participate in public access television creation. The television programs on PhillyCAM reflect the diverse social, political, ethnic, and artistic communities that can be found here. The programming gives a direct voice to all neighborhoods, groups, and points of view that exist in such a diverse and vibrant city.

The program schedule during the reporting period has grown to 485 hours of locally sourced, original programming. Created by Philadelphia communities and media artist/producers, these programs represent locally generated music and cultural events; youth produced narratives and talk shows on current events, a variety of shows covering wellness, local arts and social issues, documentaries on Philly neighborhoods and PSA's from the non-profit community, to highlight but a few examples.

During the reporting period, PhillyCAM certified producers took on important topics and provided the space for longform conversations addressing issues of concern to Philadelphians. The Media Mobilizing Project premiered their new series ***The Spark: Stories that Change Our Times*** covering stories of everyday people who are leading the way to winning human rights struggles. Show topics covered included healthcare, PA's next governor, immigrant rights, future of the schools, worker's rights and media consolidation. The New Sanctuary Movement ***Kids' United Against Deportation Captures***, produced in collaboration with AFRICOM, presented honest portrayals of deportation and its impacts through the voices of these young Philadelphia leaders. ***Equality & Justice NOW***, produced by the Pennsylvania State Chapter of the National Organization for Women (NOW) examined the news and issues relevant to women and featured an episode on Second Wave Feminism.

PhillyCAM members facilitated a lot of conversations in their shows. Longtime broadcast journalist Trudy Haynes returned TV with her show ***Let's Talk About*** and provided educational and informational entertainment for families. ***Talk the Talk***, produced by Letitia Portis and Charles Gregory, is an urban talk show that discusses current events and lifestyle topics in a fun and casual way. ***Are You Feeling Me?*** produced by Carol Sloan, is a talk show for healing of the heart using the bible.

In a recent member survey over 80% of members responded that their programs showcase arts and culture including music, fashion and food. Program examples include ***In Search of Knowledge*** produced by Bea Joyner and Jason Gordon explored the various talents and occupations in African American communities. ***Miles of Music***, hosted by Bob Miles, is an interview and performance show with guitar greats such as Johnny Winter, David Bromberg and others. ***XTRA-ordinariness with Brytnei Elle*** inspired viewers to be extraordinary by showcasing the stories of ordinary people and the extraordinary things they do with their lives. ***Tenor Madness Pop Up Concert***, produced by the Philadelphia Jazz Project, covered a

surprise lunchtime jazz concert at the Reading Terminal Market. In ***The Selby Signature***, Chef Selby demonstrated his exchange of ingredients using core spices to create multicultural cuisine

Highlights of some of the independent documentaries shown on PhillyCAM in FY 2014 include: ***Vets Finding a Home***, by award-winning photographer Harvey Finkle, Mark Lyons of the Philadelphia Storytelling Project and sponsored by Project HOME, gives a face and a voice to Philadelphia veterans who have experienced homelessness. Joan May Cordova's ***Asian Americans United's Mid-Autumn Festival*** tells of the cherished 19-year tradition in Philadelphia's Chinatown. ***Summer Lost: Stopping the Slide***, produced by the Public School Notebook, was a series of short videos about a summer learning loss problem that contributes to low literacy rates in Philadelphia. ***Goodbye To City Schools***, by Amy Yeboah, revealed stories on the impact of closing 24 public schools. ***Food for Thought : The Social Cost of Eating Out***, produced by Penn Program on Documentaries and the Law, looked at how improving working conditions (such as wage theft and absence of sick leave) in the restaurant industry can make dining out safer and more fair for everyone.

Community Bulletin Board

Twice daily we go to our Community Bulletin Board from 8:00 – 9:00 am and again from noon – 1:00 pm, seven days a week. Organizational members can submit slides featuring info about upcoming events of community interest. Individual members may also submit photographs and original music to be featured on the Community Bulletin Board. Here are some examples of the slides featured on the Bulletin Board during the reporting period.



PhillyCAM Productions

On October 23, 2013 PhillyCAM celebrated 4 years on the air with an unprecedented 8 hours of live programming produced in our studios from 10:00 am to 8:00 pm. Over 80 PhillyCAM crew, show hosts and their guests were fearless in taking their normally pre-recorded shows and presenting them live for the first time. Participating shows included: **Focus on Fitness**, **Salima Speaks**, **Actor's Lounge**, **Real Praise**, **I Am A Philly Artist**, **Be with Kysha Woods**, **Heart of Philly**, **Neighborhood Sports Showdown**, **Unsolved Philadelphia**, **Digital Grafitti**, **Dumpsta Players** and **Go Philly Service**.

We continued to produce **Go Philly Service (GPS)**, a 30-minute interview based program focusing on local non-profit organizations. **GPS** is produced entirely by PhillyCAM volunteers and gives newly trained members the opportunity to get valuable hands on training. In October, Mia-lia B Kiernan of One Love Movement, Erika Almiron of JUNTOS, Blanca Pacheco of New Sanctuary Movement discussed local organizing work related to immigration policy locally and nationally. In January, Thomas Earle of Liberty Resources, Jill Feldstein of Women's Community Revitalization Project and Majeedah Rashid of Nicetown CDC discussed the creation of the City's first Land Bank and how it represents a significant step in transforming vacant properties into productive sites for active use. In April as part of Philly Tech Week a special edition of GPS was live streamed on the topic of Net Neutrality. This roundtable engaged local and national experts in a conversation about Internet access as it impacts users, small businesses and Internet activists in Philadelphia and throughout the country.

We assisted **Moonstone Arts** in bringing its *Mentor and Mentored Poetry* series to PhillyCAM's studio to provide a unique look at the relationship between mentors and mentored as they share insight into their creative writing processes live in front of a studio audience. In FY 2014 we taped 7 episodes of **Mentor and Mentored** including one featuring Sonia Sanchez and Philadelphia's first youth poet laureates Siduri Beckman and Jaya Montague.

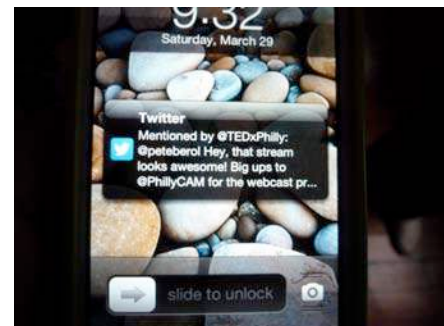


Collaborative Filmmaking a project-based workshop offered at PhillyCAM to encourage members to work together to produce short films using the field production equipment. In FY 2014 we premiered several shorts produced as part of the workshop. **While We Wait** is an intimate discussion with founder, Rev. Rhetta Morgan, about providing a supportive, healing forum for those with incarcerated loved ones to express themselves creatively. **Food Heritage** recounts the story of a new afterschool program located at the Philadelphia Praise Center through an interview with founder, Aldo Saihaan.

In April 2014 we hosted our 3rd edition of the **PhillyCAM Video Voter Guide**. As a way of providing Philadelphians an opportunity to learn more information about the candidates running in the May primaries we invited all candidates to come and record a 5 minute message to the voters. Twenty-four (24) candidates seeking various offices from Ward Leader to Municipal Judge to State Rep took advantage of the opportunity. The Video Voter Guide aired twice a day for 10-days leading up the primary election.



Live streaming grew in importance as we enhanced our multi-platfrom distribution strategy. In FY 2014 we provided live stream support for 16 events produced by our non-profit partners with a combined online viewership of of nearly 6500 viewers. These sessions covered such topics as the PA Governor's race, sexual assault on college campuses, net neutrality and the youth immigrant experience. The most popular stream was of Tedx Philly. The stream was embedded on the philly.com website, TedX organized viewing parties and used social media to drive viewers to the stream. The result was that over 5000 people tuned in that day. This was a prime example of when properly promoted live streaming is capable of attracting substantial viewership. The impact of the conversations continued after each event when the programs were cablecast on the channels and later made viewable on demand on our website and in some instances via Comcast On Demand.



Program Outages

In FY 2014 we experienced several programming outages. As soon as we were aware of the outages we implemented out protocols to contact the cable companies. Here is a summary of the outages:

- July 1, 2013 – Verizon communicated that channel 30 was not receiving a signal. Following trouble shooting in our server room signal returned it was determined that a cable had become unpatched.
- July 8, 2013– Verizon Fios was out and interrupted signal transmission for several hours.
- April 14, 2014 -- Power outage in the building took us off the air completely from 11:00 am – 2:00 pm
- April 22, 2014 -- Verizon FIOS went down from 9:00 am – 5:00 pm resulting in the Verizon channels being off air and the Internet down.

Programming Summary by Type

From July 1, 2013 through June 30, 2014, PhillyCAM debuted 915 hours of original series and 57 hours of works produced by young people. We presented 3700 hours of independently produced documentaries and short films and 1440 hours of community interest programming was shown in prime time. On average PhillyCAM is premiering 9.32 hours of new, original, locally produced programming each week.

| Program Type | Original Airings (In Hours) | Repeated Playbacks (In Hours) | Total Hours |
|--|--|--|--------------------|
| Local Source | 485 | 4241 | 4726 |
| Non-Local Source | 430 | 2636 | 3066 |
| Programming consisting of exclusively text ie: Community Bulletin Board | | | 968 |
| Total Programming Hours from July 1, 2013 – June 30, 2014 | 915 | 6877 | 8760 |

| Program Detail | Original Airings (In Hours) | Repeated Playbacks (In Hours) | Total Hours |
|--|--|--|--------------------|
| New/Original Programming | 915 | 6877 | 7792 |
| Primetime Community Programming | 460 | 980 | 1440 |
| Series (regular program airing weekly, bi-monthly or monthly) | 600 | 3492 | 4092 |
| Individual programs (not a series but a stand alone program such as a documentary) | 315 | 3385 | 3700 |
| Programming produced using PhillyCAM's facilities/equipment | 220 | 1500 | 1720 |
| Programming produced using PhillyCAM vehicles/remote equipment | 45 | 300 | 345 |

Cable Guide

PhillyCAM is one of the few public access cable stations on the cable guide in the country. We continue to make the best use of this opportunity by providing viewers with as much information about programs as possible. It also allows cable subscribers with DVRs to time shift to record PhillyCAM shows for viewing anytime of their choosing.



Web-based Video on Demand

PhillyCAM continued to add new ways for people to watch our programs online. This is very important to growing our impact by making programming available to a viewing public beyond Philadelphia County. Using Telvue's Cloudcast system we manage a Video on Demand player on our website. Any PhillyCAM producer may request to have their program added to the Video on Demand player. By year's end we had approximately 400 videos available to be viewed via our online video on demand player.



| Video on Demand (VOD) | FY 2012 | FY 2013 | FY 2014 |
|------------------------------|---------|---------|---------|
| VOD Total Hits (Telvue) | 5,649 | 7,528 | 25,363 |
| VOD Unique Visitors (Telvue) | 1,877 | 2,621 | 19,443 |
| VOD Total Plays (Vimeo) | n/a | 3,253 | 5,493 |

In addition to having video on our site we also launched a Vimeo channel to host PhillyCAM content and make it available for people to view and share. Play is registered anytime someone pushes the play button each time the video player loads on any page on Vimeo.com or wherever a video is embedded.

Comcast Video On Demand

As per the franchise agreement with Comcast, after our 2nd year of operation we can upload up to 8 hours of video on demand content to the *Get Local* section of

Comcast's Video on Demand program

offerings. Keeping timely content available on demand has been challenging as the process for upload to Comcast is always in flux. But that said we were able to upload HD content to VOD for the first time this year. Programs

featured On Demand included the youth produced documentaries *Pushouts* and *Pushouts II*, arts programs featuring poets, filmmakers and jazz musicians and recent panel discussions covering such issues as the young immigrant experience in Philadelphia and the creation of the City's new Land Bank. We are still trying to find ways to steer viewers to this content as it is not easy to find. To reach the PhillyCAM content viewers must first select On Demand » scroll down to Get Local » Select Philly in Focus then » PEG and finally » PhillyCAM.



to

Comcast's Philly in Focus

We also began populating a PhillyCAM Channel on Comcast's **Philly in Focus**, a community-driven, local video and interactive media network dedicated to supporting the creative efforts of the personalities, businesses and organizations that make this city great. Philly In Focus is a part of Project Open Voice, a national initiative designed to strengthen local content. As of June 2014 we had uploaded 30 videos to our Philly in Focus Channel. We also provided live streaming to support their coverage of the Kensington Kinetic Sculpture Derby for a 2nd year in a row in May 2014.

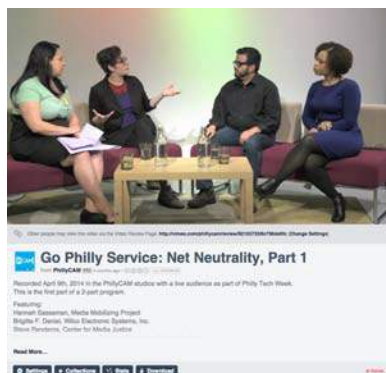


Live Streaming

Our live streaming production work continues to increase greatly. In FY 2014 we provided live stream support for 16 events produced by our non-profit partners with a combined online viewership of of nearly 6500 viewers. We provided streaming services for the Technology Learning Collaborative's 1st Annual Conference-- *Technology and Shared Prosperity*, Al Día NewsMedia's *Pinging the Media* and *Harvest the Empire* events, the 1st Annual Philly Podcast Festival, Black Star Film Festival panel discussions, Ignition Philly's campfire chats, the Mayor's Office of Immigration and Multicultural Affairs forum on youth immigration issues, a Rowan University sponsored townhall meeting on sexual assault on college campuses, TedXPhilly, Philadelphia FIGHT's *Beyond the Walls: Prison Helath Care & Re-entry* AIDS Education Month keynote with Michelle Alexander, and gubernatorial forums for Liberty Resoruces and the Community Forum for Governor Coalition.

Here are a few examples of live streamed programs and event documentation that PhillyCAM produced for organizational members between July 2013 – June 2014.

Net Neutrality



Gubernatorial Forum



AIDS Education Month



Pinging the Media



Programming Content Complaints

PhillyCAM received no programming complaints from viewers during FY 2014. We believe that this demonstrates that PhillyCAM member producers are following the programming policies, taking responsibility for the content of their programs and are invested in the success of the channel. The lack of complaints also demonstrates that PhillyCAM is effectively communicating our mission and our value of free speech.

When received, PhillyCAM seeks to deal with each complaint with intention and timeliness. When we receive a viewer complaint PhillyCAM staff are required to complete a Complaint Log-in Form. This is then forwarded to the Executive Director for further action. When the complainant provides their name and address a written response is sent by the Executive Director.

If the complainant seeks to request an appeal of this decision they must submit an Appeal Request (see attachments) that is then forwarded to the Appeals Committee made up of PhillyCAM Board and general members. To date no programming complaint has gone to the Appeals Committee.

PhillyCAM's response to controversial content in programming is to encourage more speech. Furthermore, PhillyCAM is restricted from censorship or content control, outside of the limited instances referenced in the "prohibited content" of our programming policies. PhillyCAM encourages anyone who disagrees with a program to produce counter-programming presenting an opposing point of view, or otherwise respond to the program in question, subject to the applicable PhillyCAM membership and/or sponsorship requirements.

Opportunities for Feedback

PhillyCAM solicited comments from the general public through our website, email newsletter and Facebook. We also continue our Viewer Feedback Line where callers can leave recorded comments. We are saving these files for future use in promotional campaigns for specific programs. Several times a day messages encouraging viewers to call in to the Viewer Feedback Line are played on the channel.

We also have a Feedback Box in our lobby so that members may submit written suggestions. These suggestions are reviewed monthly by staff to see how member input can be incorporated into future planning.

Website

The PhillyCAM website continues to grow and evolve. It is the most important tool in spreading the word about PhillyCAM and supporting our members in their work. PhillyCAM producers are able to reserve equipment and studio time, register for classes, renew their membership and update their online member profiles all through PhillyCAM's website. For members without web access or strong computer skills PhillyCAM staff and volunteers train users on how to access the website using our Media Lab.

The phillycam.org site is designed using Drupal a powerful, open source content management system (CMS) written in PHP. It is used as a back end system for many different types of websites, ranging from small personal blogs to large corporate and political sites, including whitehouse.gov. We have also added CiviCRM to our website to manage all of our contacts including memberships. Adoption of this very robust contact management system has permitted us to transition to monthly membership renewals as opposed to annual. And we have fully integrated the site with our PayPal account. This integration and made it easier for people to pay for memberships, workshops and make donations online.

| Website Stats | FY 2012 | FY 2013 | FY 2014 |
|--------------------------------------|----------------|----------------|----------------|
| Page Views | 191,982 | 148,375 | 134,596 |
| | | | |
| Unique Web Visitors | 20,096 | 17,479 | 22,390 |
| | | | |
| Total Number of Web Visitors | 40,298 | 35,584 | 41,258 |
| | | | |
| On Demand Views | 5,649 | 2,000 | 25,363 |
| | | | |
| On Demand Unique Visitors | 1,877 | 700 | 19,443 |
| | | | |
| Live Streaming Views | 470 | 614 | 6441 |
| | | | |
| Total Income From Website Activities | \$13,287 | \$16,855 | \$23,436 |
| | | | |
| Total Donations From Website | \$1,290 | \$1,875 | \$1,057 |

Individual and Organizational Member Totals

The numbers listed below includes all memberships that were active during the period of July 1, 2013 to June 30, 2014. We did experience a drop in membership in FY 2014 but income generated from membership did not decrease. In FY 2013 we earned \$18,430 in memberships and \$19,475 in FY 2014. In reviewing overall activity even though member numbers are lower, individual members are more engaged. This is demonstrated by big increases in content creation and workshop registrations. Since our founding in 2009, over 1000 people have been members of PhillyCAM. In FY 2015 we will look to find out more about our members and seek out ways to improve retention.

| Member Level | Totals |
|--|---------------|
| Individual Members | 325 |
| Student | 21 |
| Youth (21 and under) | 6 |
| Senior | 13 |
| Work Exchange for Individual Membership (Includes PhillyCAM Interns and Instructors) | 20 |
| Organization (\$0 - \$50K) | 47 |
| Organization (\$51K - \$250K) | 6 |
| Organization (\$251K - \$500K) | 7 |
| Organization (\$500K – more) | 24 |
| Individuals who have active memberships as result of an organizational membership | 40 |
| TOTAL: | 509 |

Summary of Organizational Member

Organizations \$0 - \$50K

Armour of God
Artspllosion Media
Black Buttafly Publishing L.L.C
BRIDGE
Cathedral Park Association
Creative Performing Arts of Philadelphia
Collaboration Workshop
Demarco Plays & Film Company LLC
Don N Ray, Inc.
Dysfunctional Screenwriters Society Mt. Airy
Earth's Keepers, Inc
Five Minute Follies
Frontline Dads
Garden of Eden Productions
G-LAW Foundation
Harris Training & Development
Healthtime TV
Homeschooling Co-op
InDeed
Kensington Soccer Club
Kingdom Prayer Faith Ministries
Local Arts Live
Midnight Cry
Moorish Science Temple of America #11
MOSAIC ASSOCIATION
Onyx Orchid
Pennsylvania NOW
Philadelphia Asian American Film Festival
Philadelphia NOW
Philadelphia Youth Media Collaborative
PHILLY BANDS 191 NETWORK/Z191TV
Pink Ladies Youth Mentorship Program
Project Arts
Poor Peoples Econ. Human Rights Campaign
Razom
Shipman Family Services Fund
Soil-Food-Health-Forum
Studio2videoproductions
Termite TV Collective
Trudy Haynes Foundation

Organizations \$0 - \$50K continued

Urban Resources and Opportunities Center (UROC) of
Philadelphia
Vikingle Entertainment
Visual Anthropology Society at Temple
William Penn Development Coalition
Women's Solo Project, Inc
World Mission Society Church of God
World Peace Plus

Organizations 51K – 250K

City Council President's Office
Drexel InterView
New Sanctuary Movement of Philadelphia
PhilaMOCA
West Kensington Ministry
William L. Sayre High School with the Netter Center for
Community Partnerships

Organizations 251K - \$500K

Jubilee School
Nonprofit Technology Resources
POWER: An Interfaith Movement
Scribe Video Center
Tabor Children's Services
Unitarian Society of Germantown
West Philadelphia Financial Services Institution

Organizations \$501K – over

American Friends Service Committee
American Heart Association
Clean Air Council
Communities In Schools of Philadelphia, Inc.
Community College of Philadelphia
Entrepreneur Works
Friends of Farmworkers
Generocity.org
Greater Exodus Baptist Church
Kimmel Center
Leeway Foundation
Liberty Resources, Inc.
Media Mobilizing Project

Organizations \$501K – over continued

Mayor's Office of Immigration and Multicultural Affairs
Morris Animal Refuge
Need In Deed
New Media Technology Charter School
Newspaper Guild of Philadelphia
Penn Program on Documentaries & The Law
Philadelphia FIGHT
Philadelphia History Museum
Philadelphia School Notebook
Power Corps PHL
Tech Impact

Outreach

All members are required to attend a free PhillyCAM New Member Orientation, which are held on the 2nd Thursday of every month. If an individual or associate member of an organization wants to submit content to the channel, take a training workshop, book any space in the facility or use production equipment they are required to have attended an orientation. This important session gives members and potential members an opportunity to hear first hand about our operating procedures and organizational history and culture. We also discuss the roles members play in ensuring the growth of the organization and what makes public access television unique within Philadelphia's media ecology.

We currently average 30 people per month in orientation and have found that most people learn of PhillyCAM by word of mouth and recommendations from trusted sources such as peers, colleagues and family members. This past year, we have also partnered with organizations to raise our visibility and recruit new members through community events such as TedX Philly, the Technology Learning Collaborative Conference and the BlackStar Film Fest.

We send out a monthly eNews and other targeted communications via our Constant Contact email list of 2700+ subscribers to keep the community updated about current PhillyCAM news. We also air short announcements on the channel encouraging interested people to contact us and consider becoming a member. All the community organizations listed in the appendix "Organizations Providing Programming to PhillyCAM" submitted programs to PhillyCAM as a result of a face-to-face meeting or phone conversation that helped them plan out their production process.

Spanish Language Outreach

In FY 2014 Latinos represent 13% of the population in Philadelphia but their participation in PhillyCAM does not match these demographics. In response we hosted our first Spanish language orientations in June 2014 at Taller Puertorriqueno in North Philly and at JUNTOS in South Philly.

Following the meetings there was a core group of 8 producers committed to taking classes at PhillyCAM to begin to create content reflecting the Latino experience in Philadelphia. A

special Spanish language Basic Field Production class is planned for Summer 2014. We also have partnered with the Mayor's Office on Immigrant and Multi-Cultural affairs on several events resulting in programming for the channel including a discussion on youth immigration issues.



Sintoniza el canal
Comcast 66/966 o Verizon 29/30
y mira tu propio programa!

¿Quieres aprender a filmar y editar videos? ¿Compartir las historias de tu gente? ¿Incluso tener tu propio programa de TV? Aprende, produce, edita, y comparte con la comunidad de Filadelfia!

Talleres
Equipo Audiovisual
Estudios de TV
Producción de Video
Edición Audiovisual
Capacitación Profesional
Aprendizaje Comunitario

Únete hoy mismo. Conéctate con gente. Produce tus propios mensajes y medios de comunicación.
Calle 7 entre Market & Chestnut (699 Ransstead St.) | Filadelfia, PA 19106
TELÉFONO 267-639-5481
EMAIL info@phillycam.org
HORARIO Lunes a Viernes 10am-6pm. Sábados 11am-4pm.

PHILLYCAM.ORG Visítanos y ponte en contacto!
Hablamos Español! Pregunta por Laura!

Social Media

Our presence on social media continues to grow with a particular emphasis on using Twitter to help drive viewers to our live streaming events. As of year end we had over 1200 Twitter followers and over 2200 likes on our Facebook page.

<https://twitter.com/phillycam>

<https://www.facebook.com/phillycam>



Organization Support

PhillyCAM provided a variety of services for its organizational members. These members receive production support to create PSAs and topic-driven programs as part of their member benefits. We also provided discounted production services for larger more involved projects like live-streaming events with our multi-camera mobile studio and single-camera streaming system.

Special production projects were done in collaboration with members such as the Mayor's Office of Immigration and Multicultural Affairs (MOIMA), Liberty Resources, Philadelphia FIGHT, the Technology Learning Collaborative, Philadelphia Dance Projects, Moonstone Arts Center, the Leeway Foundation, the Black Star Film Festival, Penn Programs on Documentaries and the Law, and Al Día NewsMedia, to name a few.

With PhillyCAM's assistance, the History Museum was able to create informational videos as a part of their *Gifts that Gleam: Stories in Silver* exhibit. These videos featured the exhibition's curator sharing the history of a various objects on display. We provided production support for Moonstone Art Center's *Mentor and Mentored* poetry series. Since closing the doors of their facilities, Moonstone has worked with us to provide a new home for *Mentor and Mentored*, which takes place on the first Tuesday evening of each month in our main studio. We have also documented The Leeway Foundation's REVOLVE: An Art for Social Change Symposium, Liberty Resources's Disability Day Parade, View from City Hall: The Mayors' Exchange on Unlocking Value in Vacancy, and Philly Dance Projects: Artists as Activists in Fukushima.

PhillyCAM assisted many organizations working with young people in and out of school. With our support the New Sanctuary Movement was able to create a series of short videos for their Kids Against Deportation Campaign. These videos featured young people sharing their thoughts and personal experiences about deportation. Other youth-based projects this period include our work with Need In Deed and Stetson Middle School to help teens produce a series of PSA speaking out against sexual assault.

Here are a few examples of event documentation that PhillyCAM produced for organizational members between FY 2014.

Leeway Foundation



UPenn Law School



Youth Media Work

PhillyCAM has emerged as a hub of activity celebrating the accomplishments of youth media makers in all forms. We have partnered to create content for the channel with non-profits working with young people including YESPhilly, Norris Square's Art Factory, Mt. Airy Homeschool Collaborative, Scribe Video Center, Presenting Our Perspectives Philly Youth News (POPPYN), Little Filmmakers, People's Emergency Center and Big Picture Alliance. In the past three years we organized screenings and workshops that served over 500 young people. In FY 2014 over 57 hours of youth produced programming aired on our cable channel. In June 2014, to grow our youth program we leased an additional 2000 square to create a Tech Lounge to connect young adults to media making, mentors, and institutions throughout the city in one dynamic space designed to inspire collaboration and creativity.

In FY 2014 PhillyCAM hosted Art Factory for a 2nd year, to work on a series of six animated short films on the topic of incarceration, in partnership with Decarcerate PA. Art Factory met twice a week at PhillyCAM to produce, film and edit their videos. We also organized a summer internship opportunity for high school age students. A group of 4 interns worked collaboratively to produce 5 PhillyCAM bumpers on the theme of 'People Powered Media.'

In the Fall, a group of 8 students, the Leaders Corps, from Sayre High School started meeting bi-monthly at PhillyCAM to receive training and support for a series of short video projects they are developing on the effects of unequal education funding and lack of services in their schools.

PhillyCAM partnered with People's Emergency Center to support the production of their Teen Technology Network: media focus course. Students learned all aspects of TV production from operating the cameras, to creating graphics and working the switcher and teleprompter. They also produced a fire safety video employing stop motion animation.

We continue to be an active member of the Philadelphia Youth Media Collaborative (PYMC) by hosting meetings and providing space for other youth groups. As a PYMC member PhillyCAM took on a leadership role in producing the hugely successful Mashed Media Awards held at the Kimmel Center in March 2014. The event showcased the best youth media in Philadelphia, from video to photography, music to spoken word.

During the year we provided tours to a number of youth groups, which included Walter Palmer Charter School, Northern Liberties Arts Program, Norris Square Neighborhood Project and the People's Emergency Center. These young people were able to visit PhillyCAM's production facilities, learn about community media and careers in the communications field. Most of these tours have led to the development of partnership projects.

Member Complaints

PhillyCAM understands that problems may arise, at times, which are unavoidable. However, for the sake of all members, PhillyCAM staff is responsible for guarding against the emergence of a pattern of violations and for following up as necessary to achieve conformity with all relevant policies and guidelines.

PhillyCAM staff uses its discretion in assessing the severity of each problem and determines the appropriate follow-up. As a situation arises, staff will discuss it with the member, make every effort to rectify the problem in a mutually agreeable way, and document the issue and its follow-up action plan.

If members have a complaint relating to their experience at PhillyCAM they must submit it in writing using the forms available online or by requesting one from a staff member. The Board of Directors Appeals Committee will hear complaints from members relating to claims of unfair treatment, rules violations, and improper management decisions. The Appeals Committee has the right to refuse to pursue matters which it believes are trivial, irrelevant or beyond its scope.

During FY 2014 several members filed complaints relating to incidents that transpired between members. PhillyCAM staff and board were called upon to mediate these situations. All were resolved without the need to take any action.

Member Suspensions

PhillyCAM members are held accountable to do their part to maintain a safe and productive workplace. Any behavior that threatens the safety and well being of staff, members or other visitors, may result in immediate suspension of member privileges and removal from the PhillyCAM premises until further notice.

Any individual who violates their membership agreement may be subject to restriction, temporary suspension, or loss of member privileges, including use of production resources, channel time and/or entry to facilities. PhillyCAM Board of Directors and staff will exercise judgment giving the highest importance to the best interests of the PhillyCAM community as a whole, but also giving consideration to the member's individual rights in these decisions.

In FY 2014 the Board Appeals Committee suspended 1 member for 3 months with the intention that following the suspension the member can meet with the committee to discuss the terms of their return.

PhillyCAM Events

In FY 2014 PhillyCAM hosted or participated in 60 events and activities that served a total of 8119 people. We hosted screenings, discussions and networking opportunities for members. We also carried live streams from our studio and out in the field of important community conversations. Highlights included the PhillyCAM's 4th Year Anniversary Celebration,; a networking event, STRIKE, presented in partnership with the Greater Philadelphia Film Office and PIFVA; the Mashed Media Awards at the Kimmel showcasing the best in youth media in Philadelphia and our very popular Holiday Potluck and new this year a Member Picnic.

| Event Type | Event Date | Attendance |
|--|------------|------------|
| Member Orientations | | |
| General Orientation | 7/11/13 | 22 |
| General Orientation | 8/8/13 | 20 |
| General Orientation - Daytime | 8/29/13 | 20 |
| General Orientation | 9/12/13 | 38 |
| General Orientation | 10/10/13 | 51 |
| General Orientation | 11/6/13 | 6 |
| Special Orientation for Non-Profit Organizations | 12/3/13 | 11 |
| General Orientation | 12/5/13 | 32 |
| General Orientation | 1/9/14 | 50 |
| General Orientation | 2/6/14 | 43 |
| General Orientation | 3/6/14 | 21 |
| General Orientation | 4/10/14 | 18 |
| General Orientation | 5/8/14 | 29 |
| Spanish Language Orientation @ JUNTOS | 6/3/14 | 10 |
| Spanish Language Orientation @ Taller Puertorriqueno | 6/7/14 | 6 |
| General Orientation | 6/12/14 | 44 |
| PhillyCAM Member Events | | |
| Member Picnic | 8/31/13 | 40 |
| PhillyCAM Anniversary Celebration | 10/23/13 | 85 |
| Holiday Mix n' Mingle | 12/13/13 | 90 |
| Meet the Candidates | 2/5/14 | 20 |
| Annual Member Meeting & Board Election | 3/27/14 | 85 |

| | | |
|---|-----------------------|-----|
| Member Picnic | 6/28/14 | 48 |
| Professional Development Meetings | | |
| Philadelphia Youth Media Collaborative Meetings | Sept, Nov, March, May | 80 |
| Production Management Meet ups | Sept, Feb | 24 |
| Philadelphia Black Journalists Association Training | 1/25/14 | 50 |
| National Alliance for Media Arts & Culture Meeting | 3/26/14 | 15 |
| Creative Capital Grant Session | | 12 |
| Special Events/Live Tappings | | |
| Live Taping: Moonstone: Mentor Mentored | 9/10/13 | 10 |
| Live Taping: Moonstone: Mentor Mentored | 10/8/13 | 12 |
| PhillyCAM 4th Anniversary | 10/23/13 | 85 |
| Live Taping: Moonstone: Mentor Mentored | 1/14/14 | 10 |
| Civi Day | 1/29/14 | 10 |
| Live Taping: Moonstone: Mentor Mentored | 2/11/14 | 8 |
| Live Taping: Phila Dance Projects' Naka Dance Theater | 3/10/14 | 10 |
| Live Taping: Moonstone: Mentor Mentored | 3/11/14 | 10 |
| Mashed Media Awards @ Kimmel Center | 3/29/14 | 350 |
| STRIKE event co-produced with Film Office | 4/3/14 | 40 |
| Temple Dept of Visual Anthropology Meet Up | 4/4/14 | 30 |
| Live Taping: Moonstone: Mentor Mentored | 4/8/14 | 8 |
| Live Taping: Net Neutrality is Dead as part of Philly Tech Week | 4/9/14 | 15 |
| Screening: If You Build It hosted by Sundance Institute | 4/12/14 | 8 |
| New Sanctuary Movement screening of youth documentary | 5/10/14 | 64 |
| Live Taping: Moonstone: Mentor Mentored | 6/10/14 | 12 |
| Griot Works Storytelling & Fundraiser event | 6/25/14 | 38 |
| Live Stream Events | | |
| Philadelphia Podcast Festival | 8/2/13 | 97 |
| Black Star Film Festival | 8/4/13 | 22 |
| Young, Involved & Immigrant in Philadelphia Panel | 9/18/13 | 153 |
| Live Town Hall Meeting On Sexual Assault On College Campuses | 9/25/13 | 89 |

| | | |
|---|----------|-------------|
| Technology and Shared Prosperity: Fighting Poverty Through Digital Literacy | 10/17/13 | 44 |
| Happy Anniversary | 10/23/13 | 386 |
| Al-Dia Conversation with Harvest of Empire | 11/8/13 | 51 |
| Ignition Philly | 11/11/13 | 77 |
| Media and the City: Pinging the Mainstream | 11/19/13 | 31 |
| Philadelphia NOW- Panel on Second Wave Feminism and Beyond | 3/13/14 | 9 |
| Annual Member Meeting and Board Elections | 3/27/14 | 105 |
| Tedx Philadelphia | 3/28/14 | 5254 |
| Go Philly Service: Net Neutrality | 4/9/14 | 9 |
| Disabilities Issues Forum | 4/29/14 | 2 |
| Kinetic Sculpture Derby | 5/17/14 | 38 |
| Beyond the Walls: Prison Health Care & Re-entry | 6/14/14 | 74 |
| TOTAL: | | 8119 |

Training Workshops for Individual Members

Two hundred fifty (250) PhillyCAM members enrolled in workshops that resulted in two hundred twenty-nine (229) of them becoming certified to either check out field production equipment, use the Final Cut Pro editing systems or use the main studio production equipment.

We also began offering two new workshops --

Production Management and Producing and Directing for the Studio. Production Management helps members

develop and refine their project ideas and create a blueprint for producing a successful program for cablecasting on PhillyCAM. Producing and Directing for the Studio is the final certification workshop that producers must take if they want to take on the full responsibility of leading productions in the main PhillyCAM studio.



Certification Workshops Summary

| Class Type | Amount of Workshops Offered | Amount of Individuals Served | Persons Certified |
|--|-----------------------------|------------------------------|-------------------|
| Basic Field Production | 9 | 72 | 65 |
| Intro to Final Cut Pro | 5 | 40 | 37 |
| TV Studio Production Crew | 4 | 53 | 50 |
| Production Management | 2 | 19 | n/a |
| Producing and Directing for the Studio | 5 | 35 | 51 |
| Express Studio Accelerated Training | 4 | 24 | 20 |
| Advanced Camera | 2 | 9 | 6 |
| TOTALS: | 31 | 252 | 229 |

Certification Class Descriptions

Intro to Basic Field Production

Intro to Basic Field Production is a six-week workshop that meets one evening per week. This course provides a maximum of 8 members to gain hands-on experience operating PhillyCAM's Canon Vixia HD video camcorders, wired and wireless microphone systems, and field lighting equipment. In addition to learning equipment mechanics, members take this course to learn and practice production techniques that will help them create quality programming to cablecast on public access channels. Members who wish to use PhillyCAM's field production equipment to make their own content are required to successfully complete a written and demonstration exam at the end of this workshop.

Intro to Final Cut Pro

PhillyCAM also offers a series of trainings that introduce producers to Apple's Final Cut Pro video editing software. This six-week workshop curriculum includes instruction on navigating the software interface, procedures for transferring video from cameras and SD cards to the computer, fundamental editing methods, and practice tutorials. Beyond in-class instruction time, students are also required to fulfill lab practice time to complete practice tutorial projects. The final certification process entails members completing a written exam and short length edited piece that demonstrates their ability to use the software.

Producing & Directing for the Studio

This workshop is for members who want to take on the full responsibility of leading productions in the main PhillyCAM studio. Through this intensive course members learn best practices for producing and directing that are specific to submitting project plans, making studio reservations, checking out studio equipment and leading a certified PhillyCAM crew.

TV Studio Production Crew

This six-week workshop introduces members to studio production crew roles and responsibilities, production terminology, and proper equipment use. Upon completion of the class instruction period and a written exam, members are also required to work as crew for 4 PhillyCAM studio productions.

Sony Advanced Camera Workshop

This class is for certified Basic Field Production members who would like to work with the advanced Sony NXCAM. The 6 week class focuses on technical understanding of the manual camera settings and functions.

Test-Out Certification Process

For PhillyCAM members who express a high level of production experience they have an option to become certified without taking a workshop—this is referred to as the “test-out” certification process. Individuals who test out are still required to pay the regular workshop fee and complete the written and demonstration parts of the exam in to earn their certification. The test-out option is only offered for certification to use the field production equipment (as taught in the Basic Field Production course) and Final Cut Pro. Total number of members tested out last year was 8. Two in Final Cut Pro and nine in Intro to Digital Video. During the year, there has been a small growing demand from members who only need access to audio or lighting equipment. To accommodate these members, separate certifications in audio equipment were provided at a reduced rate.

Other Training Workshops

Throughout the year we offer a series of special topic workshops based on the interests and needs of our members. Some workshops, like Production Management and Collaborative Filmmaking are offered 2-3 times a year while other special topics may only be offered once or twice.

Production Management

The goal of this workshop is to help members develop and refine their project idea and create you a blueprint for producing a successful program for cablecasting on PhillyCAM. This course is suitable for either members who are planning to produce a new show, or for those who are aiming to improve their management of a show already in production.

Collaborative Filmmaking

This workshop was created as a follow up project-based class for Basic Field certified members. Participants work in 2 teams to produce a short film over the duration of the 6-7 week workshop. In the first 2 cycles, narrative, documentary and experimenal films were produced by students.

Media Lab Mondays

In January, we started offering weekly one-on-one sessions and special topic tutorials in the media lab for Final Cut certified members, or those who need support editing their projects. These sessions are staffed by our Access Manager. An average of 5 people attend each week. Topics range from sound editing to creating simple title graphics, media management and exporting for DVD and web distribution.

Other Training Workshop Totals

| Workshop Type | # Sessions Offered | Individuals Served |
|---|--------------------|--------------------|
| Copyright Roundtable for Media Producers* | 1 | 16 |
| Philly Photo Day Photography Workshop* | 1 | 15 |
| Lighting Concepts (2-week class) | 1 | 20 |
| Advanced Editing Concepts (4-week class) | 1 | 7 |
| Intro to Google Tools and Communities* | 2 | 15 |
| Collaborative Filmmaking --Documentary Portraits + Short Form Filmmaking (6-week class) | 2 | 13 |
| Intro to Green Screen Productions and Techniques | 3 | 12 |
| Creating Sustainable Productions | 1 | 10 |
| TV Studio Refresher: CG, Teleprompter, Camera* | 3 | 21 |
| Introduction to Narrative Design: Writing from Within* | 2 | 20 |
| *Free workshop | | |
| TOTALS: | 17 | 149 |

Organizational Trainings

In addition to member trainings, we offer group trainings as a benefit to our organizational members. This year we offered the following trainings:

| Workshop Type | Organization | Individuals Served |
|--------------------------|--------------------------|--------------------|
| Television Crew Training | Media Mobilizing Project | 8 |
| Express Studio Training | Philly311 | 6 |
| Basic Field Production | City Council Office | 4 |
| Basic Field Production | Public School Notebook | 8 |
| TOTALS: | | 26 |

Facility Improvements

To complete the buildout of the Ranstead Street space and brand our location as “The PhillyCAM Building” the organization took on a major exterior signage project to be completed in Fall 2014. The sign proposal was successfully presented at the Arts Commission and the Zoning Board in Spring 2014 and put out to bid.



In Spring 2014 an acoustic specialist from Metropolitan Acoustics conducted a sound evaluation of our Main Studio. The sound in the studio has more of an echo than is desirable. The finding of the study was that there is a 1.5 second delay or echo in our studio. A desired level would be closer to a .5 delay. Over the next year we will work to adopt some of Metropolitan Acoustics recommendations to reduce the echo and improve overall sound quality.

Improvements were also made to our Express Studio. The original design was a bit clunky and the Ross switcher lacked the functionality we needed. The Ross switcher was traded in for a Broadcast Pix switcher similar to the one in our main studio. One advantage of the switch is that members trained on one can operate the other. Also the Broadcast Pix unit came with a computer graphics program which the Ross switcher did not have. The broadcast engineer helped us complete this upgrade by rerouting the connections in the Express Studio and to the Main control room. The robotic HD cameras were also mounted to articulating arms making the room more functional and the ability to get camera angles. This is a net improvement and as a result member use of the Express Studio has increased significantly.

Facility Access and Usage

PhillyCAM plays an important role in the community as a “physical” center by providing access to our studio spaces to conduct productions, community meetings, screenings and media-related networking events where members and the public come together for in-person, peer-to-peer learning. On any given night you might find poets performing to a studio audience for later cablecast in our Main Studio, students learning 3-point lighting in the Commons, a scriptwriting group meeting in the Community Room and members editing projects in the Media Lab. The facility includes a large 930 square foot multi-camera main studio where members can produce and broadcast talk shows, performances, community meetings, and electronic town halls. It is large enough for small studio audiences.

PhillyCAM offers members access to two state of the art television production studios. The Main Studio is equipped with a full lighting grid of all LED fixtures, 3 high-definition studio cameras and a teleprompter. Great attention was made to making sure the studios were adequately soundproofed and climate controlled. The Main Studio also includes a video projector, screen and sound system so that the room may also be used for screenings and presentations. There are also program monitors in both the central lobby and 2nd floor Community Room on which we can show either the Community Bulletin board, a live feed from PhillyCAM’s cable channel or a closed circuit view of what is being recorded in the main studio.

The studios and other facilities are available for member use Monday thru Friday from 11:00 am to 8:00 pm. In response to member requests, we began opening on Saturdays from 11:00 am to 4:00 pm starting in September 2013. Members fill out an online reservation form to request which space they intend to use. The Main Studio, Express Studio, and Edit Suite can be used for a maximum of 3 hours per session. The Community Room is available for a maximum of 2 hours per meeting. Extensions are available upon request. Here is a summary of space usage in the past year by members and PhillyCAM events and workshops.

Equipment and Facility Reservations by Type

| Type | Times Reserved |
|------------------------------------|----------------|
| Community Room | 284 |
| Edit Suite | 46 |
| Express Studio | 179 |
| Field Equipment | 517 |
| Main Studio | 395 |
| Media Lab | 942 |
| Tech Lounge | 2 |
| Total Facility Reservations | 2365 |

Facility Usage

| Purpose for Facility Reservation | Facility Reserved | Times Reserved |
|----------------------------------|-----------------------------|----------------|
| Videotaping Shows | Main Studio/ Express Studio | 402 |
| | | |
| Meetings | Community Room | 152 |
| | | |
| Video Editing | Media Lab | 902 |
| | Edit Suite | 43 |
| | | |
| Workshops | Main Studio | 126 |
| | Community Room | 123 |
| | Express Studio | 27 |
| Total Facility Usage | | 1775 |

Monthly Attendance

All individuals entering PhillyCAM are asked to sign in at reception. Though not an 100% precise way of accounting all who pass through our doors, this is a good indication of the traffic. The numbers reflect growth in those accessing the facility which at FY 2014 year's end averaged between 35 - 40 people visiting PhillyCAM each day.

| Month | Totals |
|--------------------------------|-------------|
| August 2013 | 435 |
| September 2013 | 595 |
| October 2013 | 762 |
| November 2013 | 513 |
| December 2013 | 469 |
| January 2014 | 613 |
| February 2014 | 695 |
| March 2014 | 861 |
| April 2014 | 982 |
| May 2014 | 952 |
| June 2014 | 887 |
| Total Recorded Visitors | 7764 |

Media Lab

Media Lab usage nearly doubled in FY 2014 to accommodate growing number of members certified to edit their projects. Members who are producing projects for the channel reserve time to work on their material. In addition, workshop participants from our Final Cut Pro workshops and Intro to Digital Video workshops, as well as special workshops participants from non-profit groups logged in for several hours of lab use. PhillyCAM staff and interns also use the Media Lab on a daily basis for our own inhouse productions.



| Purpose | Times Used |
|--|---------------------|
| Video Editing | 707 |
| Workshop Related | 171 |
| Other Uses ie: Web browsing, Media Transfer, Data Entry | 88 |
| Total Times Reserved | 966 |
| Total Lab Hours Recorded (This is a conservative estimate) | 5000 + hours |

Equipment Usage

The total number of equipment reservations during FY 2014 is more than double the reservations made by PhillyCAM members in FY 2013. With over 300 producers certified to check out equipment these figures will undoubtedly continue to grow. Another contributing factor to the significant increase is our move to an online space and equipment reservation system. Certified producers can log into their member accounts on the PhillyCAM website anytime and request an equipment reservation.

| Equipment Usage | |
|--|-----------------------|
| Purpose for Equipment Reservation | Times Reserved |
| Field Production | 492 |
| Studio Productions | |
| Main Studio | 147 |
| Express studio | 93 |
| | |
| Workshops/Training | 275 |
| | |
| Other | 91 |
| Total Equipment Usage | 1098 |

Equipment Loss

On the morning of Monday, July 22, 2013 a theft occurred in the Main Studio at approximately at 9:50 am. The person was let into the building in the morning when our bookkeeper arrived. He did not have an appointment or other reason to be at PhillyCAM. He asked a staff person if he could use the restroom and exited the facility approximately 20 minutes later. Our Technical Director discovered later that morning that 2 of the Sony studio camera lenses were missing. The Executive Director notified the police and a report was filed. Video footage from our security cameras was provided to the police which was subsequently released to the local news media. Following the airings of the footage a suspect was apprehended several weeks later and charged with the theft. Nearly a year later the suspect pleaded guilty to the theft.

An insurance claim was filed immediately and the claim paid within several months of the theft. Replacement cost of the two lenses was \$20,179. The lenses were replaced within one week of the theft. So there was very downtime in the Main Studio.

The perpetrator was able to gain access to the Main Studio because it was open for our housekeeper to mop the floor. Since the theft we continue to be hyper vigilante about making sure the Main Studio is locked. We are also looking at ways to better secure the lenses to the cameras to avoid a future incident.

Equipment Purchases

In June 2014 we purchased over a dozen additional LED lighting instruments for the Main Studio. By adding these additional lights to the grid we significantly improved the amount and quality of light available. This has significantly improved the overall look of all productions and has also streamlined production since lighting instruments no longer need to be relocated to accommodate different lighting plots.

Equipment Maintenance

Even though equipment useage has increased dramatically we have seen relatively few incidents relating to serious equipment issues. This demonstrates that members have been well trained to operate all our equipment and take pride in insuring its longevity. We have noticed an expected creep in incidents relating to equipment malfunction, particularly with lighting instruments and microphones. These include blown lamps, audio cables, detached tripods legs, missing tripod plates, loosened screws, etc. We have had no problems with our higher priced broadcast equipment. Overall the production equipment has been kept in good working condition and most incidents requiring maintenance or repairs have been handled internally.

In June 2014 we began working with a freelance broadcast engineer to advise us on how to improve our overall studio operations in an effort to improve the overall quality of the television content being produced in the studio.

Twice a year we close the facility for a seasonal slow down. During these periods members may not check out equipment or book the studios. This gives us a chance to do a comprehensive inventory of all equipment and conduct any necessary repairs or upgrades. Shut downs took place in late August and the second one over the Christmas/New Year holidays.

| Equipment Repairs/ Maintenance | | |
|---------------------------------------|---------------------|--------------------------------|
| Item | Description | Repair/Replacement Date |
| Omni Light | Ballast Broken | 6/19/2013 |
| Pro Light | Broken Bulb Fitting | 6/19/2013 |
| AJA KIPRO | Drive Failure | 11/18/2013 |
| Rifa 55EX | Cable Short | 12/11/2013 |
| ME-2 Lavalier Microphone | Damaged Mic | 2/21/2014 |
| Lavalier Receivers | Pc board failure | 2/24/2014 |
| Apple Keyboard | Unresponsive | 4/10/2014 |
| Sony Camera Lens | Lens Alignment | 5/7/2014 |
| Headphones | Damaged | 5/13/2014 |
| Apple IMac LCD Panel | Screen worn out | 6/23/2014 |
| | | |

Fundraising

The current funding climate continues to be particularly challenging and competitive. We are still considered a new organization and need to build relationships with funders and show a history of activity in order to garner support in the future.

In FY 2014 we received support from the **Philadelphia Cultural Fund** (\$9,000) to support our arts and culture programming. We received \$1,500 from the **Wyncote Foundation** via a re-grant from the **Philadelphia Jazz Project** to do acoustic work in the Main Studio. We also received an award of \$2,000 from the **Hispanic Heritage Foundation** that we put towards launching our Spanish language outreach and training programs.

We submitted an application to the Pennsylvania Council on the Arts in the entry track program and were notified by the close of the FY 2014 that we could expect to be funded in FY 2015. We applied for a planning grant to the **Barra Foundation** to help us with a planning process to grow our youth media program and build out the Tech Lounge space on the 2nd Floor. At the end of FY 2014 we were notified that we had received a grant of \$31,000, our largest grant to date.

We also applied for support to **Best Buy** for the Tech Lounge/youth media work but are still awaiting word on that grant.

Other sources of earned income include: Memberships, Fees for workshops and Equipment/Facility Rental. This year we also began soliciting donations for members and supporters. At the end of 2014 we sent out a year-end donor appeal which resulted in \$2,620 in contributions from over 50 supporters of PhillyCAM. The board has begun to meet regarding the creation of a more comprehensive fundraising plan.

While equipment and production facilities are first and foremost available to members at minimal to no cost, we began to look at models of using our assets to generate additional earned income through fee for service productions and facility rentals to for-profit or contracted city government projects in order to generate additional revenue. This year we developed a Production Services Rate Sheet for our non-profit members. We were able to work on two projects which provided not only some new earned income but also excellent promotional opportunities and hands on training for our members.

We also rented our Main Studio for several small special events. We will continue to evaluate how to accommodate rentals while not compromising members' access to any PhillyCAM space.

Staffing

Gretjen Clausing, Executive Director

fulltime, 40 hours per week

Laura Deutch, Education and Production Coordinator

fulltime, 40 hours per week

Antoine Haywood, Membership & Outreach Director

fulltime, 40 hours per week

Jay Mohan, Access Manager

fulltime, 40 hours per week

Deborah Rudman, Director of Programming

fulltime, 40 hours per week

Ryan Saunders, Technical Director

fulltime, 40 hours per week

Sonia Thompson, Online Media Manager

fulltime (as of March 2012), 40 hours per week

PhillyCAM contracted with local media makers to teach our training workshops. PhillyCAM also works with independent contractors and consultants for bookkeeping and audit services, web design, outreach efforts, and broadcast engineering. The Executive Director, with input from the Executive Committee, which serves as the defacto personnel committee, is drafting personnel policies.

Volunteers

Volunteers are an important part of PhillyCAM's daily operations from greeting the public at the front desk to supporting special events and productions. After becoming a member and attending an orientation, individuals are able to sign up to volunteer at PhillyCAM. Once per year, volunteers are allowed to exchange 10 service hours to receive a free workshop. Members who work more than 20 hours throughout the year are acknowledged for their service during the annual member meeting.

This fiscal year, **16 volunteers worked a total of 566 hours** to support PhillyCAM's production projects, administrative operations, events and outreach activities.

Interns

We continue to operate a thriving internship program, which offers internships on a semester-basis: fall, winter/spring, and summer. We have successfully recruited interns through recommendations from professors and career councilors as well as postings on the Greater Philadelphia Film Office and PhillyCAM's web and social media sites.

Last year, we had **13 interns log a total of 1,034 hours**. These students came from a variety of schools, which include **Temple University, Boston University, the Art Institute of Philadelphia, University of the Arts, Rowan University, and ITT Technical Institute**. While working at PhillyCAM, these students received course credit, got hands-on production experience, learn about the administrative operations of a non-profit organization, and helped us build relationships with our community partners.

In addition to having a number of interns for each semester, we also began participating in **Drexel's Co-op program**, which has enabled us to recruit and hire a highly skilled media student who works with our organization for 6 months. Students participating in the co-op program work 40 hours per week to gain professional experience in their field of study. Our recent co-op student has led the launch of our new community affairs program entitled *Around the Corner*, increased our administrative and production capacity, and helped us build relationships with community organizations.

Strategic Plan

PhillyCAM completed a comprehensive strategic planning process in July 2012. Facilitated by Edward F. Swenson & Associates, Inc. (EFS), an independent management consulting firm, the process enabled the Board and staff to reflect on their vision and goals for PhillyCAM. EFS worked closely with a Steering Committee and the Executive Director. It engaged the Board in small groups; and as a whole in a retreat and several other planning sessions. The firm interviewed stakeholders, outlined a benchmarking process, and designed surveys to reach out to PhillyCAM's constituents. These are the resulting strategies from this process.

Programmatic Goals

- Establish PhillyCAM as a convener and “go to” resource that is open and welcoming to anyone, regardless of their views or background.
- Create a community around media making, which increases the digital literacy of Philadelphians and embraces the full range of ages and socioeconomic groups.
- Increase the political discourse in Philadelphia and public awareness of media policy issues.

Infrastructure Goals

- Be a leader in understanding and using new technologies.
- Elevate PhillyCAM's leadership and management capacities.
- Sustain PhillyCAM's physical plant to maximize short- and long-term support of activities.

Resource Development Goals

- Build PhillyCAM's financial sustainability.
- Convey an image and identity that are unique and valued.
- Build PhillyCAM's base of individual and institutional members.

Attachments:

- Program Summary
- Programming Policy
- Membership Form
- Organizations Providing Content to PhillyCAM
- Program Submission Form
- Complaint Form
- Board List
- Board of Directors' meetings minutes from July 2013 – June 2014
- Equipment List
- Email newsletters

EXHIBIT B-5

PhillyCAM Business Plan, FY
2014-2016, dated January 17,
2014, amended August 1, 2014



EXHIBIT B.5

PHILLYCAM BUSINESS PLAN, FY 2014 - 2016

DATED JANUARY 17, 2014*

(Amended August 1, 2014)



BUSINESS PLAN FY 2014 – 2016

SUBMITTED BY
PHILADELPHIA PUBLIC ACCESS CORPORATION
January 17, 2014*

*Amended August 1, 2014

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Executive Summary

After a hard-fought grassroots campaign, public access television in Philadelphia transitioned from the dream of a large and diverse group of people to a reality called PhillyCAM. As the non-profit designated by the City of Philadelphia to operate its public access television channels, PhillyCAM was in its infancy in terms of nonprofit status, yet assumed an adult-size responsibility, embarking upon being the steward of public access television.

During PhillyCAM's forth year of operations its membership grew to over 500, and its educational offerings trained over 300 people. It found, outfitted, and moved into its new headquarters – great feats, especially for a relatively small and up-and-coming organization. This success is evidence of what many have recognized for a very long time – the area's demand for a community media center is strong and growing. Philadelphians are hungry for communication vehicles that will enable them to share their voices. They are eager to be part of a value-based and member-driven organization whose mission and actions are aligned with the needs and interests of the neighborhoods and communities that fuel the vitality and unique richness of life in Philadelphia.

The opening of its Ranstead Street studios shone a spotlight on the organization, catapulting its visibility to people throughout the City. The pace of PhillyCAM's organizational journey over the past 12 months accelerated exponentially. We saw percentage increases in the triple digits in all areas from studio production (1200%) to equipment checkouts (200%) to media lab use (400%). And 2,123 people came to PhillyCAM to attend 33 screenings, discussions and networking opportunities. PhillyCAM is poised to continue to see its membership, cable programming, distribution networks and scope of activities grow well into the future.

The board and staff of PhillyCAM identified the following goals as part of an extensive strategic planning process initiated in 2012 and reviewed annually.

The **programmatic strategies** outlined are ambitious but achievable, and call for PhillyCAM to engage the community in media making deeply and widely. They reflect the strong desire of the Board and staff to support underrepresented voices, bringing to life the mission and the principles behind public access, freedom of speech, and the democratic process.

The **infrastructure strategies** address perhaps the biggest trial that lies before PhillyCAM over the coming years – how best to master the challenge of growth and change. Disciplined management and leadership will focus PhillyCAM on its high-priority goals, and anticipate the technology, governance, personnel, and facility practices needed now and in the future. High priorities for the next two years include cablecasting our flagship *PhillyCAM Community* channel in HD, adding a 3rd channel to our line up in 2015, a 4th channel by Fall 2016 and a 5th in 2017.

The **resource development strategies** champion a range of initiatives to help secure PhillyCAM's future. The renewal of the franchise agreement takes center stage in this regard, and is complemented by fundraising, earned income, and brand-building initiatives.

This Business Plan lays out strategies to continue this positive growth and support our mission well into the future.

**Programmatic
Goals**

- Establish PhillyCAM as a convener and “go to” resource that is open and welcoming to anyone, regardless of their views or background.
- Create a community around media making, which increases the digital literacy of Philadelphians and embraces the full range of ages and socioeconomic groups.
- Convey an image and identity that are unique and valued.

**Infrastructure
Goals**

- Be a leader in understanding and using new technologies.
- Expand channel line up to two distinct channels and submit requests for 3rd, 4th and 5th channels.
- Upgrade our broadcast capability to begin cablecasting in HD.

**Resource
Development
Goals**

- Build PhillyCAM’s financial sustainability.
- Ensure adequate funding in upcoming Comcast cable franchise renewal.
- Diversify PhillyCAM’s base of financial support by increasing non-cable-company funding.
- Build PhillyCAM’s base of individual and institutional members.

I. ORGANIZATIONAL OVERVIEW

Mission and Vision

PhillyCAM is a community media center that brings together the people of Philadelphia to make and share media that promotes creative expression, democratic values and civic participation.

PhillyCAM will become...

- More than a television station – a vibrant community center that connects, meets unique interests and needs, and teaches people to become creators, not just consumers, of high-quality media.
- A leading advocate for discussing issues absent from public dialogue in greater detail and without bias.
- An organization that is indispensable to local community, educational, and government institutions.
- A resource for Philadelphians to build digital literacy skills.

Background

The community television and public access movements crystallized in the early 1970s when budding cable systems opened up channels to do-it-yourselfers; then the Federal Communications Commission mandated in 1972 that cable providers in the nation's largest TV markets provide channels for government, educational institutions and the public. Today there are close to 2000 public, educational, and government (PEG) access centers, also called Community Media Centers, across the nation producing over 20,000 hours of local programming each week.

In 1983 Philadelphia City Council passed an ordinance to establish a public access system to be funded by the cable companies, but failed to implement the promise of this legislation. For years Philadelphia held the dubious distinction of being the largest city in the United States without public access cable television. In the fall of 2007 the City finally took the necessary steps to launch a public access cable television station. After a prolonged and successful fight led by activists followed by a collaborative effort between those activists and city officials to create a workable scenario, Mayor John Street filed the articles of incorporation to create the non-profit which would operate the public access system. Then, in fall 2008, Mayor Michael Nutter and City Council made their appointments to the first board of directors of the Philadelphia Public Access Corporation, more familiarly known as PhillyCAM, thereby creating the body designated by the City to set up the public access television system. The first board meeting took place in October 2008.

A year later PhillyCAM began cablecasting on October 23, 2009 and since then the cablecast schedule has grown to 24 hours a day, 7 days a week. PhillyCAM opened a start-up facility located within the Painted Bride Art Center in May 2010. Field production equipment and post production editing stations were purchased. PhillyCAM began assisting groups and individuals in content submission for cablecast and conducted orientation sessions to introduce people to the possibilities of public access television. It convened its members and the general public for educational programs and screenings to showcase the work exhibited on the channel.

PhillyCAM's staff has grown, from one staff member in 2009 to seven full-time employees supported by a host of committed volunteers. The Board of Directors and the Executive Director conducted an extensive search for an appropriate permanent facility. In February 2012 PhillyCAM opened its new home at 7^h and Ranstead Streets. The facility is outfitted with two television studios and ample training, meeting and office space.

In FY 2013 PhillyCAM:

- Presented 65 original television series
- Debuted 55 works produced by young people
- Presented 2625 hours of independently produced documentaries and short films
- Cablecast 720 hours of community-interest programming in primetime
- Averaged 500 members at any point in time during the year
- Averaged 5.77 hours per week of original, non-repetitive, locally-produced content

About Public Access

Public access is a system on cable television, which provides people with access to equipment and training to make and broadcast their own non-commercial programs, publicize their activities or get their message out without having to buy airtime.

The public receives access to these facilities as part of the compensation from the cable companies that are given the right to do business within a given municipality, including the use of public rights of way (sidewalks, telephone poles, etc.). This compensation includes franchise fees that are paid to the City and an obligation to provide facilities, equipment and channel capacity for public access.

Public access cable is not the same as public broadcasting (PBS). Public or community access programming and content production is open to everyone in the community on a typically first come first served basis. Public access serves as an "electronic park" where people from all different types of communities have the opportunity to share their views and information on just about anything—arts and culture, sports, cooking, religion, education, local issues, national news, health concerns—the list is only limited by people's imaginations.

Since 1983 there have been significant changes to communications technology, including the rise of the Internet, widespread use of the personal computer, and the development of high bandwidth technologies. Through public access broadband and other digital technologies individuals, community groups and non-profit organizations can maximize their involvement in the new digital age.

Our Constituency

PhillyCAM is dedicated to insuring the inherent potential of information technology to increase civic engagement and help improve our democracy. Public access provides a forum and opens the airwaves to civic dialogue of regional and national importance. It provides all community members and particularly those in underserved or disenfranchised communities with the tools to be heard by others.

Public access is a system on cable television where people have access to equipment and training to make and broadcast their own non-commercial programs, publicize their activities or get their message out. But this assumes that individuals are all coming from a similar experience and feel entitled to their right to make their voice heard using public access television. This is not necessarily the case for low-income people, immigrants, communities of color, sexual minorities, people with disabilities or otherwise marginalized communities who have often been left out or misrepresented by mainstream media. PhillyCAM supports the use of public access television by individuals seeking to present their different and individual points of view. PhillyCAM also designs educational and outreach programs to reach people who may not actively seek out public access television as a forum to discuss issues and share stories.

Anyone who lives or works in the greater Philadelphia region can participate in PhillyCAM programs and public access television creation. PhillyCAM's goals most directly affect the residents of the City of Philadelphia. Public access functions much like a public library - a community resource that ensures that all people have equal access to vital tools of communication. With the rise of major media outlets being owned by fewer and fewer corporations, PhillyCAM views the ability to communicate as a fundamental human right. The denial of media access cuts people out of the political and social realm, especially those communities that have historically not had access to the tools of production and distribution.

PhillyCAM supports an engaged constituency of people of color, working people, women, sexual minorities, people with disabilities, social justice activists, educators, artists, community arts creators and presenters, senior citizens, former prisoners, youth, unionists and otherwise marginalized communities who have often been left out or misrepresented by mainstream media. Demographic survey info shows that 52% of our members self identity as male, 47% female, 1% transgender, 49% African American, 2% Latino, 3% Asian American, 41% Caucasian and 4% mixed race. Members are from all parts of the city as seen from their zip codes from 19101 to 19153 and everywhere in between.

Through outreach we continue to grow an empowered public access system by cultivating community collaborations and promoting our services and resources to government agencies, religious and cultural organizations and non-profits. This work includes doing an inventory of organizations who are already using media or have incorporated technology into their day to day, beginning with an evaluation of the media environment in Philadelphia so that public access is not being duplicative but complementary and launching a multi-tiered outreach campaign that is both person to person and online. The intent is to create a citywide network of organizational partners who will publicize the opportunities offered by the access center and contribute programming to the channels.

II. PROGRAMMATIC STRATEGIES

The **programmatic strategies** outlined in this plan are ambitious but achievable and call for PhillyCAM to engage the community in media making deeply and widely. They reflect the strong desire of the to support underrepresented voices, bringing to life the mission and the principles behind public access, freedom of speech, and the democratic process.

PhillyCAM's vision is to be a vibrant community media center in Philadelphia that is accessible and welcoming to all people and provides them access to and training in the use of new digital media technologies.

PhillyCAM facilitates the creation and cablecast of locally produced television programs that reflect the diverse social, political, ethnic, and artistic communities that can be found in Philadelphia. These programs promote neighborhood news and community events, public health information; labor issues and youth initiated programs; to highlight but a few examples. The programming gives a direct voice to all neighborhoods, groups, and points of view that exist in such a diverse and vibrant city.

PhillyCAM is committed to creating an environment that fundamentally promotes public discourse, explores issues in-depth and redistributes power within the realm of communications media. All Philadelphians have the opportunity to make and watch programs about themselves, their lives, and interests.

Growing Program Offerings & Channel Expansion

PhillyCAM began cablecasting on October 23, 2009. From July 1, 2012 – June 30, 2013, 41 new original 30 – 60 minutes series were added to our weekly line up bringing the total to 65. Youth produced programming increased from 41 to 55 works produced by young people. We presented 141 hours of independently produced documentaries and short films and 1095 hours of community interest programming was shown in prime time. Productions in our studios resulted in 200 hours of programming.

From July 1, 2012 – June 30, 2013, our schedule averaged 5.77 hours of original, non-repetitive, locally-produced content per week. We estimate reaching an average of 10 hours per week of original, non-repetitive, locally-produced content by the end of 2014 and 20 hours per week of by end of 2015. We will reach this threshold in four ways:

- 1) Increase the amount of live programming coming out of our newly upgraded Express Studio.
- 2) Increase our city-wide event and community forum coverage.
- 3) Increase the number of non-profit and community organizations who receive PhillyCAM's support in producing content.
- 4) Increase programming produced by young people at PhillyCAM or participating in media production programs either in or out of school.

Programming Summary

| Program Type | Original Airings | Playbacks | Total Hours |
|--|------------------|-----------|-------------|
| Local Source | 300 | 3750 | 4050 |
| Non-Local Source | 470 | 2295 | 2765 |
| Programming consisting of exclusively text ie: Community Bulletin Board | | | 1540* |
| Total Programming Hours from July 1, 2012 – June 30, 2013 | 750 | 6045 | 8355** |

*We had to rely more on our community bulletin board during the months of September and October while we rebuilt our media archive following our broadcast server crash.

**Total hours of programming is lower than our typical 8760 hours per year as we were off the air for 2 weeks as a result of a broadcast server failure in September 2012.

1.) Express Studio Programming

We will increase the amount of live programming produced in our Express Studio outfitted with two robotic cameras and a flexible set up. Two people can successfully produce a high quality program to tape or go live to our channel. The Express Studio was modeled on Cambridge Community Media's Be Live Studio which produces on average 55 hours of live programming a week. With several shows already in development we project being able to add an average of 3.5 hours of new, original programming, some of it produced live, to our schedule each week by Fall 2015. In order for these programs to be sustainable and flourish we will need to hire additional production staff to oversee these daily programs.

The plan is to produce these programs daily from noon to 1:00 pm.

Programs in the works include:

Around the Corner

30 minutes/per week

Interviews with PhillyCAM non-profit and community based organization members. Viewers will have the opportunity to call in with their questions.

Member Spotlight

30 minutes per week

Interviews with PhillyCAM members and opportunity to hear more about their programs, their journey and how they have benefited from being a PhillyCAM member.

Tech Talk

30 minutes per week

PhillyCAM staff will share tips on using various equipment available at PhillyCAM, Members and other invited guests such as local filmmakers, musicians or tech professionals will share their own production tips. Viewers will have the opportunity to call in with their questions.

Open Mike

60 minutes per week

An invitation to local poets and musicians to perform "on the street" in the Express Studio which has windows looking out on to 7th Street. Passersby will be able to view the performances through the window and hear them with through speakers placed outside.

Street Beat

30 minutes per week

Interviews with writers and reporters from other local print and online news outlets to discuss recent stories. Format provides an opportunity to get more of the story behind the story. Partners will include: Philadelphia Public School Notebook, Al Dia, Philadelphia Gay News, Philadelphia Tribune, AXIS Philly, Flying Kite, Technically Philly, WURD.

Youth Mediazine

30 minutes bi-weekly

A youth-produced, crowd-sourced tv featuring video, audio, photos and artwork submitted by young people to be part of a magazine type format program.

Senior Moments

30 minutes bi weekly

A light-hearted and informative bi-weekly conversation with people over 65 hosted by PhillyCAM members of that generation.

2.) Community Events Coverage

With a growing crew of well-trained PhillyCAM studio producers we are able to provide more live coverage of forums and other events featuring dialogues around current issues that are important to neighborhoods and communities. Past examples of this type of programming include event coverage for Philly Tech Week, Black Star Film Festival, Art Sanctuary's Celebration of Black Writing and other one off events. Looking ahead we anticipate expanding this type of on-site coverage to signature annual events such as the Flower Show, Fashion Week, Fringe Arts, Science Fest and One Book, One Philadelphia.

When we are able to acquire a mobile production vehicle we also envision having a recognized community presence at outdoor cultural festivals and gatherings such as Feria del barrio, Peoplehood, Odunde, Kensington Kinetic Sculpture Derby, Autumn Moon Festival, Cherry Blossom Festival, Puerto Rican Day Festival and Cinco de Mayo.

3.) Non-Profit Shows

We will increase the number of non-profit and community organizations receiving PhillyCAM's help in the production of programs focusing on local issues. This is possible now with recently added staff and a more robust group of skilled volunteers. Production of *Go Philly Service (GPS)*, a monthly conversation show featuring local non-profit leaders discussing such issues as the Affordable Care Act, sexual assault on college campuses and the establishment of the City's new Land Bank, will be produced on a monthly basis and result in 6 hours of programming per year. Special local arts programs such as *Mentor Mentored*, a monthly poetry series with Moonstone Arts and concerts and conversations hosted by the Philadelphia Jazz Project will result in another 2.5 hours of content per month.

In the coming year the City's 311 office, Liberty Resources, and the Philadelphia Association of Community Development Corporations will receive training and support in support of the production of new monthly series, resulting in another 1.5 hours of content per month.

4.) More Youth Produced Programming

In FY 2015 we will build on PhillyCAM's role as a hub of youth media production to launch our own Youth Media program that will offer regular trainings for young people aged 14 – 23 in digital media and television production. The long-term goal is to develop a core of young people committed to producing weekly youth programming for our various channels. We project that within a year of launching the youth space that they will be creating 2 hours a month of new programming for the PhillyCAM cable channels. By 2017 we will have enough youth produced content coming out of PhillyCAM and other Philadelphia programs that we will be able to launch our Youth Channel.

Vision for Channel Expansion

Only four years into our work, it is necessary for us to expand our channels as demand for channel time is growing exponentially. Projecting into the future, two channels will not meet the needs of our rapidly expanding community of producers. When envisioning a robust public access system for Philadelphia we looked to comparable cities around the country for a baseline and inspiration. Cities with similar populations like Chicago and all of the boroughs of New York to smaller cities like Minneapolis and Cambridge, Massachusetts all operate 3 or more public access channels. Our goal is to add a 3rd channel in 2015, a 4th channel by Fall 2016 and a 5th in 2017. This is inline with our long-term vision and on par with cities with similar operations around the country.

In preparation for reaching our 20 hours per week of locally-produced original content per week, which will let us request a third channel under the franchise agreement, we will launch unique branded channels with different program schedules on Comcast 66 and 966 and Verizon 29 and 30. We are targeting a soft launch of these newly branded channels by Summer 2014. In order for PhillyCAM to transmit two different channels to the cable headends engineering work will need to be done by Comcast.

Plans to brand and differentiate these two channels are as follows:

Channel 66 will become ***PhillyCAM Community*** and will be branded as our flagship public access channel featuring a strong and growing line up of local member-produced content.

Channel 967 will become ***PhillyCAM Live Culture*** and feature programs celebrating the vibrant cultural scene in the city of Philadelphia. In a recent poll of PhillyCAM members, 82% identified their program interest as arts and culture. Programming on this channel would include independently produced videos by local filmmakers on dance, music, theater, visual and literary arts. Programs already screening on PhillyCAM by arts organizations such as Apiary Literary Magazine, Art Factory, Big Picture Alliance, Leeway Foundation, Mural Arts program, Philadelphia Jazz Project, Moonstone Arts, Painted Bride Art Center, Philadelphia Folklore Project, Scribe Video Center, Termite TV Collective and the Village of Arts and Humanities will provide the building block of the *Live Culture* program lineup.

Projecting into 2015 and 2016, we have a strategy to meet the programming thresholds in the current franchise agreements to request 2 additional channels. The plan for these channels is as follows:

PhillyCAM Sustainability – Channel 968

In keeping with the City's vision of becoming the most sustainable city in the US by 2015, we will create a channel covering the areas of energy, environment, equity, economy, and engagement. Such a channel would include programming focused on human services, nutrition, wellness, and the environment. We also see this channel as being a place for conversations of that are faith-based in nature.

PhillyCAM Heritage – Channel 969

In response to the changing demographics of Philadelphia we will seek to create a channel committed to providing an outlet to new immigrants and non-English speakers. Partners that we will work with on developing training programs and content will include Juntos, Taller Puertoriqueno, SEAMAC, Chinatown CDC, and Raices Culturales. It is our intention to develop a close relationship with the Welcoming Center so that we may find ways of engaging with immigrants from the Caribbean, Africa, Asia, the Middle East and Latin America. As we see these programs develop it will definitely influence where we look to place satellite production and education training sites. This effort will also require multi-lingual staff and language specific training materials. We will also want to adopt technical solutions to assist us in subtitling non-English language programming to make it accessible to more audiences whenever possible.

Projecting into 2017, we have a strategy to meet the programming thresholds in the current franchise agreements to request another additional channel, for a total of five PhillyCAM channels, the maximum provided for in the current franchise agreements, with all channels featuring unique, locally-produced programming. The plan for this channel is as follows:

PhillyCAM Youth – Channel 970

PhillyCAM has emerged as a hub of activity celebrating the accomplishments of youth media makers in all forms. Already there is a solid block of youth produced programming that runs every afternoon featuring work by many of our member organizations including YESPhilly, Norris Square's Art Factory, Mt. Airy Homeschool Collaborative, Scribe Video Center, Presenting Our Perspectives Philly Youth News (POPPYN), Little Filmmakers, People's Emergency Center and Big Picture Alliance.

With more production work being produced as a result of trainings in the new youth space and with PhillyCAM starting its own youth media training core in 2015, we anticipate being able to have sufficient content to launch a channel dedicated to media produced by and for young people 25 and under by 2017. The channel will provide an important voice to young people and help inform the broader public, elected officials, non-profit leaders, parents and educators of what is on the minds of Philadelphia's youngest generation.

Growing Our Youth Media Program

PhillyCAM has emerged as a hub of activity celebrating the accomplishments of youth media makers in all forms. We have partnered to create content for the channel with non-profits working with young people including YESPhilly, Norris Square's Art Factory, Mt. Airy Homeschool Collaborative, Scribe Video Center, Presenting Our Perspectives Philly Youth News (POPPYN), Little Filmmakers, People's Emergency Center and Big Picture Alliance.

In FY 2015 we will build on these connections to launch our own Youth Media program that will offer regular trainings for young people aged 14 – 23 in digital media and television production. The long-term goal is to develop a core of young people committed to producing weekly youth programming for our various channels. We project that within a year of launching the youth space that they will be creating 2 hours a month of new programming for the PhillyCAM cable channels. By 2017 we will have enough youth produced content coming out of PhillyCAM and other Philadelphia programs that we will be able to launch a dedicated Youth Channel.

We have the opportunity to lease an additional 2,100 square feet at our current location starting in Spring 2014. This is an ideal location to begin to test ideas about how to create a Tech Lounge to connect young adults to media making, mentors, and institutions throughout the city in one dynamic space designed to inspire collaboration and creativity.

We will do a comprehensive survey of existing media arts programs locally, and survey key national organizations to review their structure and format. We will bring together key stakeholders with an emphasis on Philadelphia Youth Media Collaborative organizations and their constituents who have actively used PhillyCAM's spaces and resources to be part of our planning process. We will develop a youth committee to also participate in this visioning process.

Growth of the Youth Media program will result in increased youth produced content on all our cable channels. And the larger community impact of the Tech Lounge will be more young people will learn how to access, analyze, and create digital media content with thoughtfulness and social responsibility.

It is our goal to develop a space where teens can access computers and a variety of media creation tools and software to stretch their imaginations and acquire digital media skills. The Tech Lounge will invite participation at all levels and will have drop-in hours open to all eligible teens. Much in the way a public library provides access to books, the Tech Lounge will provide access to technology supported by an on-going schedule of workshops and hands on demos. We will partner with Philadelphia Youth Media Collaborative to lead workshops designed to build teens' skills and result in digital projects from music to videos to photography to podcasts. Workshops in video journalism will provide youth an opportunity to report stories from their perspective.

Space within PhillyCAM is already at a premium, especially in the evenings. This new Tech Lounge will make additional teaching space available in the evenings for workshops for adult members. We will offer new types of technology training to all ages including sound

composition, audio editing, podcasting, graphic design or animation. The space would offer different tools than in our other production spaces in a more creative environment. This will give people more reasons to want to be come a PhillyCAM member, increase earned income and add more unique, original content to our cable channels.

However, the expansion of the youth media program will result in increased operating costs for rent, technology, program expenses and staffing. We will hire a Youth Media Coordinator who would be responsible for overseeing daily operations of the Youth Media Programs and Tech Lounge. Video production equipment and computer stations to outfit the space will be purchased. Our monthly operating costs such as rent, utilities and supplies will increase. In order to be successful in sustaining the Tech Lounge beyond the initial planning stages we will need increased financial support.

Marketing and Communications

Since our launch in the fall of 2009, name recognition and visibility for PhillyCAM has clearly increased. But many people are still unaware of the opportunities public access offers, its relevance and importance as a communications and community-building tool. PhillyCAM completed a branding process with the result was a comprehensive brand identity that included a new logo, a social media avatar and tagline “People Powered Media.” We have used the new logo on all printed materials and created new, colorful marketing materials including postcards, business cards, stickers, buttons and t-shirts.

Over the next several years, we will craft marketing, communication, and membership initiatives to capitalize on the positive attention we have earned since our founding. To build our profile and visibility even further, we will enhance the sophistication of our communications, and be proactive in shaping perceptions of our identity, mission and goals. We will be systematic in setting and meeting goals for increasing membership ranks, and will use our new logo as the centerpiece of activities designed to build our brand.

PHILLYCAM IN BRIEF

Our brand as we know it...

What is a brand?

A brand is our promise to deliver a specific kind of experience to our members, visitors, and stakeholders. The brand experience is multi-sensory and includes their interaction with everything from our marketing materials and our website to their visits to our facility.

What is the message of our brand?

PhillyCAM provides me and others in the general public with direct access to media production resources and airtime to produce their own content. PhillyCAM is not just a provider of public programming—it's a resource to distribute my own stories and messages. The new PhillyCAM space is a place where I can go to interact with a diverse community of peers that I appreciate and I learn from.

Values

- Access for All — a commitment to policies that serve the public interest and ensure an equitable and accessible media system to all people on all platforms (e.g., cable TV, Internet, mobile).
- Collaboration — people and groups working together for common goals and powerful results.
- Community Connectivity — communication that unites across culture, demographics or opinion, and that encourages informed civic engagement.
- Discovery — the act of people, in safe places, seeing beyond themselves and viewing the world in new ways.
- Learning — the individual and community transformation, creativity and innovation resulting from new information and new experiences.
- Local Focus — telling stories about, by, and for Philadelphians.
- Quality — state-of-the-art technology and high-level technical standards for on-air programs, media creation, educational experiences, and administrative practices.
- Stewardship — practices that support a fiscally strong organization.

SAMPLE IMAGERY...

Imagery for PhillyCAM provides visual references for our facility, technology, process, people, and even our history.



OUR LOGO

The official logos, type styles, and colors are part of our unique identity. When used in a consistent manner, they project a unified image of our organization. These graphic elements should not be manipulated or modified in any way.

On White



Full Logo



Collapsed Logo



Color Logos

TAGLINE



On Page

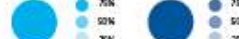


COLORS



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PMS 109
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Hex: FFCC33



PMS Cyan
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PMS 662
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Hex: 0056A9



PMS 324
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Web: R:255 G:255 B:0
Hex: FFCC33

PMS Magenta
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Graphic: PhillyCam brand brief and style sheet used by PhillyCam for any visual treatments in print, online, and on screen.

We will:

- Develop a clear and memorable communications message centered around our *People Powered Media* identity.
- Create unique brands for Channel 66 as our flagship *Community* channel and Channel 966 as our *Live Culture* channel with different program schedules on each.
- Implement a press strategy to generate media coverage includes print, television, radio and Internet coverage.
- Use the channels to communicate our brand and services through our own content, station IDs, logo bug, PSA's and billboard announcements.
- Expand PhillyCAM website, generate more station created editorial and member generated content.
- Use email marketing software to build an email list and send out electronic newsletters and bulletins about programs and opportunities for participation.
- Refine our social media strategy with an emphasis on better, timely communications about what's happening on air and in person at PhillyCAM with the goal of growing our community of PhillyCAM fans and supporters.
- Place advertising about PhillyCAM's programs in community papers and on community radio stations.
- Participate in community events and hold Community Meetings across the city to engage potential members and viewers.
- Invite key community and opinion leaders to tour our facility.
- Work directly with our members to help promote PhillyCAM to their networks through Member-led Open Houses.
- Increase our visibility in the community by covering more events. Our best marketing tool is being out with our equipment and demonstrating what we do.

III. INFRASTRUCTURE STRATEGIES

The **infrastructure strategies** address how best to master the challenge of growth and change. Disciplined management and leadership will focus PhillyCAM on its high-priority goals and anticipate the technology and facility practices needed now and in the future. High priorities for the next three years include cablecasting our flagship channel in HD and expanding our channel line up.

Move to HD

Having a HD channel is critical to our future growth because without this upgrade PhillyCAM we will be lost to most viewers who have migrated to only watching programming featured on the higher tiers where HD content lives. Furthermore continuing to only cablecast our content in SD will continue to perpetuate the stereotype that public access content is inferior and poor quality. When in reality all our production equipment is High Definition and most of our producers are down converting their content from HD to SD for playback.

There are already public access stations cablecasting in HD such as MetroEast in the East Portland, OR metropolitan area. We will begin our pathway to provide HD programming to Comcast and Verizon in FY 2014. As stated in the franchise agreement with Comcast, once PhillyCAM can demonstrate to the City of Philadelphia that we are HD ready the request can be made for a HD channel. Placement of the channel in the HD tier must situate PhillyCAM's channels in close proximity to the local broadcast channels.

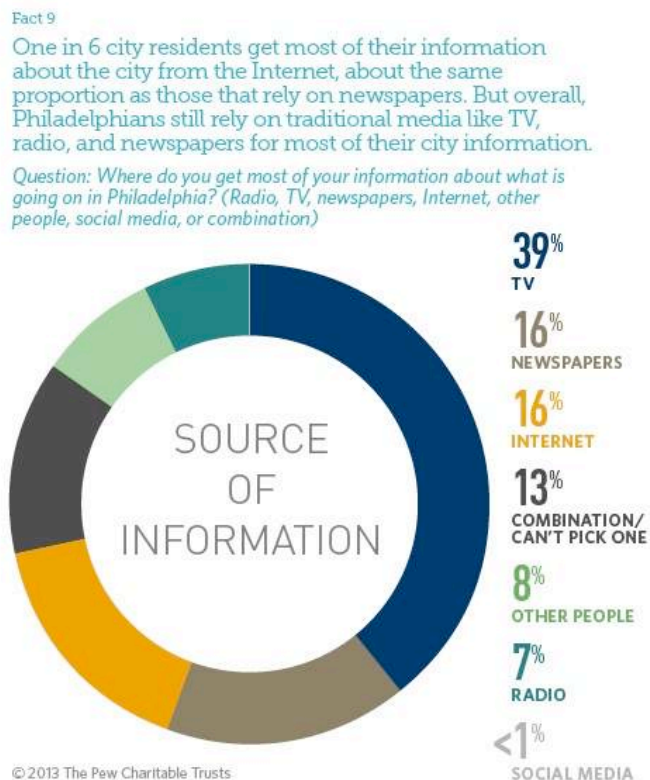
We will be vetting proposals from different companies in early 2014. We have spoken with our current broadcast server vendor, Telvue regarding their HyperCaster broadcast servers. They have proposed a HD/SD Simulcast system that would stream HD video to the web while continuing to deliver SD to the cable head ends until they are ready to upgrade our channel. An advantage of this approach is that we can prepare content in its native format, and mix and match SD and HD files and sources. This allows for a transition to HD at our own pace.

With a target date for installation of the HD servers set for summer 2014 we estimate having our programming schedule to 100% HD by fall 2014.

The system would also have built in redundancy with a back up server that syncs all content and scheduling from the primary. In the event of a failure, the backup can be configured to deliver the primary streams.

Multi-Platform Strategy

The way people watch and interact with media has evolved to include traditional television viewing along with Internet streaming via computers, tablets, and mobile devices. But in Philadelphia where nearly 40% of residents report getting most of their information about the city from television, and only 16% from the Internet, television remains a primary source of local news and information (see Pew Research chart below). PhillyCAM's multi-platform strategy will supplement but not take the place of the delivery over the cable system that must continue to be PhillyCAM's focus to best serve its audience.



To stay current with the ever-evolving technology environment we will continue to develop our Internet presence where new potential users and viewers can find out more information about public access programs and also watch channel offerings. PhillyCAM is a community media center that provides services supporting the varied media platforms in use. This work includes the use of social networking sites, cloud-based video sites and the development of mobile apps.

PhillyCAM will continue to add new ways for people to watch our programs online and via mobile devices. This is very important to growing our impact by making programming available to a viewing public in Philadelphia that doesn't have cable television for a variety of reasons. We anticipate beginning to stream our primary channel in FY 2015 in HD.

Using Telvue's Cloudcast system we manage a Video on Demand player on our website. Any PhillyCAM producer may request to have their program added to the Video on Demand player. By year's end we had approximately 260 videos available to be viewed via our online video on demand player. In addition to having video on our site we also launched a Vimeo channel to host PhillyCAM content and make it available for people to view and share.

| Video on Demand (VOD) | FY 2012 | FY 2013 |
|------------------------------|----------------|----------------|
| VOD Total Hits (Telvue) | 5,649 | 7,528 |
| VOD Unique Visitors (Telvue) | 1,877 | 2,621 |
| VOD Total Plays (Vimeo) | n/a | 3,253 |

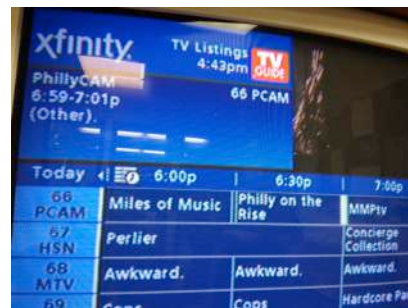
We have been an active collaborator with Comcast on their web portal **Philly in Focus**, a community-driven, local video and interactive media network dedicated to supporting the creative efforts of the personalities, businesses and organizations that make this city great. Philly In Focus is a part of Project Open Voice, a national initiative designed to strengthen local content. As of June 1, 2013 we had uploaded 17 videos to our Philly in Focus Channel.

Providing technical support and live streaming of community events, forums and candidate debates is a growing area of interest for PhillyCAM. We have provided live streaming support to Arts Sanctuary's Celebration of Black Writing, Black Star Film Festival, Philly Tech Week, Kensington Kinetic Sculpture Derby, gubernatorial candidate forums and PhillyCAM programs originating from our studios. We will provide more opportunities for non-profits to live stream their programs to reach more people in Philadelphia and beyond. All of these live stream activities also generate content that is televised on our cable channels and made available for later viewing online.

Cable Guide & VOD

In fall of 2012 the PhillyCAM program schedule began to be included in the cable guide on Comcast only. This was a huge step forward and we will continue to make the best use of this opportunity by providing viewers with as much information about programs as possible. It also allows cable subscribers with DVRs to time shift by recording PhillyCAM shows for viewing anytime of their choosing

As per the franchise agreement with Comcast, after our 2nd year of operation we can upload up to 8 hours of video on demand (VOD) content to the *Get Local* section of **Comcast's Video on Demand** program offerings. In March 2013 we were able to successfully upload our full eight hours. Programs featured On Demand include episodes all five episodes *GPS (Go Philly Service)*, the youth produced documentaries *Pushouts* and *Pushouts II*, and arts programs featuring poets, filmmakers and jazz musicians. And in early 2014 we uploaded 8 hours of HD content to the Comcast On Demand service.



We are still trying to find ways to steer viewers to this content. To reach the PhillyCAM content viewers must first select On Demand » scroll down to Get Local » Select Philly in Focus » select PEG Access and then finally you arrive at the PhillyCAM menu. This is a very difficult process that needs to be made easier for viewers to find our VOD content.

We also need to get a set top unit from Comcast so that we can monitor our signal on any delivery system. We are currently unable to view Comcast On Demand at our 699 Ranstead Street location, which makes it impossible for us to verify if uploaded content has reached the VOD folder.

Completing Facility Build Out

PhillyCAM plays an important role in the community as a physical center in which producers can come together for in-person, peer-to-peer learning and create ways to situate their work in a rich multi-platform network for community media, which straddles linear cable channels, Internet and other media forms. The two-level, 8,000 square foot space, located in the Market East neighborhood at 699 Ransstead Street, features two television studios, a media lab where members edit their projects, and community space where members gather and collaborate.

On any given day it is not unusual to have a production being recorded in the Main Studio, members editing in the Media Lab, a training being held in the Community Room and members gathering in the Commons networking or checking out equipment.

In FY 2014 and FY 2015 we will complete the fit-out of a few remaining production areas and make some final tweaks in the Main and Express Studios to improve overall production quality.

These will include:

- Upgrade to a HD broadcast server and install redundant server.
- Upgrade acoustics in the Main Studio.
- Purchase additional lighting instruments for the Main Studio grid.
- Purchase/construct a range of sets, risers and backdrops to add more diversity to the look of PhillyCAM productions.
- Complete the fit-out of the Edit Suite and Sound Room/Edit Suite.
- Install exterior signage on our building to enhance our visibility and increase recognition of PhillyCAM as a community destination.

FY 2016 will include projects to safeguard our digital files through archiving, expanding our off site production capability and expand out education space with the creation of a Tech Lounge for youth and adult learners.

These will include:

- Research and purchase a media archiving system to safeguard all PhillyCAM master files.
- Purchase mobile equipment to enhance off-site production capability.
- Purchase a vehicle for mobile production.
- Build out the youth media technology and education space.

The lease for our current space is in effect until July 2021. To insure a sustainable future for PhillyCAM it is a priority that adequate capital dollars are earmarked in the new Comcast franchise in the event that we need to relocate to a new facility once our lease is up.

IV. Resource Development Strategies

The **resource development strategies** call for a range of initiatives to help secure PhillyCAM's fiscal health well into the future. The renewal of the franchise agreement takes center stage in this regard, and is complemented by fundraising, earned income, and brand-building initiatives. Cable fees provide the base funding for PhillyCAM as stipulated in the cable franchise agreements between the City of Philadelphia and Comcast Corporation and Verizon. But it is a priority to diversify our sources of support to insure the health and growth of the organization.

Foundation Support

We will seek foundation support to raise \$50,000 in FY 2014 to put towards general operating and increase that to \$65,000 by FY 2016. We will seek grants from private and public funding sources in order to develop new programs and better serve the needs of the community. We have begun developing relationships with program officers at regional foundations such as the Barra Foundation, Pennsylvania Council on the Arts, William Penn Foundation, Knight Foundation, Philadelphia Foundation, Wyncote Foundation and the Samuel S. Fels Fund. To date we have received funding from Bread and Roses Community Fund, J-Lab for a youth-led multimedia journalism project and annual support from the Philadelphia Cultural Fund to support our arts and culture programming.

Membership

Anyone who lives or works in the greater Philadelphia community regardless of race, color, religion, national origin, ability, age, gender expression, sexual orientation, disability or economic status may become a member of PhillyCAM. To become a member an individual or organization must pay annual membership fees and agree to abide by the policies and procedures of the organization. Non-profit organizations or community groups may become members by submitting proof of non-profit status or a history of working collectively.

We intend to keep membership fees at their current level and will consider a possible increase in fiscal year 2016. Annual membership fees are collected from individuals and organizations to offset nominal costs. Scholarships are made available to low income individuals to cover membership and instruction fees. PhillyCAM has a membership goal of 650 members by the end of FY 2015 with an earned income goal of \$20,000.

| Membership Type | Membership Fees |
|--------------------------------------|-----------------|
| Individual | \$25 |
| Senior/Youth | \$15 |
| Organization (\$50K and under) | \$30 |
| Organization (\$250K and under) | \$75 |
| Organization (\$500K and under) | \$125 |
| Organization (\$1 Million and under) | \$250 |

Education Programs

Starting in the fall of 2010, we began offering trainings to members to develop their production skills so they can take full advantage of the tools PhillyCAM provides to tell their own stories. Each year workshop registrations continue to exceed expectations. To respond to requests from the PhillyCAM members we will add new workshops. In FY 2014 we will offer 30 workshops with a goal of training 300 people and generating \$15,000 in training fees.

A schedule of training classes is maintained on our website and updated quarterly. Based on member demand we expanded our hours of operation and began offering Saturday trainings starting in FY 2014. Based on members' interests additional workshops will be offered to help producers enhance their production and editing skills. Specialized trainings will be developed including expanded offerings for youth and seniors, non-native English speakers, people with disabilities and other groups who could most benefit from specialized instruction.

| Training Session | Fee | Duration | Frequency |
|--------------------------------------|------|--------------------|---------------|
| Basic Field Production | \$75 | 5, 2 hour sessions | 2 x a quarter |
| Collaborative Filmmaking | \$75 | 5, 2 hour sessions | 1 x a quarter |
| Production Planning & Management | \$40 | 3, 2 hour sessions | 1 x a quarter |
| Advanced Camera Training | \$40 | 2, 2-hour sessions | 1 x a quarter |
| Intro to Studio Production | \$75 | 5, 2 hour sessions | 2 x a quarter |
| Directing & Producing for the Studio | \$40 | 3, 2 hour sessions | 1 x a quarter |
| Intro to Final Cut Pro | \$75 | 5, 2-hour sessions | 2 x a quarter |

Equipment/Space Rental and Production Services

While equipment and production facilities are first and foremost available to members at minimal to no cost, we have begun to make them available for rental to media makers working on independent projects. Over the past year we have begun to work with non-profit organizations and city agencies to produce video content or provide live video streaming. These opportunities create exciting new partnerships that result in content for the channel. And these projects provide excellent visibility for PhillyCAM and give our members, who work as crew, real-world production experience. In FY 2015 we hope to generate \$16,000 in earned income from these areas.

Individual Donors

Our new facility presents us with an unprecedented opportunity to launch a major donor campaign to help insure our financial stability and grow our programs in this exciting new space. It is an opportunity for individuals who support our mission and want to make a commitment at a higher level to insure permanence. In FY 2013 we streamlined our online payment system and encouraged members to make contributions. We have seen individual donations increase by 700% in two years. Our goal for individual donations in FY 2015 is \$5,500.

V. BUDGET

OPERATING

In order to support PhillyCAM's long term goals and those of our growing membership, we anticipate an annual increase of 5 to 10% in our operating budget over the next few years. These increases will be reflected mostly in the areas of staffing, facilities, community engagement and program support.

To retain a qualified staff we have budgeted to offer competitive salaries and compensation packages. Also over the next several years we anticipate adding several new full-time and part-time positions to support the growth of our education programs, increase our production output and support the delivery of services to members. These new positions will include a Production Coordinator to oversee production on PhillyCAM initiated, member-led and for hire projects. To staff our youth programs we will hire a Youth Media Coordinator to oversee daily operations of the youth space, create and run the workshops and trainings and support a growing community of youth producers who will be contributing content to our channels. As our channel lineup expands we will hire a Programming Assistant to assist the Program Director in scheduling multiple channels, populating our on-demand and Internet platforms, and keeping programming information up to date on PhillyCAM's website, on the channel guide and on our social media platforms. To better serve our growing membership we will also hire 1 – 2 part time Access Facilitators to provide additional support to members in accessing PhillyCAM facilities and equipment through one on one instruction. We will also be able to extend our hours of operations. These projected new staffing hires will increase the budget by approximately \$150,000 over the next 2 years.

With more activity happening in our two studios, media lab, common spaces and the proposed new youth space, we are incurring increased maintenance and cleaning costs. Costs are projected to increase from \$230,000 to \$300,000 in the next 3 years. In order to keep the facility and equipment in good working order we need to budget for maintenance of the physical plant and repair/replacement of small and large equipment items. The expansion of the youth media program will also result in increased operating costs for rent, utilities, technology, and program expenses. Video production equipment and computer stations to outfit the space will be need to be purchased. We also budgeted for some infrastructure costs to run phone and data lines to the new space.

In order to continue to grow the skills of our members and attract new members we need to offer more sessions of our core workshops and offering new classes and public programs. We have increased the budget to hire instructors and production facilitators. Due to member demand we anticipate extending our evening and weekend hours but this move will increase our operating budget by at least \$40,000 a year in staffing, utilities and operational costs. We have budgeted \$62,000 in FY 2015 for a community engagement and public relations campaign to grow membership and viewership. This increase will support increased advertising, public relations and event expenses as we look to deepen our reach into all neighborhoods through print, radio and community presence at events.

The following is a summary of PhillyCAM's projected operating and capital budgets for FY 2014 - 2016. PhillyCAM's fiscal year begins on July 1st and ends on June 30th. Budget numbers for FY 2014 are actuals from our pre-audited financial statement. Budget totals for FY 2015 and 2016 are projected.

Operating Budget for FY 2014 – 2016

| | 2013-14 Annual Budget | 2014-15 Annual Budget | 2015-16 Annual Budget |
|--|-----------------------------|-----------------------------|-----------------------------|
| Income | | | |
| 43410 · Corporate Contributions | 0 | 5,000 | 6,000 |
| 43440 · Gifts in Kind - Goods | 0 | 3,000 | 3,000 |
| 43450 · Individual & Business Contributions | 2,626 | 5,500 | 6,000 |
| Total 43400 · Direct Public Support | 2,626 | 13,500 | 15,000 |
| 44820 · Comcast | 500,000 | 500,000 | 500,000 |
| 44820 · Verizon | 500,000 | 500,000 | 500,000 |
| 44835 · Grants - Other | 13,387 | 51,500 | 65,000 |
| Total 44800 · Grants | 1,013,387 | 1,051,500 | 1,065,000 |
| Total 45000 · Investments | 1,715 | 3,500 | 3,500 |
| Total 46400 · Other Types of Income | 334 | 1,500 | 1,500 |
| Total 47200 · Program Income | 50,498 | 59,000 | 64,500 |
| Total Income | 1,068,560 | 1,129,000 | 1,149,500 |
| Expense | | | |
| Total 62100 · Contract Services | 29,049 | 44,400 | 27,500 |
| Total 62800 · Facilities and Equipment | 229,908 | 296,649 | 302,215 |
| Total 65000 · Operations | 21,575, | 38,650 | 42,000 |
| Total 65100 · Other Types of Expenses | 13,276 | 14,500 | 15,500 |
| Total 65200 · Marketing & Outreach | 14,992 | 62,000 | 45,000 |
| Total 66000 · Payroll Expenses | 475,290 | 605,834 | 664,383 |
| Total 67000 · Program Expenses | 33,651 | 111,800 | 105,000 |
| Total 68300 · Travel and Meetings | 2665 | 10,800 | 18,200 |
| Total Expense | 874,299 | 1,184,633 | 1,219,799 |
| Net Operating Income (Loss) | 194,261 | (55,633) | (70,299) |
| Transfer from Cash Reserve | 0 | 55,633 | 70,299 |
| Net Income | 194,261 | 0 | 0 |

Capital Budget for FY 2014 – 2016

In FY 2015 we will have budgeted for the following capital projects.

- Upgrade to a HD broadcast server and install redundant server.
- Address the acoustics in the Main Studio.
- Purchase additional lighting instruments for the Main Studio grid.
- Purchase/construct a range of sets, risers and backdrops to add more diversity to the look of PhillyCAM productions.
- Complete the fit-out of the Edit Suite and Sound Room/Edit Suite.
- Install exterior signage on our building to enhance our visibility and increase recognition of PhillyCAM as a community destination.

FY 2016 will include projects to safeguard our digital files through archiving, expanding our off site production capability and expand out education space with the creation of a Tech Lounge for youth and adult learners.

These will include:

- Research and purchase a media archiving system to safeguard all PhillyCAM master files.
- Purchase mobile equipment to enhance off-site production capability.
- Purchase a vehicle for mobile production.
- Build out the youth media technology and education space.

| | FY 2014 Annual Budget | FY 2015 Annual Budget | FY 2016 Annual Budget |
|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 15000 Fixed Assets | | | |
| 15100 Furniture and Fixtures | 0 | 22,000 | 30,000 |
| 15200 Computers/Software | 2,953 | 20,000 | 0 |
| 15310 Broadcast and Internet Systems | 0 | 130,000 | 214,600 |
| 15320 Studios and Master Control | 40,236 | 60,000 | 145,400 |
| 15330 Field Equipment | 7,943 | 15,000 | 134,000 |
| 15340 Post Production Equipment | 0 | 20,000 | 32,000 |
| 15390 Theater/Projection Systems | 0 | 3,000 | 0 |
| 15500 Autos & Trucks | 0 | 0 | 120,000 |
| 15505 Installation/Training/Warranty | 0 | 0 | 135,200 |
| | 51,132 | 270,000 | 811,200 |
| 15900 Leasehold Improvements | | | |
| 15902 Studio Engineering Consultant | 3,310 | 5,000 | 5,000 |
| 15903 Architect/Building Consultants | 26,183 | 25,000 | 80,000 |
| 15904 Outside Contract Services | 0 | 150,000 | 380,000 |
| | 29,493 | 180,000 | 465,000 |
| Total transfer to Fixed Assets | 80,625 | 450,000 | 1,360,200 |

Appendix 1: Our Structure

Philadelphia Public Access Corporation, doing business as PhillyCAM, was incorporated by the City of Philadelphia in December 2007 and received its tax-exempt 501(c)(3) status under the Internal Revenue Code in September 2009. PhillyCAM is a membership organization whose board of directors is elected by its members. The initial Board of Directors, comprised of 15 members, was appointed by City Council President Anna Verna, with input from individual Council Members, and Mayor Michael Nutter. This was in accordance with the by-laws of the organization.

The initial board included representatives of the cultural, educational, social service, media and faith-based communities. Board members include several filmmakers, a media policy professional, attorneys, university professors, journalists and a reverend. There are board members from the African American, Latino, Asian American, and LGBT communities.

The board is now at its prescribed total of 19 members. PhillyCAM members in good standing, who are residents of Philadelphia, may run for one of 12 Board of Director positions. PhillyCAM's board of directors is responsible for insuring the health and growth of the non-profit and be accountable to the mission, vision and values of the organization. Board members are elected to an initial two (2) year term. Board members are expected to attend meetings, participate on at least one committee, participate in discussions and related decision-making related to policies and systems for organization governance, represent PhillyCAM publicly, participate in long-range planning, approve annual budget and other responsibilities as needed. The President of City Council and the Chief Innovation Officer of the City of Philadelphia or their designees serve on the board. And the Board of Trustees of the Free Library of Philadelphia and the School Reform Commission each has one appointee.

PhillyCAM continues to grow its membership base which now as of date of this report totals over 500 individuals and non-profit organizations. As stated in the bylaws, membership is available to any individual who lives or works in Philadelphia or Philadelphia-based organizations. The membership is comprised of users and supporters of PhillyCAM.

In 2014 the Board intends to review the election process to insure that it is open, inclusive and not overly labor intensive for staff or membership. The board will also look to implementing a process to evaluate individual board member performance.

Appendix 2: Board or Directors

Elected by the PhillyCAM membership on March 21, 2013

Beth McConnell, Policy Director,
Philadelphia Association of Community Development Corporations

Bruce Schimmel, Founder, Philadelphia City Paper

Denise M. Brown, Executive Director, Leeway Foundation

Doris Thomas, PhillyCAM member

Inja Coates, Planning Board, Philadelphia Community Access Coalition*

Jihad Ali, Designee of City Council President*

Jim Moran, PhilaPOSH and CWA Local 38010

Jim Pecora, Chief Technology Officer, Free Library of Philadelphia*

John Herzins, Philadelphia Department of Public Property*

Jonathan Stein, General Counsel, Community Legal Services

Jos Duncan, Director, Griotworks

Messapotamia Lefae, PhillyCAM member

Myla Morris, Philadelphia Chapter NOW

Ricky Paul, DP Arts Consortium

Dr. Sharon Thompson, Community College of Philadelphia

Terry E. Johnson, City of Philadelphia, Health Commissioner's Office*

Wayne Geschwindt, PhillyCAM member

*appointed board members

Note: Board total is only at 18 as a board member recently stepped down

Appendix 3: Staffing

To meet the needs of our new facility we continue to evaluate staffing needs. A diversified staff, which is inclusive of racial and ethnic minorities, is a priority. It is an organizational commitment that the Center's staff be reflective of the diversity of Philadelphia residents.

The staff at PhillyCAM is made up of seven full-time employees. Over the next several years we will add new full-time and part time positions to help us grow our education programs, increase our production output and support the delivery of services to all members. Independent contractors are hired on a case-by-case basis for their production and teaching expertise to lead our training and production programs.

Expanding and nurturing our robust volunteer corps is also important to the sustainability of the organization and will help us expand our capacity. PhillyCAM seeks volunteers and qualified interns who work with staff in all areas of operations and programming. In FY 2013 we worked with 33 volunteers and 11 interns. Their contributions represent the equivalent of one fulltime employee.

Executive Director (Full-time , start date: June 10, 2009)

The Executive Director (ED) is responsible for the leadership and management of the public access system—the Center, channels, website, and staff. The ED manages the annual budget, fundraising activities and develops programming initiatives; and serves as the main liaison between the Corporation, Board of Directors, City government, franchisees, sponsors, and the community. The ED provides leadership and supervision over such areas as outreach, training, production, programming, promotion and fundraising to effectively meet the challenges of community media in an urban environment and with new technologies, ensure the fair and equitable delivery of services, continue to expand access to underserved communities, and encourage the growth of diverse and quality programming and is an effective advocate for policies that preserve and expand Public Access. The ED oversees administrative, financial and program operations and all personnel matters. This includes the preparation of a proposed annual budget and the development and implementation of responsible fiscal procedures and policies. The ED also supervises the site selection, design and renovation of suitable space for the interim and permanent facilities. Approve and oversee the purchase and installation of all production and office equipment (including preparation of bid specifications, vendor selection, etc.)

Technical Director (Full-time, start date: November 28, 2010)

Technical Director (TD) has overall technical responsibility for what happens in the studios and broadcast and transmission of the public access system. The Technical Director is responsible for the purchase, maintenance and replacement of equipment in the studio, computer and editing labs and field packages. The TD has overall responsibility for planning and implementing new technology and systems throughout the organization, from databases to websites, all computer systems in the center both in the administrative office and the training and production labs. Other responsibilities include evaluating and researching equipment replacements and upgrades. The Technical Director works closely with the Executive Director vetting of engineers, equipment dealers and architects as part of the planning and build out the permanent

facility. The TD maintains up to date records of equipment usage and inventories of all equipment. The TD is also the primary technical contact with the digital broadcast server and insures the correct ingest of all programming into the digital files. They are responsible for all archiving of programming, data backups, streaming, and works closely with the Online Content Manager and contracted web designers on the upkeep and maintenance of the Center's website.

Program Director (Full-time, start date: March 15, 2010)

The Program Director (PD) works closely with members on the submission of their media for cablecast and other distribution platforms. The PD seeks submissions of new and existing programming; researches and acquires shared content from other access centers for rebroadcast and assists motivated producers to best use the center's training workshops to create their own new programming. The PD works with other staff to come up with ideas for new programs for the channels. And works specifically the Technical Director, on the compression of all media files for required playback formats. The Program Director serves on the Programming Committee of the Board of Directors.

Membership and Outreach Director (Full-time, start date: September 9, 2010) Membership & Outreach Director (MOD) is responsible for promoting public access in the community and in the local press, and assess community needs and work with the executive director and media educators to develop programs, trainings, and collaborative projects with non-profits. The MOD is responsible for all membership drives and communication with members. The MOD works closely with the ED to build and sustain relationships with non-profits, arts and culture organizations, faith-based institutions, labor unions, the School District, and the cable franchise companies. The MOD serves on the Membership & Outreach Committee of the Board of Directors.

On-Line Content Manager (Full-time, start date: March 1, 2011)

The Online Content Manager is responsible for updating and generating content for the center's website which includes maintenance of all the backend navigation, content management systems and databases. Other responsibilities include working closely with the Memberships & Outreach Director to keep social networking sites updated with news about television programming and events. Other responsibilities posting news to blogs and helping producers create and maintain their online profiles on the Center's website. They also work closely with the Director of Programming and the Outreach & Marketing Director on the creation and upload of video content to PhillyCAM's various web channels and community bulletin board.

Education & Production Director (Full-time, start date: May 1, 2013)

Education Director (formerly the Education and Production Coordinator) is responsible for the conception, planning and scheduling of all workshops and trainings. This includes recruiting and contracting with Community Media Educators. The Education Director would lead selected production workshops and oversee the development of youth led productions and develop media literacy trainings and materials. Develop and maintain the training curriculum, class sequences and class materials for field production, editing, studio production, specialized trainings and related programs. Oversee operations and program development of the Tech Lounge.

Access Manager (Full-time, start date: May 1, 2013)

The Access Manager enhances the public's ability to access PhillyCAM's video production equipment and facilities, participate in training programs, and submit content for cablecast. The Access Manager is responsible for overseeing daily operations with particular emphasis on assisting PhillyCAM members to access all video and studio production equipment and facilities

NEW - Production Coordinator (Part-time, start date: Summer 2015)

Coordinate PhillyCAM field and studio production teams. Recruit and supervise production interns, volunteers, and members seeking production experience to work on PhillyCAM initiated and member projects. Oversee post-production of PhillyCAM initiated projects.

NEW - Youth Media Coordinator (Part-time, start date: Spring 2015) The Youth Media Coordinator is responsible for overseeing daily operations of the Youth Media Programs and Tech Lounge. Responsibilities include assisting the Education Director to develop and maintain the youth media training curriculum, class sequences and class materials for media production, specialized trainings and related programs.

NEW - Programming Assistant (Part-time, start date: Spring 2015)

The Program Assistant would assist the Program Director in maintaining the cablecast schedule of multiple channels, upload videos to on-demand and Internet platforms and keep programming information up to date on PhillyCAM's website.

NEW - Access Facilitators (2-3) (Part-time, Hourly, start date: Spring 2015)

These new part time positions would have additional staff working on evenings and Saturday, our busiest times, to provide additional support to members in accessing PhillyCAM facilities and equipment.

Bookkeeper (Independent Contractor, \$10,000 a year)

The bookkeeper is responsible for recording financial transactions (checks written and received); managing accounts payable and receivable; reconciling bank statements; profit-and-loss statement and balance sheet; managing payroll; invoicing clients; coordinating with payroll service the submission of federal and state tax deposits; and completing annual tax forms, such as W2s and 1099s.

Community Media Educators (Independent Contractors, \$400 - \$600 per workshop)

The Community Media Educators are responsible for developing and teaching trainings and workshops on video production. They also work closely with community organizations in facilitating production of PSAs, Bulletin Board announcements, studio and field productions.

Appendix 4: Evaluation Plan

PhillyCAM will undertake the following activities to evaluate the success of its programs and continuing responsiveness to its members and the larger Philadelphia community.

- Design or adapt a pre-existing database to track PhillyCAM's member use of studio facilities, equipment rentals and training opportunities. This database will include information pertaining to training topics and number of training workshops provided to the public; number of individuals attending training workshops, the number and types of community organizations and nonprofit corporations attending, identified by place of residency.
- Maintain a report of the number of programs and types of Community-Oriented Programming are shown during primary television viewing hours pursuant outcomes such as Programming on the Channel and what percentage of those hour are of Local Programming or new, original Programming produced using PhillyCAM's facilities; programming acquired from local sources; programming acquired from non-local sources;
- Design evaluation tools that will solicit feedback from PhillyCAM producers, viewers, community partners and members to assess how PhillyCAM is meeting their needs through training and equipment access. These evaluations will take place in several ways, in person and via the phone and Internet.
- The Programming Committee, made up of board and members, will meet to review viewer comments received about programs aired on a quarterly basis. And the committee will also hold two focus groups to evaluate and review programming with PhillyCAM members.
- Maintain a summary of outreach efforts to community organizations and a summary of the impact from outreach efforts, including organizations contacted, number of hours of Programming produced by each, the number of Programming hours transmitted, and the number of Programs; whether the organization is new or returning; and any other pertinent information related to outreach efforts and impact.
- Maintain a record of all channel programming outages attributable to PhillyCAM. An outage includes a loss of one or more video or audio channels, but does not include instances where the sound or video is lost prior to its receipt by the Cable System.
- Maintain a summary of PhillyCAM's development or incorporation of new technology, such as video streaming, interactivity, data communications or other entertainment and non-entertainment services.

Appendix 5: City Comparison

Other cities where public access stations operate more than 1 channel

| City | Station | Channels | Content | Population |
|--------------------|--------------------------------------|----------|---|---------------|
| Chicago, IL | CAN TV | 3 | LIVE, Community, Religious plus 2 Bulletin Board Channels | 2.715 Million |
| New York, NY | Brooklyn (BRIC) | 3 | Free Speech, Local issue | 2.566 Million |
| New York, NY | Queens | 2 | Community, Variety | 2.273 Million |
| New York, NY | Manhattan Neighborhood Network (MNN) | 4 | Community, Lifestyle, Spiritual, Culture | 1.619 Million |
| Philadelphia, PA | PhillyCAM | 2 | Community, Live Culture (coming in 2015) | 1.548 Million |
| New York, NY | Bronx Net | 6 | Local Issues, Youth, Arts, Foreign Language, Spiritual, Public Events | 1.408 Million |
| Fairfax County, VA | FCAC | 4 | Local, International, Community Religious | 1.119 Million |
| Austin, TX | Channel Austin | 3 | Variety (2), Religious | 842,592 |
| Denver, CO | Denver Open Media | 3 | Community, Crowd-Sourced | 634,265 |
| New York, NY | Staten Island (SITV) | 4 | Community Variety | 470,728 |
| St. Paul, MN | SPNN | 4 | Residents, Community Groups, Religious | 290,770 |
| Cambridge, MA | CCTV | 3 | Arts/Culture, Residents, Community Orgs | 106,741 |

Appendix 6: Non-Profit & Community Organization Members

Organization \$0 - \$50K

3rd U.S. Colored Troops
Apiary Literary Magazine
Artblog
Art Factory
Artspllosion Media
Balance Ministries
Beatcancer.org
Caution Community Youth Drill Team/Fountain
of Youth Preventative Health
Christian Credit Development
Coalition of Labor Union Women
Community Enrichment Fitness Network
Decarcerate PA
Disability Pride Philadelphia
Edutainment Co Non-Profit
FAITH Minisitries
Frontline Dads
Go Believe
GoCar Productions
Griotworks
Guardian Civic League
Healthtime TV
inSightOut TV
La Mott Community Garden Group
Legacy Pathways
Live Love Learn
Mt. Airy Homeschooling Co-op
National Alliance Against Violence in America,
No Sugar "Phillyteens" Talk
Palmer Foundation
Pentecostal Youth For Christ, Inc.
Philadelphia Asian American Film & Filmmakers
Philadelphia Association of Black Journalists
Philadelphia Community Corps
Philadelphia Podcast Festival
Philadelphia Film Archivists Collective
Philadelphia International Action Center

Organizations \$0 - \$50K continued

Philadelphia Now
Philly Roots Fellows
Power to Believe LLC
Protecting Our Waters/Casino-Free Philly
Returning Citizens Voters Movement
SCORE Philadelphia
SlaveryMuseum.org
Spells Writing Lab, Inc
Tax Report
Trudy Haynes Foundation
United Asian Appeal
Verbally Loose
Women's Solo Project, Inc
Youth Now On Top

Organizations \$51 - \$250 K

Drexel University Office of Institutional
Advancement
Scenic Philadelphia
B. Someday Productions
Walter D. Palmer Leadership Preparatory
Academy Media Department
Ebenezer Maxwell Mansion
National Writers Union UAW Local 1981
Beech County Services
Spells Writing Lab
Preservation Alliance
Moonstone Arts Center

Organizations \$251 - \$500 K

Philadelphia Jazz Project
Education Voters of Pennsylvania
First Person Art

PennFuture
Scribe Video Center
Univ. Community Collaborative of Philadelphia
Temple University Dept. Anthropology
CORE Scholars

Organization \$501K and over

AFSCME DC 47
Bread & Roses Community Fund
Centers for Medicare & Medicaid Services,
Region 3
City Of Philadelphia Mural Arts Program
Clean Air Council
EducationWorks
Energy Coordinating Agency
Entrepreneur Works
Enterprise Center Community Development
The Food Trust
Leeway Foundation
Media Mobilizing Project
Morris Animal Refuge
Newspaper Guild of Philadelphia
Norris Square Neighborhood Project
Partners for Sacred Places
People's Emergency Center
Philadelphia Commission on Human Relations
Philadelphia Cultural Fund
Philadelphia Reads
Philadelphia Sheriff's Office
Public Health Management Corporation
Public Citizens for Children and Youth
Samuel S. Fels Fund
The Village of Arts Humanities
William Way LGBT Community Center
Women's Way
Youth Empowerment Service

Appendix 7: Program Summary by Organizational Members

The following non-profit and community-based organizations all submit content to PhillyCAM.

Apiary Literary Magazine gathers writing by Philly artists of many ages, cultures, and styles showcasing the best of Philadelphia's buzzing literary scene and bringing together diverse people who love words.

Art Blog with Roberta Fallon and Libby Rosof, founders of the Zero .1% for Art Commission, bridges the gap between ordinary people and art.

Academy of Natural Sciences of Drexel University, sustainability Programs Department's public forum showcasing the very best thinking about regional environmental issues.

Art Factory, an arts-based program at Norris Square Neighborhood project for high school and "out of school" youth ages 14-19, Art Factory is a creative skills development program, designed to increase access to both art creation and exhibition as career paths within the local community.

Community Enrichment Fitness Network's mission is to empower individuals to make a permanent healthy lifestyle change.

Council on American Islamic Relations Philadelphia created as an organization that challenges stereotypes of Islam and Muslims, an Islamic advocacy group and an organization dedicated to providing an Islamic perspective on issues of importance to the American public.

Deaf Welcome Foundation a national charity for sign language media celebrating deaf culture.

Decarcerate PA, a grassroots campaign demanding that PA stop building prisons, reduce the prison population, and reinvest money in our communities.

Disability Pride Philadelphia, part of a worldwide movement that celebrates acceptance, diversity, and the accomplishments of all people with disabilities, the overall mission is to encourage people with disabilities to love and accept themselves and to educate the general public on disabilities.

DP Arts Consortium creates a monthly themed interactive improvisational theatre experience that parodies society's joys and ills in an irreverent and over-the-top style.

Drexel University's mission is to serve students and society through comprehensive integrated academic offerings enhanced by technology, co-operative education, and clinical practice in an urban setting, with global outreach embracing research, scholarly activities, and community initiatives.

The Food Trust, for more than 20 years, The Food Trust has been working to ensure that everyone has access to affordable, nutritious food.

Greater Exodus Baptist Church in obedience to the exhortations of Jesus Christ, and under the leadership of its Pastor, Herbert H. Lusk, II, understands that it has an important responsibility to the community and the world around it to be SALT and LIGHT in all that it does.

Leeway Foundation is committed to art making as an integral part of social change, to movement building, and anti-oppression work. Guided by the values of fearlessness in action, speech, and self-examination, Leeway commits to breaking down boundaries and barriers with creativity, respect, and openness to the process.

Media Mobilizing Project believes that media must be connected to the economic and social realities of everyday life by sharing stories for the purposes of education, outreach, and organizing.

Mural Arts Program unites artists and communities through a collaborative process, rooted in the traditions of mural-making, to create art that transforms public spaces and individual lives.

Mothers in Charge's mission is violence prevention, education and intervention for youth, young adults, families and community organizations.

Need in Deed/Powel School -- For over 25 years Need in Deed has been encouraging young people to explore, learn about and address such issues as homelessness, hunger, violence, blight, and other problems that affect the quality of life in Philadelphia.

People's Emergency Center (PEC) nurtures families, strengthens neighborhoods, and drives change. PEC is committed to increasing equity and opportunity throughout the community by providing comprehensive supportive services to women and their children experiencing homelessness.

Philadelphia Folklore Project focus is to build critical folk cultural knowledge, sustain vital and diverse living cultural heritage in communities in our region, and create equitable processes and practices for nurturing local grassroots arts and humanities.

Philadelphia National Organization of Women (NOW) Since its founding in 1966, NOW's goal has been to take action to bring about equality for all women.

Philadelphia Reads' mission is to strengthen the literacy skills of Philadelphia's youngest and neediest school children by providing mentors and resources for in-school and out of school programs.

Partners for Sacred Places, based in Philadelphia, is the only national non-sectarian, non-profit organization devoted to helping congregations and their communities sustain and actively use older and historic sacred places.

Scribe Video Center was founded in 1982 as a place where emerging and experienced media artists could gain access to the tools and knowledge of video making and work together in a supportive environment.

Social Security Administration's mission is to deliver Social Security services that meet the changing needs of the public.

Temple University Community Collaborative combines media with youth leadership development and community youth organizing activities enabling VOICES participants to gain valuable technical skills and a strong comfort level with using technology while learning how to effectively use the media they produce as a tool for creating positive change.

Termite TV Collective makes multi-faceted and multi-voiced programs that address issues of cultural, political, and aesthetic concern.

University of Pennsylvania Documentaries & the Law Project has four goals: To promote the critical use and analysis of law-genre documentaries in the legal academy, to examine the role of lawyering in the creative process by which documentary films are made, to probe the myriad uses of film as a tool of legal advocacy, and to create models for instructing law students, lawyers, and others in the fundamentals of nonfiction filmmaking and legal advocacy on film.

West Park Cultural Center promotes a thriving West Park environment by using arts and culture as a central tool that helps youth tap their creative and academic potential, and where residents can access the arts, education, and other support programs that contribute to their personal development, helping them come together as a strong community.

Women's Solo Project serves at-risk, Philadelphia-area women and their children by giving them the ability to become independent and resourceful in making healthy and positive decisions

YESPhilly has created a place where youth who've dropped out of school can discover their talents and dreams, while developing academic and job-related skills.

EXHIBIT B-6

Summary Narrative of
Governmental Access Focused
Discussion and Interviews



EXHIBIT B.6

SUMMARY NARRATIVE OF GOVERNMENTAL
ACCESS FOCUSED DISCUSSION AND
INTERVIEWS

SUMMARY NARRATIVE OF GOVERNMENTAL ACCESS FOCUSED DISCUSSION AND INTERVIEWS

The following is a summary of information reported by Cable TV Unit Staff during a focused discussion and interviews concerning the City's Governmental Access Channels (Comcast Channels 63 and 64, Verizon Channels 40 and 41)-related needs and interests.

Focused Discussions and Interviews with Governmental Access Representatives

- **Governmental Access Channels' near and longer term equipment needs** – Interviewees and focused discussion participants indicated needs in the following categories:
 - *Single Camera Field Equipment* – Currently the Cable Television Unit (“Unit”) has two field cameras that are HD; a large, heavy camera with no built-in audio capability, and a smaller one with (non-wireless) microphones. There is only one lighting kit for both cameras. This limits their ability to shoot video in two locations at once, or even to use both cameras in one location that is not naturally lit. Participants indicated that they need three remote production packages, each including a HD camera, with wireless audio transmission capability, and high capacity batteries, as well as a complete LED lighting kit. These single camera field packages should have long range wireless microphones that work at high frequencies in order to capture speaker or crowd audio at a distance, and the ability to utilize larger video and audio cables in order to plug the camera into distant connectivity points. These cameras should use fixed, high-speed media (at least three gigabits).
 - *Multi-camera Field Production* – Currently, video produced in the field has to be edited and post-produced in the main Cable TV Unit location before it can be aired because it is only shot with a single camera, with no graphics input or multicamera coverage and switching capabilities. This reduces the ability of the Unit to provide live, real-time and live-to-recorded coverage of many meetings and events. It would be more efficient and provide better coverage of such meetings and events to have a full featured, multi-camera remote package that could be operated by as few as two people.¹ This would allow them to go live from any location, including expanding coverage of public meetings and events important to citizens, such as events in the new Dilworth Plaza, City Council and Mayor Outreach events in the community, and other locations where they are also seeking new permanent fiber optic connectivity back to the studio such as Love Park and the Office of Emergency Management.

¹ See Exhibit B.11 for full complement of equipment needed.

- *Master Control* - The Unit needs to update and expand its master control equipment, including better graphics, a better scheduling system, the ability to drag and drop media files and the ability to feed two channels with distinct programming separately and simultaneously.²
- *Editing/Post-Production* - The City currently has one desktop editing station, an older Windows-based system, with editing software, hard disk recorder and audio, and also three (3) older Macbook Pro laptops for portable editing. If these workstations, that are still being used by the Unit past their useful life, are replaced with high-capacity, high performance modern video production computers and up-to-date software, this number of units, 1 desktop and 3 laptops, will suffice for the near term. The biggest near term is for additional storage capacity for both raw footage and post-produced footage. Participants emphasized that they need either a bigger stand-alone network dedicated to post-production, or much more storage space on the OIT network they now share with the rest of the agencies in City Hall. The Unit's objective is to move to a completely tapeless workflow in the near term, replacing all of the tape based recording equipment they now have.³ The Unit's current stand-alone capability is a 2 terabyte hard drive which is connected to a storage area network (SAN).⁴
- *Council Chambers* - Production facilities installed in Council Chambers also need upgrades in the near term. The Unit needs the capability of cablecasting live, in real time, from the Council's Caucus Room (City Hall Room 401) located across from Council Chambers. This would permit coverage of public discussions, when they occur in this room. Council Chambers has an out-of-date audio system that requires constant monitoring by a technician in order to maintain sound quality that is acceptable for cablecasting. This needs to be changed to an automated system that can be monitored, along with the video, from the Cable TV Unit's control room. This will be more efficient, and will free up technician time to support other production tasks.
- *Studio* – The Unit needs a substantially larger studio (as described further below) in order to expand the amount and type of studio-based programming from live coverage of remote events to produced program content. Regarding the equipment complement, they need call-in capabilities; HD cameras with a 16x9 aspect ratio; the ability to pull internet into productions; a 10x10 foot blue and green screen; and microphones that drop down from the ceiling.⁵

² See Exhibit B.11 for the full complement of master control equipment needed and see the also Governmental Access Channels Business Plan (hereinafter known as "Governmental Business Plan" or "Exhibit B.9"), dated 1/1/2014, p. 9 for a description of the differing programming planned for Channels 63 and 64.

³ Over the past decade, the television production industry has been moving from analog tape to digital tape and now tapeless, digital (hard drive), video/audio recording, similar to the consumer electronics move from VCRs to DVRs.

⁴ CBG's review concurs with the Cable TV Unit's indication that 2TB is far less than what is needed going forward. Based on the plan to program 2 separate HD channels as opposed to the existing single, simulcast SD channel, more than 15 times this amount will be needed over the next 10 years.

⁵ See also Exhibit B.9, p. 10.

- *Remote Production Sites* –Equipment installed in the existing remote production site, the PhillyStat Room in the Municipal Services Building, needs to be upgraded. This includes upgraded switching and video recording equipment as well as an additional (fourth) camera added to the current three-camera system, and additional control room capabilities so that there are better graphics and digital audio mixing.

In other buildings where meetings occur in multiple locations, such as the One Parkway Building, portable cameras that can be moved from conference room to conference room are needed. In these instances, though, it will be beneficial to have a control room area that can function for any of the various meeting rooms. Lighting in the PhillyStat room is inadequate now and should be replaced with high-capacity fluorescent or LED lights.

- *Spare/Redundant Equipment* – Discussion group participants noted that it would be important to have spare and redundant equipment so that when units fail and go out of service, they can be replaced quickly.
- *Larger Governmental Access Studio* – As noted above, Cable TV Unit staff emphasized a substantial need for a larger governmental access studio. The current studio configuration is so small (340 square feet, including the control room area), that it is difficult to include more than one program host and one guest in any program produced there. The Unit is considering a new space in City Hall, near the present facility, that would accommodate a studio size of 30x30 feet (900 square feet). This is not large by normal video production standards, but would permit production of original programming with more than one or two participants and standard props. It will be important, based on existing staff limitations, for the equipment in a new studio to be configured for automated operation so that one or at most two technicians can fully control a production.⁶
- *New Remote Access Origination Connections* - Group participants noted that there were a number of remote sites, given the multi-camera and live origination capabilities needed, as described above, from which the Unit could produce programs with time sensitive content of interest to viewers. These require a variety of external, fiber optic or wireless connections back to the City Hall main control/editing room including:
 - Office of Emergency Management (OEM) in the basement of the Fire Administration Building (also in the lobby and in the auditorium), for live, emergency information broadcasts as the need arises
 - The Fire Academy for coverage of Academy events
 - The Police Training Bureau (on State Road), for coverage of Bureau events
 - Centrally located in the new Dilworth Plaza so production equipment can be connected to the Unit's master control area for coverage of important

⁶ See also Exhibit B.9, pp. 10-11 for details on the new studio requirements.

City events such as press conferences and special events such as holiday activities and the recent Taney Dragons rallies,

- The Navy Yard for events occurring there sponsored by City agencies
- Love Park, for live coverage of events occurring there.
- Video origination through CityNet or institutional network connections so that connectivity could be established from any City location when needed
- Additional connections in the future as different locations are identified for remote programming opportunities⁷

Group discussion participants also indicated other connections that are needed, including for more frequent program production purposes, as discussed above:

- At the Municipal Services Building - connections on both the 14th and 15th floors
 - At the One Parkway Building-connections on the 18th floor
 - Connection from wherever the new Governmental studio will be located back to master control
- *Delivery of the Governmental Access Channels* - The Governmental Access Channels require significant upgrade in the means of program distribution available to them. Participants indicated the need to produce and distribute all governmental access programming in high definition. They said HD is necessary because of needs expressed by government officials, the viewing habits of the audience for government access and the fact that the television industry is now nearly totally focused on HD program production and delivery.⁸ They indicated the need to make more programming available through cable video-on-demand so that programs can be accessed according to the viewer's schedules, as current audiences increasingly demand from Access TV as well as commercial TV.⁹ They said programs must continue to be available via streaming over the internet, as well as from the cable system, to meet the needs of predominantly online users, and also to make programming accessible from mobile devices. They indicated an interest in interactive television (iTV) applications, especially for information like official voting records and other programs where access to metadata would be beneficial to residents.¹⁰

Regarding audio, there is a significant interest in Second Audio Program (SAP)/Multiple Audio Program (MAP) capability, including programs provided in Russian and in Spanish, which represents the largest foreign language speaking percentage of the Philadelphia population. Participants noted that it would take 21 languages to cover a majority of the Philadelphia population, but that Channel 64

⁷ See also Exhibit B.9, p. 11.

⁸ See also Exhibit B.9, p. 12.

⁹ See also Exhibit B.9, p. 13.

¹⁰ Interactive TV and other industry terms are explained in the Needs Assessment Report Section B concerning Governmental Access, p. 94.

has no foreign language capability now, even for the largest foreign language communities in the City.

Interviewees and participants also noted that Channel 64 had some success in delivering programming through Comcast's "Philly in Focus" on-demand platform, such as press conferences and brief clips of major City events such as the Made in America celebration on the Parkway during Labor Day weekend. They indicated, however, that substantial additional cable-based on demand capacity is badly needed, including:

- the ability to deliver longer format programs via cable system on-demand
 - a much shorter time for finished production to be uploaded and available on Comcast's on demand platform. Participants noted that it takes as much as four weeks from delivery by Channel 64 for Comcast to have programs available for VOD viewing.
 - a greater amount of descriptive information about program content available on the video-on-demand menu so viewers can readily find programming of interest to them.
 - a greater number of hours of capacity on the cable on-demand platform. Participants noted Channel 64 alone would need about 40 hours of on-demand capacity to provide both current City programming and past programs, which have a long shelf life (sometimes known as "evergreen" programming).
- **Two Governmental Access Channels** – Philadelphia will continue to need two governmental access channels throughout a franchise renewal term. The City is reconfiguring and rebranding Channels 63 and 64 to become PHLgovTV1, with a focus on programming related to the City Administration, and PHLgovTV2, with a focus on legislation, legislative affairs, activities of Council, and public meetings of governmental bodies.¹¹ At present, Channel 63 simulcasts Channel 64. Under the reconfiguration, each channel will carry its own full schedule of programming. Interviewees and group participants stated that both the Council and multiple City agencies have asked the Unit to produce original programming that addresses the specific needs, interests, and service delivery objectives of their organizations. As described later in this section and in the attached Philadelphia Governmental Access Business Plan, this would require additional production staff in both the agencies and the Unit, through hiring additional employees and developing internship programs, or retaining producers on contract.¹² With the staff additions, and a larger studio space as described in its Business Plan, the Unit expects to at least double its current amount of original programming.

In order to carry out the channel reconfiguration described, and based on the current and projected number of hours of programming to be distributed on each channel, the City will continue to need both Governmental Access channels going forward.

¹¹ See also Exhibit B.9, pp. 9-10.

¹² See also Exhibit B.9, pp. 12-13.

- **Operational Enhancements** - Interviewees and group participants noted certain additional operational enhancements and resources needed for the Governmental Channels over the term of a renewal franchise. In particular, they noted the need for additional video producers, especially since the channels require current staff to perform many technical functions, including traffic monitoring, scheduling, and master control, in addition to video production graphic content development and editing. At least two additional staff members dedicated to video production will be necessary to meet the objectives for original, department-based programming described above. Two support technicians will be needed to perform new and additional technical functions, and a station clerk needs to be added to assist with administrative duties.¹³ Participants noted that one way to fund such staff would be charge-backs from agencies for programming produced for them, particularly for the new PHLgovTV1 that will focus on the City Administration and information for the public from the various operating departments and agencies.

¹³ Ibid.

EXHIBIT B-7

Summary Narrative of
Governmental Access Program
Providers/Producers/Users
Online Survey



EXHIBIT B.7

SUMMARY NARRATIVE OF GOVERNMENTAL
ACCESS PROGRAM
PROVIDERS/PRODUCERS/USERS ONLINE
SURVEY

SUMMARY NARRATIVE OF GOVERNMENTAL ACCESS PROGRAM PROVIDERS/PRODUCERS/USERS ONLINE SURVEY RESULTS

To further assist in determining Governmental Access related needs, an online survey was developed for distribution to City personnel and others involved with the development of content on Channels 63 and 64. A link to the survey was sent to a variety of City department and agency representatives and other stakeholders that had worked with Cable TV Unit staff to develop programming, had participated in the production of programs, or who were aware of the Channels' potential and mission. Responses were received from City Department employees, a Community Development Corporation (CDC) director, an outside producer, an advocate, and a "community activist".

The following is a summary of the results of this Governmental Access Program Providers/Producers/Users Survey. The summary is provided by question as presented on the survey.¹

Nature of Affiliation -- A variety of those involved with City Governmental Access Channels responded to the Survey, including City employees (this was the largest number at over two thirds of respondents), followed by organizational representatives (25%), which included a CDC Director, an outside producer who produces content related to elected officials, an advocate working for an informed community, and a community activist focused on the local government process. One Channel 64 employee also responded to the survey.

Length of Affiliation -- The range of length of affiliation with Channel 64 reported by respondents was from six months to 26 years, with several affiliated since the Channel's inception and others, who became involved more recently, reporting affiliations of eight or more years.

Average Hours Per Month of Involvement in Governmental Access Television -- Respondents were asked to estimate how many hours per month on average they have been involved with the production or distribution of programming for Governmental Access television. Of the six (6) who responded to this question, a wide range was indicated, from less than one hour to 10 hours per month.²

Overall Satisfaction with Channel 64 facility operations -- All respondents indicated they were either Very Satisfied (31%), Satisfied (50%) or Somewhat Satisfied (19%) with current City Cable Channel 64 operations. No respondents indicated they were not satisfied. Those that were somewhat satisfied indicated areas of improvement and change that would increase their satisfaction levels, described below.

Nature of Respondent's Interest and Involvement in Governmental Access Television -- For this question, respondents were instructed to select all areas of interest and involvement that apply. For this question, respondents were instructed to select all areas of interest and involvement that apply. The vast majority of respondents were involved in public outreach

¹ See Exhibit B.8 for full survey results.

² The Channel 64 employee was one of those who did not respond to this question.

programming (86% of respondents). The next highest categories were public empowerment and community engagement and public meetings and civic engagement, each at 36%. Two other types were at 29%- community events and community news and public affairs. Training and education showed 21% involvement and sports coverage, other program types and other reasons for being involved in governmental access each showed 7% involvement.

Respondents were instructed to provide commentary with their answers and some respondents explained their selections as including involvement in coverage of City Council meetings, providing information to the public on how to plan for emergencies, providing background on council persons' agendas and issues, "covering our city's various special events, big and small", and "tutoring and explaining in layman's terms City operations".³

Additional Types of Programs That Need to be Produced -- Fifteen percent (15%) of respondents indicated additional types of program were needed. The additional programs described by these respondents included history of the City programming, "more in-depth view into some of the areas of operation in City Hall" and "a 'Live' Town Hall style program".

Assistance Received During the Production of Programs -- Respondents were asked about the assistance they received from the Cable TV Unit. A majority of respondents indicated that it was Very Helpful (40%) or Helpful (40%), followed by Somewhat Helpful (13%).⁴

Some respondents amplified their responses by saying that "easy to follow instructions were provided by Channel 64 staff", that the staff was "very thorough, cooperative and responsive covering our events", and that "the technical guidance was good", and that "producing the program was fine, but it required lots of follow-up to get it on the air".

Use of Governmental Access Facilities and Equipment -- Respondents were asked to select their frequency of use of various equipment and facilities throughout the City. For each facility or set of equipment, the respondent could choose a frequency of use of weekly, monthly, occasionally, never, or N/A. A substantial number of respondents to the survey had not directly used the facilities and equipment. These are agency representatives that work with the Cable TV Unit to get programming produced, so they would not have direct familiarity with the equipment. For those who had, respondents reported occasional use of recorded program playback over the cable system (38%), field equipment (36%), and multi camera remote production equipment (33%). One respondent, a CATV Unit employee, used Council Chambers production equipment, live programming over the cable system, and recorded program playback weekly, as well as MSB production equipment monthly, and the portable equipment used for productions at the One Parkway building occasionally.

Ratings of the Facility and Equipment -- Respondents were also asked to rate each of the same facilities and equipment listed above. The highest number (33%) of respondents indicated Good for the following categories: field equipment, live program over the cable system, and recorded program playback over the cable system respectively. The category with the largest number of

³ See Exhibit B.8, pp. 2-3.

⁴ One respondent indicated that receiving assistance was not applicable to them, potentially because they, instead, provide such assistance.

respondents selecting a Fair rating (17%) was also given to recorded playback over the cable system, followed by 11% for live program over the cable system.

Regarding the Fair ratings given, one respondent noted that the live programs were sometimes marred by "feedback or static on some of multi boxes/feeds".

Again, many respondents did not directly use the equipment, so they provided "Don't Know/No Opinion/N/A" responses.

Characteristics of Governmental Access Channel's Operation -- Respondents were asked to rate each of a number of operational characteristics and attributes on a four point scale (Excellent, Good, Fair, or Poor). Similar to direct familiarity with the facilities and equipment, many questions had high No Opinion/Don't Know/Don't Use responses.⁵

Other categories, such as the facility staff, were rated as Excellent and Good by over $\frac{3}{4}$'s of all respondents (77%). In fact, the facility staff received the only Excellent rating (33% of respondents) and Good by 44% of respondents. The remainder of respondents (22%) had no opinion or did not know. Nearly all the remaining characteristics were rated Good by those respondents that had familiarity with them, ranging from Portable Field Equipment Availability at 44% to Training and Education Program Production at 11%.⁶

Only one characteristic received Fair and Poor ratings, Playback Scheduling with 27% Fair and 9% Poor ratings. One respondent indicated the reason for giving a Fair rating was because "it is not clear to me how to get the programs scheduled effectively".

Problems Encountered in Scheduling Necessary Staff, Facilities and Equipment – For this yes/no question, no respondents indicated any problems in scheduling necessary staff, facilities and equipment for their productions.

Additional Capabilities or Services Needed – In this open ended question, twenty-five percent (25%) of respondents suggested additional capabilities or services that they thought were needed for Governmental Access Television. Specifically, respondents reported the "Need for closed captioning equipment/services for live broadcasts of the Mayor and other city officials' press briefings during emergencies"; more "In-studio programming"; more "public and community affairs programming for the departments and city residents"; "interactive television"; and "A 1080 HD workflow from the studio, cameras, post production and distribution."

New, Additional or Different Types of Programs on Channel 64 – In this yes/no question, fifty-five percent (55%) of those respondents that answered the question indicated that there needed to be new, additional or different types of programs on Channel 64. These respondents who answered yes were asked to provide comments. These comments included "more details of the actions of City Council members in committee hearings", more "community programs", "programming in other languages", more "coverage of community events", "debates; Mayor addresses; and promotion of Ch. 64 so people know when and how to tune in."

⁵ See Exhibit B.8, pp. 5-6 for more detail.

⁶ Ibid.

Value to Having Different Types of Programming on each Governmental Access Channel –

Sixty-four percent (64%) of respondents indicated that there would be value in having a different types of programming on each channel (Channel 64 is currently simulcast on Channel 63). One respondent in the free form response section said that one channel could be designed for interactive community programming, while the other outlet could be for taped events and bulletin notices, PSAs, etc. Another respondent indicated that one channel could provide “a look into the executive branch and how it works”, and others indicated that it was a great idea that would provide more options for government programming.

Problems in Getting Programs Aired– Only one respondent indicated that they had a problem getting their programs aired on Channel 64. Specifically, they indicated that they were “Not sure how to do this.” In more detail they also asked “When is the schedule published? How do you access it?”

Current Awareness/Promotion of Governmental Access Programming – Fifty-eight percent (58%) of respondents indicated that current awareness/promotion of local Governmental Access programming is inadequate. Respondents indicated that promotion of the Governmental Access Channels needed to be through other avenues beyond just Channel 64 itself and that it needed “more marketing citywide”. Respondents suggested to “use press releases and social media to promote programs” and “promotion at bus stops, train stations, online, billboards, radio, or other TV stations to tune into Ch 64.” Another noted that “If my friends didn't tell me about [Channel 64], I wouldn't know it exists”, and another said “not many people other than city employees or those who have a relationship with the city know that this program exists”.

Additional Comments or Concerns -- All respondents were given an opportunity to provide any other comments or concerns about the Governmental Access Channels. Two respondents (13%) commented and indicated “It serves as a wonderful free resource and treasure for City Departments as well as the community.” and the other said “Ch. 64 needs promotion and marketing”.

EXHIBIT B-8

Governmental Access Program
Providers/Producers/Users
Online Survey Markup



EXHIBIT B.8
GOVERNMENTAL ACCESS PROGRAM
PROVIDERS/PRODUCERS/USERS ONLINE SURVEY
MARKUP

**PHILADELPHIA GOVERNMENT ACCESS PROGRAM PROVIDERS/
PRODUCERS/USERS MARKUP**
(N=16)

The City of Philadelphia is conducting this survey of users/producers of the government television facilities and services which support local government access programming provided to the City of Philadelphia cable subscribers. The survey is designed to enable you to describe your experiences with the government access facilities provided by the City and whether and how you believe enhancements or improvements could be made to existing operations. It is being conducted as part of the cable franchise renewal process with the local cable television provider, Comcast.

This survey should take you approximately 15 minutes to complete. Please complete the survey by December 13, 2013. Contact Tom Robinson at 6108897471 or by email at robinson@cbgcommunications.com or Mark McLaughlin at 2156869950 or by email at Mark.McLaughlin@phila.gov if you have any questions regarding this survey.

Thank you for your assistance!

1. How long have you been affiliated with the City's Government Access Channel 64 facility or program production? Range 6 mos. – 26 years; Mean – 9.7 years; Mode – 8 years

2. What is the nature of your affiliation?

| | |
|--|-----|
| City Department Employee | 69% |
| City Cable Office/Channel 64 Employee | 6% |
| Other Organizational Representative/Individual: (explain) (N=4) | 25% |
| • Advocate | |
| • Serves as director on a CDC | |
| • community activist | |
| • Outside producer | |

3. Overall, how would you rate your satisfaction level with current facility operations?

| Answer Options | Very satisfied | Satisfied | Somewhat satisfied | Not at all satisfied |
|-----------------------|----------------|-----------|--------------------|----------------------|
| City Cable/Channel 64 | 31% | 50% | 19% | 0% |

4. What is your interest and involvement in producing/providing/distributing the following type(s) of programming on local Government Access television? (please check and then explain below for all that apply):

| Answer Options | Response Percent |
|--|------------------|
| PUBLIC OUTREACH (informational programming about your city programs and services for viewers in their homes, etc.) | 86% |
| COMMUNITY EVENTS (programs, live or taped, that cover speeches, presentations, fairs, parades, other public gatherings, etc.) | 29% |
| PUBLIC EMPOWERMENT AND COMMUNITY ENGAGEMENT (programs produced by government agencies, etc., providing their perspective or advocacy on a wide range of topics and issues) | 36% |
| COMMUNITY NEWS AND PUBLIC AFFAIRS (local news programming and public affairs shows focusing on current events and topical issues in the Philadelphia area) | 29% |
| ARTS AND ENTERTAINMENT (programs, live or taped, such as plays, music performances or videos, comic skits, poetry readings, etc.) | 0% |
| PUBLIC MEETINGS AND CIVIC ENGAGEMENT (programs, live or taped, that cover elected officials meetings, planning meetings, other boards, commissions, advisory groups, etc.) | 36% |
| TRAINING AND EDUCATION (curriculum-related or outreach concerning required courses, professional certifications, workforce development, etc.) | 21% |
| SPORTS COVERAGE (local sports programming covering athletic events and issues) | 7% |
| OTHER PROGRAM TYPE | 7% |
| OTHER REASON FOR BEING INVOLVED IN LOCAL GOVERNMENT ACCESS (interest in volunteering, social interaction, vocational training, community involvement, etc.) | 7% |

5. For all that you checked above, please describe the specific programs you've produced/ provided/distributed or other reasons for your involvement in local Government Access television: (N=12)

1. Provide information to the public on how to prepare for emergencies; provide information to the public during emergencies
2. City Council meetings
3. City Access provides an invaluable service by covering (and proficiently) our city's various special events, big and small. They hold a special distinction by providing public record of special and ceremonial events, documenting and promoting the events in a sustained manner -- from start to finish. The programs they have covered include Take Ours Daughters & Sons to Works Day, Pal Day at City Hall, the Philadelphia Marathon press events; City's holiday tree lighting ceremony; Subaru Cherry Blossom Festival of Greater Philadelphia, Police and Fire Memorial Service; The Philadelphia Collection; Wawa Welcome America! press events and festival; Jazz Appreciation

Day/Month press events; Philadelphia Flag Day and Army birthday; Mayor's Centenarian Celebration; Civic Flag Day; Top of the class and Toss Yoru Cap educational events; various city building ribbon cuttings affiliated with law enforcement/police, fire, and DHS services; Mummers Parade press events; . Hero Thrill Show Kick-off Pep Rally and more activities associated with the Office of City Representative.

4. Being an advocate, it is great to have an informed community.
5. None just watch
6. Tutoring and explaining in layman's terms city operations. .
7. City council programming is very important in that it helps in understanding what our local government is doing. And it also gives me/us a visual image... no longer are they (elected officials) just names in a voting booth. The process of government can be viewed, the 'how' it happens and 'what' I can do to add a voice to the process.
8. Taped program on elected officials
9. AVI
10. Following these events.
11. This type of programming gives views at home to stay in touch with what is happening in City Government.
12. I produced a series of videos for the city council, providing background into on a few council people's agendas and issues.

6. Have you produced or been involved in the production of training or education programs at Channel 64?

YES 0% NO 100%

7. If YES, please indicate the types of training and education you've produced at Channel 64: N/A

8. Did the training and education programs produced meet your and/or the agency's needs and expectations?

YES 0% NO 0%

9. If YES, please describe how it met your and/or the agency's needs: N/A

10. If NO, please describe why it did not meet your and/or the agency's needs and what needs to be improved or added: N/A

11. Are there any additional types of programs that need to be produced at Channel 64?

YES 15% NO 85%

If YES, please describe: (N=3)

1. History of city
2. Maybe a more indepth view into some of the areas of operation in city hall: planning commission, revenue board (taxation), and social service agencies that happen in city hall.
3. Perhaps a "Live" Town Hall style program, addressing many issues. Also, I think Ch64 would be the perfect place for live debates to air on TV, web and mobile of many offices in the city.

12. Indicate whether the assistance you received at Channel 64 during the production of your program or other multimedia content was:

| Answer Options | Very Helpful | Helpful | Somewhat Helpful | Not at All Helpful | N/A |
|----------------|--------------|---------|------------------|--------------------|-----|
| Channel 64 | 40% | 40% | 13% | 0% | 7% |

13. How was the assistance helpful or not helpful to you? (N=8)

1. Easy to follow instructions were provided by Channel 64 staff to upload info into the rotation of programming.
2. Very thorough, cooperative and responsive covering our events and even providing documentation (a CD) afterwards, when requested. The camera operators are very professional, astute, and easy to work with: [REDACTED] and manager [REDACTED]. The station also has posted bulletin item and photos of our events and city scenes, promoting the city. It has worked with external news TV stations to coordinate and provide logistical resources (and set-up) for certain events (Mayor's Inaugurals, etc.).
3. It keeps me informed and educated on many topics!
4. Producing the program was fine but it required lots of follow up to get it on the air.
5. Helped get program ready for broadcast
6. The technical guidance was good.
7. It was helpful to be able to see how City Government works and to be able to be a part of City Council hearings.
8. Very Helpful

14. Have you used any of the following Channel 64 facilities and equipment?

| Answer Options | Weekly | Monthly | Occasionally | Never | N/A |
|--|--------|---------|--------------|-------|-----|
| TV Studio | 0% | 0% | 18% | 73% | 9% |
| Field Equipment (Portable equipment and lighting packages) | 0% | 0% | 36% | 55% | 9% |
| City Council Chambers Production Equipment | 8% | 0% | 23% | 62% | 8% |
| Editing Equipment | 0% | 0% | 15% | 69% | 15% |
| Live Program over Cable System | 9% | 0% | 0% | 64% | 27% |
| Recorded Program Playback over Cable System | 8% | 0% | 38% | 46% | 8% |
| Multi-Camera Remote Production (Studio in a box) Equipment | 0% | 0% | 33% | 58% | 8% |
| MSB Production Equipment | 0% | 8% | 8% | 75% | 8% |
| One Parkway Production Equipment | 0% | 0% | 9% | 82% | 9% |

FACILITIES AND EQUIPMENT QUALITY:

Please rate the quality, condition and/or capabilities of the Channel 64 facilities:

15. Channel 64 Facilities

| Answer Options | Excellent | Good | Fair | Poor | No Opinion/Don't Know | N/A |
|---|-----------|------|------|------|-----------------------|-----|
| TV Studio | 0% | 30% | 0% | 0% | 50% | 20% |
| Field Equipment | 0% | 33% | 0% | 0% | 44% | 22% |
| City Council Chambers Production Equipment | 0% | 27% | 0% | 0% | 45% | 27% |
| Live Program over Cable System | 0% | 33% | 11% | 0% | 44% | 11% |
| Recorded Program Playback over Cable System | 0% | 33% | 17% | 0% | 42% | 8% |
| Multi-camera Remote Production Equipment | 0% | 20% | 0% | 0% | 50% | 30% |
| MSB Production Equipment | 0% | 18% | 0% | 0% | 45% | 36% |
| One Parkway Production Equipment | 0% | 22% | 0% | 0% | 56% | 22% |

For any of the Channel 64 Facilities or equipment listed above that you gave a Fair or Poor rating, please explain why. (N=3)

1. Feedback or static on some of mult boxes/feeds.
2. None
3. FYI: I have never visited the Ch64 facilities. I've heard they're great, but again, I have never seen them.

FACILITY SERVICES/CHARACTERISTICS

Please rate the following:

16. Channel 64 (please click one rating circle for each item):

| Answer Options | Excellent | Good | Fair | Poor | No Opinion/Don't Know/Don't Use |
|---|-----------|------|------|------|---------------------------------|
| Training and Education Program Production | 0% | 11% | 0% | 0% | 89% |
| Assistance During Actual Production | 0% | 13% | 0% | 0% | 88% |
| Editing Equipment Availability | 0% | 0% | 0% | 0% | 100% |
| Playback/Scheduling | 0% | 18% | 27% | 9% | 45% |
| Channel 64 Facilities Staff | 33% | 44% | 0% | 0% | 22% |
| Overall Channel 64 Facilities | 0% | 22% | 0% | 0% | 78% |

| Answer Options | Excellent | Good | Fair | Poor | No Opinion/Don't Know/Don't Use |
|--|-----------|------|------|------|---------------------------------|
| Hours of Operation | 0% | 33% | 0% | 0% | 67% |
| Portable Field Equipment Availability | 0% | 44% | 0% | 0% | 56% |
| Studio Availability | 0% | 22% | 0% | 0% | 78% |
| Studio Size/Location | 0% | 33% | 0% | 0% | 67% |
| Channel 64 Program/Facilities Promotion | 0% | 22% | 0% | 0% | 78% |
| Mutli-camera Remote Equipment Availability | 0% | 22% | 0% | 0% | 78% |

17. For any of the Channel 64 services or characteristics listed above that you gave a Fair or Poor rating, please explain why. (N=1)

- It is not clear to me how to get the programs scheduled effectively.

18. Have you encountered any problems in scheduling necessary staff, facilities and equipment for your production(s)? YES 0% NO 100%

If YES, please describe the problems N/A

19. What additional capabilities or services need to be provided at Channel 64 (Please note especially any recent and emerging technologies such as HDTV channels and equipment, interactive television, video conferencing, IPTV, etc. that you believe would be useful)? (N=4)

1. Need for closed captioning equipment/services for live broadcasts of Mayor and other city officials press briefings during emergencies to ensure those with impaired hearing or who are deaf can get information with equal access according to the Department of Justice's requirements during emergencies.
2. In-studio programming; public and community affairs programming for the departments and city residents..
3. interactive television
4. A 1080 HD workflow from the studio, cameras, post production and distribution.

20. Does there need to be new, additional or different types of programs on Channel 64?

YES 55% NO 45%

If YES, what types of programs need to be produced? (please specify) (N=5)

1. In-studio programming; public and community affairs programming for the departments and city residents..
2. More details of the actions of City Council members in committee hearings
3. Community programs
4. Programming in other languages
5. Debates; Mayor addresses; Promotion of Ch64 so people know when and how to tune in.

21. Currently Channel 64 is simulcast on another government access channel, Channel 63. Would there be value to having two different types of programming on each channel?

YES 64% NO 18% DON'T KNOW 18%

If YES, how should the programming on the channels be different? (N=6)

1. One could be designed for interactive community programming, while the other outlet could be for taped events and bulletin notices, PSAs, etc...Also a consideration to have capability to incorporate live programming such as live streams.
2. Yes, each channel should have different programming...
3. maybe a look into the executive branch and how it works
4. Yes
5. Just more options.
6. I think dividing them up is a great idea

For example, one devoted to legislative branch programs (City Council) and the other devoted to executive branch programs (Mayor/administration); or one devoted to public meeting coverage and press events and the other devoted to programs about government agency programs, services, activities and initiatives.

22. Have you encountered any problems in getting programs aired on the dedicated Channel 64 Channel (i.e., playback scheduling, acceptable time slots, etc.)?

YES 8% NO 92%

If YES, please describe the problems: (N=1)

- Not sure how to do this well. When is the schedule published? How do you access it?

23. Do you believe that current awareness/promotion of local Government Access programming is adequate?

YES 42% NO 58%

If NO, please describe additional promotional methods and activities that would be beneficial. (N=4)

1. Use press releases and social media to promote programs.
2. More marketing city wide
3. not many people other than city employees or those who have a relationship with the city know that this program exists
4. I never see any promotion at bus stops, train stations, online, billboards, radio, or other TV stations to tune into Ch64. If my friends didn't tell me about it, I wouldn't know it exists.

24. Please provide any other comments or concerns about City Government Access Channel 64. (N=2)

1. It serves as a wonderful free resource and treasure for city departmenta as well as the community.
2. Ch64 needs promotion and marketing. It's almost as if it's one of Philadelphia's hidden gems. The average citizen does not know it exists.

25. In the last year, estimate how many hours per month on average you have been involved in the production or distribution of programming for Government Access television. (N=6)

Range 0-10 hours per month; Median = 4.5 hours per month; Mode = 1 hours

DEMOGRAPHIC QUESTIONS

26. Are you ... MALE 50% FEMALE 50%

27. Highest grade completed

| | |
|-----------------------------|-----|
| Some high school or less | 0% |
| High school graduate | 0% |
| Some college / Trade school | 36% |
| College / 4-year degree | 36% |
| Postgraduate | 27% |
| Prefer not to answer | 0% |

28. Ethnicity

| | |
|-------------------------|-----|
| Caucasian | 36% |
| Latino/Hispanic | 9% |
| American Indian | 0% |
| Asian | 0% |
| African American | 55% |
| More than one ethnicity | 0% |
| Prefer not to answer | 0% |

29. What age group are you in:

| | |
|-----------|-----|
| Age 18-25 | 0% |
| Age 26-35 | 0% |
| Age 36-45 | 18% |
| Age 46-55 | 36% |
| Age 56-65 | 46% |
| Age 66+ | 0% |

The City of Philadelphia greatly appreciates your cooperation in completing this survey!

EXHIBIT B-9

Cable TV Unit Governmental
Access Channels Business Plan,
dated January 1, 2014, revised
December 15, 2014



EXHIBIT B.9

CABLE TV UNIT GOVERNMENTAL ACCESS
CHANNELS BUSINESS PLAN
DATED JANUARY 1, 2014
REVISED DECEMBER 15, 2014



CITY OF PHILADELPHIA

Office of Innovation & Technology

CATV Unit & Cable Franchise Authority

CABLE TV UNIT
GOVERNMENTAL ACCESS CHANNELS
BUSINESS PLAN

Prepared: January 1, 2014

By: Mark McLaughlin, Cable TV Administrator

Revised: December 15, 2014

Executive Summary

The City's Cable TV Unit, which operates the City's Governmental Access channels, has improved operations each year since its creation and plans to implement significant capital and operational upgrades in the near term to respond to growing client demand and meet the informational needs of the City's residents. This report is organized to first show the history of station, then describe the current station operations, and then conclude with a detailed discussion of the station's goals and the plans to implement them. Also included are detailed operating and capital budgets for a three year period.

Key highlights from the current operations are:

- Year over year original local programming creation growth
- Strong management control over costs while growing the station
- Increased client demand and use of the station and its facilities
- Strong local internet and viewership survey results

Major goals that the station plans to achieve in the near term:

- Construct a new, purpose-built, main studio to meet the needs of the station's clients
- Grow the station staff to meet the demand to for more original local programming
- Upgrade equipment to meet the demand for more on-location programming
- Rebrand Channel 64 and 63 to cablecast unique programming onto the 2nd channel and be more recognizable to all viewers
- Upgrade to a High Definition cablecast
- Expand content distribution on the internet and video on demand

The Station Today

Governmental Access Channels Overview

Philadelphia's Governmental Access Channels are the video link between the City's government and its citizens. These channels are a key component of the City's mission is to broadly distribute government-related information, such as municipal services, legislation, and mayoral addresses, in an effective and efficient manner directly from city government to its residents. These channels are especially important to the City's residents where television remains a primary source of local news and information even in light of overall greatly increasing internet usage.¹ In a 2013 Pew study, 39% of residents report getting most of their information about the city from television, and only 16% from the internet, highlighting that television remains a primary source of local information.² Even as the station rolls out more programming on the internet, this supplemental source cannot take the place of the delivery over the cable system which must continue to be the station's focus to best serve the people of Philadelphia.

Governmental Access cable, part of the Public, Educational, and Governmental (PEG) programs provided by cable franchise agreements, is a program where cable channels are set aside for use by government officials, departments, or agencies. The program provides a convenient and cost-effective method for the government to reach residents with important and useful information. Examples of content typically found on government access cable channels include public service announcements, coverage of public meetings and conferences, and showcases of government initiatives.

Unlike the public and educational stations, the use of the government access channels is controlled by the City so that viewers may be certain about the source of the information. Users of Philadelphia's Governmental Access Channels include Philadelphia's elected officials such as the mayor and city council and City of Philadelphia departments and agencies such as 311. These eligible users may submit video service requests for public meetings, public service announcements, creation and cablecast of video features, or requests for alpha-numeric text messages.

Cablecasts on Philadelphia's government access channel originate from its facilities on the 7th floor of City Hall. The station's staff also frequently conducts live cablecasts from City Hall's Council Chambers, the Mayor's reception room, the PhillyStat meeting room in the Municipal Services Building, and from City's Hall's 7th floor studio.

History of Philadelphia's Governmental Access Channels

Philadelphia's Cable TV Unit assumed responsibility for the management of the City's Governmental Access channels (the station) and began operating Channel 64, the City's Governmental Access channel in early 1990's. Initially, the station only cablecast the weekly

¹ <http://www.pewtrusts.org/pt/research-and-analysis/reports/2013/11/12/ten-facts-about-internet-access-in-philadelphia>

² "Fact 9" - <http://www.pewtrusts.org/pt/research-and-analysis/reports/2013/11/12/ten-facts-about-internet-access-in-philadelphia>

City Council Stated Meetings (regularly scheduled council meetings) and Council's annual budget hearings with one playback of each at night on the same date it took place.

In 2005, the station upgraded to the latest digital technologies. The station's clients, mainly City Council, expressed interest in cablecasting live, with a re-cablecast the same night, every public hearing before City Council along with the Stated Meetings and budget hearings already being recorded. Since no additional personnel was added to the CATV Unit to support the station's efforts, this increased workload caused the station's limited staff to focus on these live cablecasts and prevented them from taking on more involved programming that required unique pre-production work such as features about City departments.

In 2007, Mayor Michael Nutter was elected. His administration focused on connecting the government to the people which included mayoral cablecasts on the Governmental Access channels. This move marked a signification change and increased workload on the station's staff as previously City Council was the main client of the station with limited use by the City's administration. The station was now required to cover all press conferences and some departmental meetings such as The Philadelphia City Planning Commission meetings, PhillyStat, leadership meetings, and Youth Commission meetings. The City Council workload also increased as the station was required to cablecast the occasional off-site City Council public hearings.

At first, due to limited human resources and the lack of equipment, the station could not live cablecast these events but could only record these events and play them back later on. Then, the station obtained funding from the City to outfit two key City locations for live cablecasts – the Mayor's reception room in City Hall where he delivers his press conferences and room 1450 in the Municipal Services Building for the frequent PhillyStat meetings. With these capital upgrades, the staff could work more efficiently and had the essential equipment to produce and transmit live cablecasts from these locations.

Also around the time Mayor Nutter was elected, the station's new studio was completed. The studio, located on the 7th floor of City Hall is small by industry standards, approximately 280 square feet, but was the best the station could do with the space and budget constraints at the time. This location is primarily used by City Council and the Mayor for public service announcements and video messages. The studio is capable of live cablecasts with call-in capability but the call-in capabilities are rarely used, mainly due to its limited space which prevents the station from deploying an adequate call-in show set. The studio is also used by City departments such as training and informational videos, which currently accounts for about 20% of its usage. These uses again are limited by the studio size and the stations lack of human resources.

Governmental Access Channel Programming Today

The original local programming created by the Governmental Access Channel is a combination of the live cablecast of government meetings and events, recorded events for later cablecast, and original video series produced by City departments and other local producers. All City Council public hearings and Stated Meetings are cablecast live "gavel to gavel" and are then re-cablecast the same night for viewers who are unable to watch the live day cablecast. Additionally, the

City's current Mayor is a strong advocate for communicating the City's message and many press conferences are cablecast live from the Mayor's reception room, City Hall Room 202.

Outside of the public meetings, the station cablecasts City-produced, as well as outside feature video programs. These include programs such as: Urban Explorer 2, where a former daily news reporter travels the City revealing many of the City's quirks and unique history; Inside Philly City Council (IPCC), a sit-down interview with a member of city council discussing the top current issues affecting the city and council; and Philly311TV, a 30-minute video series produced by the City's customer service 311 department to allow residences to view how their requests of local government are resolved by the 311 department and related city departments. Other content includes the live cablecast and re-cablecast of other public meetings, public service announcements, and text messages, as requested by various elected officials and City departments and agencies. Channel management keeps any message board content to a maximum of thirty continuous minutes in order to keep viewers engaged with locally-produced video content.

Measured in program hours, in 2012, the station created and cablecast over 525 hours of local, original programming, which is approximately 10 hours per week of original content. The channels re-cablecast over 3000 hours of video programming and cablecast important public service announcements and community message board announcements in the remaining time.

In 2013, the station grew and produced nearly 20 more hours of original programming, cablecasting about 10.5 hours per week, or about 545 hours per year, of original, locally produced, government programming over the government access channels. The channels re-cablecast over 3000 hours of video programming and cablecast important public service announcements and community message board announcements in the remaining time.

Both of these programming estimates *exclude* feature programming created primarily during the summer months when City Council is on recess or brought in from other local sources

The station also seeks to put relevant third-party content on the channels. Recently, the station reached out to local producers and museums asking for content and acquired promotional pieces that are under fifteen minutes from museums and some half hour series, most notably "Philadelphia: The Great Experiment" by Sam Katz, which will soon begin to cablecast in the fall in half-hour episodes up to six times a week.

All programming is cablecast on Comcast channel 64 and Verizon channel 40 and simulcast on to the second Governmental Access Channel, Comcast channel 63 and Verizon Channel 41, as well as on a live feed available over the internet at <http://www.phila.gov/channel64>.

Staffing

The City employs five, mainly full-time, employees to operate and manage the Governmental Access channels and related operations and administrative activities. Some employees listed below are listed as part-time because these employees assist other departments such as running audio/video for events in Rooms 201 and 202 or other rooms that are not recorded or cablecasted on Governmental Access Channels – about 20% of the support techs time. Additionally, the City relies on assistance from the Office of Innovation and Technology to perform minor repairs

when equipment requires maintenance or repair. Total salaries for operating the station in its current capacity are approximately \$235,000 per year.

The current employee roles are:

Cable TV Administrator (full-time, part-time for the station, adjusted annual salary \$48,000³)

The Cable Administrator serves as the Executive Director of the station and supervises all staff and is responsible for the overall leadership, management, and operation of the Governmental Access channels. The Executive Director oversees all administrative, financial, budget, program, and personnel decisions. The Executive Director also is the main contact for the Governmental Access channels with City executives such as the Mayor or Council, the station's most active clients who provide the most content and support for the Governmental Access Channel.

Assistant Managing Director/Producer (full-time, annual salary \$52,000)

The Assistant Managing Director primarily serves the tv industry role of Producer for the station. His responsibility is to produce content for City's Governmental Access channels, primarily all tasks necessary for the live broadcast of meetings and events. His duties include interacting with and fulfilling communications related requests from the Mayor's office, City Council, and City departments. The Producer can perform all duties within the unit as needed to run the station on a day-to-day basis.

Cable Support Technician (1, Full-time, Annual Salary \$47,000)

This Support Technician's primary responsibility is to assist in producing content for the channels and operating and maintaining equipment. The Technician's duties includes interacting with and fulfilling communications related requests from the Mayor's office, City Council and all the departments throughout the City. The Technician can perform many duties within the unit as needed to run the station on a daily basis, but is less experienced than the Producer.

Cable Support Technician⁴ (1, Full-time, Annual Salary \$42,000)

This Support Technician is primarily responsible for operating cable television cablecast and recording equipment, filming, and sound production, and providing technical solutions pertaining to audio and visual hardware problems, operating systems, software issues, and network problems. The Technician may assist other members of the Cable Unit with cablecast production issues and application problems.

³ The Cable Administrator spends approximately 60% of his time working on the Governmental Access Channels so the salary listed above was adjusted from the full salary to reflect only the time working for the Governmental Access Channels.

⁴ This employee's official City title is Technical Support Specialist, but he primarily serves the same industry role as Cable Support Technician.

Audio Technician (1, Part-time, Annual Salary \$45,833⁵)

The Audio Technician is responsible for operating cable television cablecast and recording equipment, filming and sound production, and providing technical solutions pertaining to audio hardware problems, audio software issues, and network problems. The Technician may assist other members of the Cable Television Office in cablecast production issues and application problems. The Audio Technician is expected to leave the station in January 2015 and will likely be replaced with a Cable Support Technician.

Vision for Growth

Based on the station's strong performance with its current resources and the City's interest in more Governmental Access programming, the time is right to invest in equipment, human capital, new programming, and an expansion to unique programming on two channels. The major management decisions that will serve as the catalyst for this growth are the channels' rebranding and an expansion of content—both live event cablecast and scripted programming. These two key pillars are the first focus of this section, followed by a detailed discussion of the equipment, facility, and personnel upgrades required to ensure the maximum benefit is received from these efforts.

New Original Programming

Demand is strong from the City's legislative and executive branches for original content. The station plans to capitalize on this demand and increase both the amount of event cablecasting as well as the development of new non-event programming.

The station currently only covers a fraction of the public hearings and public meetings in the City. The station covers all regular Council meetings and the majority of Mayoral addresses. However, the station is often limited by studio space or equipment from broadcasting more of these meetings. With the facility improvements and equipment upgrades described below, the station can first work more efficiently and cover simultaneous events, something that is a severe hardship to do now. Thus, immediately, when the Mayor wishes to give an address at the same time as a Council Meeting, the station will be able to cover both events even with the current staff.

Next, there is an untapped market of meetings of interest to the public that are currently not filmed because of staffing and equipment shortages. Some examples of these meetings are Civil Service Commission meetings; monthly and special zoning related meetings such as those held by the Planning Commission, the Zoning Board of Adjustment, and Registered Community Organizations; all meetings where Deliberations occur of any board or commission of the City such as the Board of Trustees of the Free Library of Philadelphia, the Tax Reform Commission, the Youth Commission, the Board of Health, the Tax Review Board, the Art Commission, and Commission on Parks and Recreation; and Board of Education general meetings and budget meetings.

⁵ The Audio Technician spends approximately two months of his time working for the radio shop so the salary listed above was adjusted from the full salary to reflect only the time working for the Governmental Access Channels. The Audio Technicians official City title is Electronics Technician II.

For last new avenue of live event coverage, the City is expected to open the new Dilworth Plaza in Fall 2014. The Plaza will host numerous events of public interest that the station can more efficiently live broadcast when new equipment is installed. Examples of some events that might take place at the new Plaza are press conferences, cultural events, concerts, holiday events, and public art installments.

In addition to the live events, with additional staff, the station plans to develop new scripted originally programming. The station's staff has a number of ideas developed that they will produce once the station can commit staff to the production, which is most likely only achieved with a staff expansion as discussed throughout this report. Some examples of these ideas are: A Day in the Life of the Mayor; a program tracking the life of a bill and demonstrating the workings of City government; tour local businesses, for example learn how soft pretzels are made, Tastycakes, etc.; Acres of Diamonds, a video magazine that focuses on the different city neighborhoods and their history; PHLGovRecap, a focus on pending and passed bills and new City business; a Town Hall program with live call in and/or live tweet ; and a local Arts and Culture update focusing on the City initiatives to develop and feature the great culture programs in the City.

To supplement these in-house ideas and better meet the needs of its clients, the station also plans to more actively market itself to City Departments for the production of new department-related content. The station will do this by going to department meetings and talking about the station's services and how the station can help the department get its message out. Based on talking to other Governmental Access stations, such as Fort Collins, Colorado and Montgomery County, Maryland, this tactic is likely to prove very fruitful. Some of the most heavily users of the stations services are expected to be Parks and Recreation, the Police Department, the Fire Department, utilities, and emergency management. With the addition of new staff, the station will be able to dedicate personnel to serving these clients allowing them to provide for the continuity of services.

Rebrand

The City's Governmental access channel has long been referred to simply as "Channel 64", the location in the channel lineup. This brand fails to convey to viewers that mission of the channel and the type of content a viewer might expect. Through a rebrand, the Governmental access channel will select a new brand that will convey to the residents and viewers that the channel is the City's source of information pertaining to the City and its residents.

While still a work in progress, the current proposal for the rebrand is "PHLgovTV". We must also find a way to convey that we are not just one channel since we currently are cablecast on over four channels on two different cable operators systems: Comcast channels 63 & 64 and Verizon channels 40 & 41. Additionally, there is live streaming of the Governmental Access channel cablecast over the internet via the City's webpage.

Thus, the station has outgrown the Channel 64 name and with the rebrand, the station expects viewership to grow. The necessity of the rebrand, and additional growth, will be magnified by another station growth initiative: the station's move to cablecast original content on both of its channels, as will be discussed later in this report.

Launch a second channel with unique programming

Even if only a few more hours of content is added, let alone all the content planned for, there is enough content is being cablecast over the City's Governmental Access channel to end the current simulcasting on the second channel. With an upgrade in the station's playback system, the station could offer unique programming on the second channel. While proposals are still being considered, the current idea is to brand the channels as:

PHLgovTV1 - A "Public Information Channel" (Channel 64 & 40). The Public Information channel would run Mayor's press conferences, City Council press conferences, departmental programming, weather and traffic information, public events such as holiday celebrations, etc, with message board information when no live coverage or reruns are taking place.

PHLgovTV2 - A "Public Meetings Channel" (Channel 63 & 41) The meetings channel would cover all the Council meetings and Departmental public meetings with message board information when no meetings are live or playing back as reruns.

Expand Facilities

The current location of the Governmental Access Channel is a repurposed office, not specifically built to handle to meet the standards of a modern television studio. The main production inhibitors in the current space are: 1) short ceilings that prevent the use of professional, industry standard lighting setups; 2) the studio room is too small (currently comprising 340 square feet for both the studio and control room), preventing more than one person from being on camera at a time; 3) The small room also reduces the options for multi-camera shooting, the industry standard used to make interviews more interesting to the viewer by cycling through different viewing angles, as there is minimal flexibility for the locations of the additional cameras. Unfortunately, these shortcomings prevent the station from producing demanded content. Over the past years many suggestions for video productions by City Council and other city agencies were abandoned due to the inadequate studio space, for example City Council proposed live panel discussions and interview shows that never made it to production due to lack of studio space.

The station began scouting locations with higher ceilings and an overall larger studio space to capable of hosting a purpose-built modern studio for government access TV production. The criteria for the new studio space includes: a 900 square feet studio, a significant improvement over the current 20' x14' studio and in line with industry standards, a 200 square feet companion control room and an upgrade to all high definition in order to create HD content in-house and broadcast in HD. This modernization will enable three or four camera, large-set productions and increase our overall flexibility to host the programs demanded by the station's clients and sought by the stations viewers and potential viewers.

Locations for the new studio are limited, however, reducing the options available for a new studio. The new studio space must be located within City Hall as that is where the main clients are—the mayor and city council. City Hall presents several challenges: it is located above one of the city's main underground train and trolley stations creating a noise problem for any space located on the lower floors. City Hall is also a very old building making construction difficult.

The station was advised that because of the way the building was constructed, it is not feasible to create more overhead space in the current location.

Working within these constraints, the Unit, working with OIT, Public Property, and Comcast, established a 2-stage facility upgrade plan that will allow the studio and related equipment to be upgraded as soon as possible to become HD-broadcast capable and then, for stage two, expand to additional space to obtain space for a new, adequately-sized studio as described above.

First, the Unit will expand its current 7th floor studio to allow for three camera operation and simultaneously upgrade all the necessary equipment to create content ready for HD distribution. To accomplish this, the Unit will need to retrofit approximately 900 square feet of its current 1760 square feet floor plan. This retrofit would be accomplished by converting the current studio control room into the expanded studio space. The studio still requires an attached control room, however, and that space must be reclaimed from another part of the existing 7th floor space. Since the new HD equipment that will be installed as part of this upgrade is much smaller than the existing equipment, the new attached studio control room can be created from space currently housing the old, large equipment in the council chambers control room. The Unit expects that costs for this retrofit will cost approximately \$175 per square foot⁶ and is currently in discussions with vendors, with the assistance of Comcast, to determine the budget for the required equipment.

For the additional space, the Unit is working with Public Property on securing just over 2100 square feet in City Hall Room 825. This location is will work for the Unit's new main studio because it is within City Hall, on a high floor, with existing high ceilings, and is close to existing infrastructure, minimizing relocation costs. However, there are some roadblocks: some walls will need to be removed to create a studio space and the station will need to build in ADA access because the location is only accessible by staircase. The proposed Room 825 space would consist of a total of just over 2,100 square feet for the Governmental Access station allowing construction of the required larger studio. 1100 square feet would be used for the new main studio and attached control room. Additionally, the Unit would move its entire post-production operation up to this new space. Finally, with the demand for more programming, the Unit will require offices to house the additional staff and these new offices, along with storage facilities for field equipment, will occupy the remaining space in Room 825. Unfortunately, this space is not immediately available for occupancy by the Unit and due to its current condition and the building's historic nature, construction speeds will be reduced thus creating the need for the immediate studio expansion on the 7th floor.

Even once ready for occupancy, Room 825 does not provide enough space to meet all the requirements for the City's Governmental access for the next 10 years. After the new studio and other facilities are constructed in Room 825, the Unit will keep the smaller studio on the 7th floor for smaller productions and will be able to move most of the newly acquired equipment up to the new main studio in 825. The remaining approximately 860 square feet of the existing 7th floor location would remain as offices for staff, the council chambers control room, master control and storage for equipment. Assuming that the existing space would need only modest modifications, while the new space in Room 825 would need substantial modifications, and using \$325 per

⁶. \$175 square foot is used for repurposing of 900 square feet of space in the current Cable TV Unit location, based on lesser per square foot work required.

square foot for 2,100 square feet and a more modest \$175 per square foot for 900 square feet of existing space that is retrofit, and no cost for the 860 square feet of existing space that will retain its current use, the total renovation cost would equal \$840,000 for a total of 3,860 square feet for the City's Governmental Access facilities expansion, exclusive of equipment.⁷

Based on the demand from the station's clients, the number of in-house video productions for cablecasting on the City's channel, even with just maintaining the current staff, would increase if the station acquired industry-standard production capabilities within a larger, purpose-built studio facility.

Expand Live Cablecast and Field Accessible Locations

The station's clients are increasingly mobile in order to be better accessible to their constituents and the station needs to adapt to meet their cablecast needs. The station proposes three remote location initiatives: a new live meeting production facility on the 18th floor of the One Parkway Building; a cablecast connection panel by the City Hall Courtyard and Dilworth Plaza; and a remote cablecast satellite truck.

The most immediate location demand is for the 18th floor of the One Parkway Building Room 18029 – City Planning Commission's conference room where the station records the Planning Commission meetings. Currently, station staff needs to move equipment into the location prior to the event, set the equipment up, record, and then take the recording back to the studio for editing and real-time digitizing into the playback system before going to cablecast. The inclusion of a fiber connection from this room to the City Hall Studio and the equipment investment on the 18th floor will both free up the many hours, on average set up and breakdown of equipment takes two and a half hours and editing takes five hours, spent by staff for regular setup, take down, and editing, and will also allow for the live, or quicker to cablecast, cablecast of these events due to the availability of a control room and cameras to the onsite crew to work in real-time on the content, not to mention nearly a day of staff time that can be freed up to create additional content.

The next improvement is to add a connection panel to City Hall so that the station's crew could directly connect mobile outdoor cablecast equipment to the studio for cablecasts in City Hall's courtyard and Dilworth Plaza. Serving both of these locations is important. Currently, all events are held in the courtyard because Dilworth Plaza is under construction. Once Dilworth Plaza reopens, the station's clients will move some of the courtyard events to the plaza and the plaza will also attract new events that will require coverage. The ideal location for this connection is somewhere on the west wall of City Hall. A west wall location could serve both the courtyard and Dilworth Plaza, requiring only one run of wires through City Hall, which is likely to be a challenge due to the age of the building. The length of this connection is estimated at 1,200 feet from the Cable TV Unit's master control to the west wall connection point. This connection cost is estimated at \$6,100.⁸

⁷ \$325 per square foot is the unit cost we are using for substantial renovation/remodeling of Room 825, in consideration of detailed work in a historic structure

⁸ Based on the cabling needed, cable pulling work to be done, tray and conduit installation, and the wall connection frame installation, we've estimated \$3.00 per linear foot x 1,200 ft. + \$2,500 terminal frame and installation cost, equals \$6,100.

The third request is for a remote cablecast truck. The station's clients, especially the Mayor, are increasingly going to various neighborhoods throughout the City to more directly interact with the people they serve. Currently, the Mayor and City Council have remote meetings that they would like recorded about six to twelve times per year, with the equipment available the station expects that more will be requested. Examples of remote meetings and events that the station should cover are the two off-site budget meetings, planning commission remote meetings, public holiday events, and remote City Council meetings, such as at the Academy of Natural Sciences. For the meeting at the Academy of Natural Sciences, and others, the station had to rely on the local crew at the location to get the content for cablecast. Currently, the station has no capability for a live remote cablecast from these locations. In order to cablecast live, the feed must be sent by satellite from the location. An industry-standard cablecast truck provides a purpose-built way to transfer equipment, process the content for live distribution, and make the satellite connection from the remote location.

Upgrade To High Definition

In order to reach a majority of the City's cable viewers and produce compelling content that attracts and retains viewers, the government access channel needs to cablecast in both High Definition and Standard Definition. This need is the station's most immediate upgrade requirement, driven both by client demand and the changing cable industry. The station is currently working with franchisees to expedite this capital upgrade and complete the transition by the winter of 2014. The station plans to still include the budget for this expense in the needs assessment for the franchise renewal with Comcast, but will note any equipment purchased during the franchise renewal negotiations.

Staff Expansion

A major obstacle to increasing content creation, both live coverage of government meetings and events and video features, is the lack of staff. The current staff consists of five, some part-time, employees. First, this is an inadequate amount of staff with the current equipment to cover two live events simultaneously because each live cablecast requires, at a minimum, two people, with additional support staff back at the master control room. For example, if there is a City Council session and a Mayor's press conference simultaneously, the station can only cover the council session with its limited staff. Furthermore, the client demand for live cablecast is so strong that the station can rarely meet the requests of clients for scripted content creation.

Philly's staff and operating budget are substantially less than even the staff and operating budget of smaller local governments and well below that of comparable jurisdictions. See Appendix A.

The solution is to add additional full-time or part-time staff. These employees will be able to immediately relieve the pent of content creation demand, working directly with city agencies to create scripted content for the new cablecast channel. Additionally, the station would be able to cover two live events at the same time, increasing client satisfaction as well as providing live and recablecast coverage of important governmental events around the City by various executive and legislative departments.

The station proposes the following additional positions:

Producer/Operator (2, Full-time, Expected Annual Salary \$47,000, each)

A Producer's primary responsibility is to produce content for and operate and maintain the city's government access channels. Duties includes interacting with and fulfilling communications related requests from the Mayor's office, City Council and all the departments throughout the City. The Producer can perform all duties within the unit as needed to run the channel on a daily basis, but is less experienced than the Lead Producer. These new producers will also take much of the traffic management load off of a current employee allowing all employees to devote more time to content creation while avoiding the

Support Technician (2, Full-time, Expected Annual Salary \$42,000 each)

A Support Technician is responsible for operating cable television cablecast and recording equipment, filming and sound production of cable directed cablecast and providing technical solutions pertaining to audio and visual hardware problems, operating systems, software and network problems. The Support Technician may assist other members of the Cable Television Office in cablecast production issues and application problems.

Station Clerk (1 Full-time, Expected Annual Salary \$14,000*)

The station clerk will greatly relieve the many administrative activities that distract the operations staff from utilizing their expertise to perform their core duties of creating local content. The clerk will compile and maintain station records; manage the general correspondence between the station and the public; serve as the receptionist in receiving visitors and coordinating access to the station facilities; and answer all incoming telephone calls and emails to the station's general mailbox and phone number.

*The expected annual salary for the clerk is \$28,000, however, only 50% of the clerk's time will be allocated to Governmental Access Channels and thus the salary was reduced to reflect only the time the clerk will work for the station.

The proposed new staff will allow the station to increase its use of interns from the local universities to supplement the staff without adding operating costs and give back to the community by training students in a live cablecast studio. This total increase of \$192,000 in operating budget should result in approximately double the amount of locally produced original programming. The new total operating budget would be about \$425,000 per year, putting Philadelphia more in line with comparably-sized franchise areas across the nation (see Appendix A).

Expand Video on Demand

The station requires 60 hours of video on demand between the two stations. 40 hours for the Meetings channel to allow the viewers on-demand access to current meetings and 20 hours for the Information Channel to allow the viewers on-demand access to current announcements and feature programs.

The station currently has an opportunity to send content to the cable systems for video on demand; however, Comcast recently changed the format requested of the station requiring significant additional expense and staff time to reformat the video to meet the new format. As

such, the station's management decided the best use of current resources is to not submit video on demand content. New equipment would provide the requested file format as a standard export option, eliminating the need for significant staff hours. Additionally, this same equipment will allow the current system of staff manually processing DVD orders to be eliminated and replaced with a new self-service system that the clients prefer and that will also free up staff time to work on more original programming. Finally, this new equipment would also be in the proper format for the cable companies to load the station's schedule in the TV guide for viewer information and allowing convenient use of viewer-controlled DVR devices.

Budgets

On the following pages is a summary of Governmental Access' actual and projected operating for FY 2014 - 2016.

The fiscal year for the station, and the City, begins on July 1st and ends on June 30th.

The City's Governmental Access relies primarily on PEG grants from the cable franchisees for capital spending (facility improvements, equipment, etc.) and does not maintain a separate capital budget.

Please reference Appendix A for the operating budgets of other Governmental Access channels throughout the country.

Operating Budget for FY 2014 – 2016

| | | | 2013-14 | | 2014-15 | | 2015-16 |
|----------------------|--------------------------------|--|----------------|--|----------------|--|----------------|
| | | | Annual Budget | | Annual Budget | | Annual Budget |
| Expense | | | | | | | |
| | Services (Teleview) | | 6,720 | | 6,720 | | 15,000 |
| | Facilities and Equipment (DBS) | | 16,284 | | 16,284 | | 16,284 |
| | Other Expenses | | 0 | | 0 | | 0 |
| | Marketing | | 0 | | 0 | | 0 |
| | Payroll Expenses | | 255,666 | | 255,666 | | 447,666 |
| | Program Expenses | | 0 | | 0 | | 0 |
| | Travel and Meetings | | 400 | | 800 | | 1200 |
| | | | | | | | |
| Total Expense | | | 279,070 | | 279,470 | | 480,150 |

Appendix A

Operating Budgets are Comparable Governmental Access Channels

| <u>Local Franchise Area</u> | <u>Operating Budget</u> |
|------------------------------------|--------------------------------|
| Vancouver, WA | \$300,000+ |
| Washington, DC | \$1,000,000+ |
| Seattle, WA | \$1,000,000+ |
| Virginia Beach, VA | \$300,000+ |
| County of San Diego, CA | \$400,000+ |
| City of Austin, TX | \$400,000+ |
| San Francisco, CA | \$400,000+ |
| Tampa, FL | \$1,000,000+ |
| Montgomery County, MD | \$1,000,000+ |

(source: 2013 and 2014 NATOA Governmental Programming Awards Winner Categories)

EXHIBIT B-10

Summary Narrative of
Educational Access Interviews



EXHIBIT B.10

SUMMARY NARRATIVE OF EDUCATIONAL
ACCESS INTERVIEWS

NARRATIVE SUMMARY OF INTERVIEWS WITH EDUCATIONAL ACCESS REPRESENTATIVES

The following is a summary of information reported by School District of Philadelphia (SDP) representatives during interviews concerning SDP's PSTV-related needs and interests. Initial interviews were held with Communications Department staff, which previously oversaw the channel, and later interviews were held with, and updated information received from, Information Technology Department staff, which now oversees the channel.

- **PSTV will continue its role as providing a recognized source of information for parents and the community** – School District representatives indicated that it is very important that PSTV continue to provide critical information about district decisions, activities and initiatives to students, parents and the community at large. PSTV has long done this through its coverage of School District Board meetings, related public proceedings, and the bulletin board information service. The School District continues to place a significant focus on these efforts and sees it as a critical part of PSTV's Mission going forward.¹
- **PSTV will continue to outreach to the community and publicize district, community and local school events** – School District personnel indicated that the district will continue to develop PSTV as a vehicle to connect the many SDP resources and community outreach efforts, in support of a singular goal, a shared vision and a shared responsibility for the citizens and youth of Philadelphia. As such, it will continue to place emphasis on ensuring that PSTV provides programming that connects the School District to the community. With a mostly volunteer staff and limited budget², it will seek to involve an increasing number of students in content development to further this goal.³
- **PSTV will continue to provide timely and evergreen programming of an instructional, informational and educational nature** – SDP continues to have access to programs delivered via the internet and over satellite, targeted both at students in the classroom and other learners community wide. This includes programming like timely programs such as CNN Student News, and evergreen programs such as Colonial Williamsburg, Liberty Kids, and a host of other syndicated series that PSTV continues to have rights to provide.
- **PSTV will develop greater involvement of students in video production, multimedia and other content development creation and learning opportunities** – SDP will be working with individual schools throughout the City to develop greater involvement of students in PSTV's operation. This will include semester long internships where students

¹ The School District of Philadelphia provided for CBG's review a draft proposal and plan concerning the planned evolution of PSTV on October 11, 2014 (hereinafter known as "SDP Draft Plan"). This plan indicated that a combination of Information Technology volunteers along with minimal contract staff, are operating PSTV now. However, the SDP Superintendent has made revitalization of PSTV an anchor goal for the School District.

² The only operating funding that PSTV receives is for resources focused on the production of School Board meetings, the development of bulletin board content and oversight of master control operations.

³ According to the SDP Draft Plan, Superintendent Hite supports transforming PSTV into a student centric entity.

will participate in running centralized studios and editing facilities, as well as distributed video production and editing equipment, development of programming and acting as on air talent. Specifically, student journalists will be able to apply their research and writing skills in relevant context with an intended purpose of program creation for PSTV. They will be able to create Public Service Announcements (PSA), student oriented messages such as those focusing on internet safety, and local stories of interest to them. They will choose areas of focus that reflect their interest and skills and will be able to pursue them at PSTV. This will allow the students to ultimately explore career options in video, broadcast, multimedia and other media development occupations in a practical learning environment.

The District will support them with facilities and equipment in two ways, as described in more detail in the facilities and equipment projection section of the PEG Access Needs Assessment.⁴ First, the District will upgrade and refurbish PSTV's existing production studios and post-production facilities. Second, it will provide equipment and related support to create school news rooms in individual schools, and associated production and post-production facilities and equipment. The objective is to upgrade existing facilities to support existing school media programs and plan future improvements to support these programs going forward.⁵

- **PSTV needs upgraded facilities and equipment to complete its transition and transformation – Representatives from PSTV** stated that they will need equipment support primarily for the upgrade of its centralized facilities at District Headquarters, but also to support the initiative of expanding program production in the schools. The District has recently upgraded its auditorium and supporting television production equipment and production control equipment. The objective is to automate these functions to meet program needs with the limited staff anticipated. However, beyond the initial upgrades, SDP needs outside funding that could be provided under the renewal franchise for additional facilities and equipment to support the other transformation initiatives it is pursuing (as described above). Detail regarding equipment needs is provided in the SDP Draft Plan and in the facilities and equipment projections.⁶

⁴ See Exhibit B.11.

⁵ As discussed in the SDP Draft Plan.

⁶ Ibid.

EXHIBIT B-11

Philadelphia Public, Educational
and Governmental (PEG) Access
Equipment Upgrade and
Replacement Spreadsheets



EXHIBIT B.11

**PHILADELPHIA PUBLIC, EDUCATIONAL AND
GOVERNMENTAL (PEG) ACCESS EQUIPMENT
UPGRADE AND REPLACEMENT
SPREADSHEETS**

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|------------------------------------|--|-----------|--------------|------------------|
| PhillyCAM/Pubic Access | | | | |
| Field Acquisition | | | 9 field kits | |
| Camera Field Packages | One HD camera, one tripod, lighting package, 2 channels wireless audio and accessories. A 10 year replacement schedule indicates replacement of this equipment be a 5-year replacement as opposed to a 7-year because of anticipated wear and tear. | \$15,000 | 6 | \$90,000 |
| Camera Field Packages | One prosumer grade HD camera, one channel wireless audio and accessories, one tripod, small lighting package. | \$6,000 | 6 | \$36,000 |
| Flypack (Studio in a Box) | Includes 3 HD field cameras, portable switcher that includes chromakey/green screen virtual set technology, CG, 8-input audio mixer, 4"x4" LCD input monitor, fiber encoder and tapeless recorder. Housed in a flight case. This is intended to be used at remote locations. | \$110,000 | 1 | \$110,000 |
| Sub Total-Field Acquisition | | | | \$236,000 |
| Media Lab/Editing | | | | |
| Editing Systems | Computer system capable of editing video as well as utilizing other software programs for graphics, web design and other media related activities. | \$5,000 | 8 | \$40,000 |
| Sub Total-Media Lab/Editing | | | | \$40,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|---|-----------|----------|------------------|
| Post Production | 5 systems: 2 full systems, 3 portable systems | | | |
| Portable Edit Systems | Portable laptop computer system with card reader configured for non-linear editing. | \$4,000 | 3 | \$12,000 |
| Ingestion | The editing ingestion process needs to match the Field Acquisition technology. Also needs to be capable of dual ingestion supporting legacy equipment. The price reflects the cost for ingestion needed for editing. | \$2,000 | 2 | \$4,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 2 | \$3,000 |
| Monitoring | Capable of at least SDI/HD, or SDI/HDMI inputs. Includes multi-standard, multi-format digital waveform monitor. Prices are per monitor. | \$3,000 | 2 | \$6,000 |
| Edit Equipment | Price is for a turnkey (including both hardware and software) high-end computer with I/O card with dual monitors. Performance will be slower when trying to edit HD on older computers. Turnkey systems can vary in cost depending on storage, graphics cards, I/O cards and system RAM needed. Should also include network capability. | \$8,000 | 2 | \$16,000 |
| Solid-State Recorder | Capable of multi-format type recording and consistent with entire facility workflow. | \$3,000 | 2 | \$6,000 |
| Sub Total-Post Production | | | | \$47,000 |
| Total-Field Production/Media Lab/Post Production | | | | \$323,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|-----------|----------|------------------|
| Whole Facility | | | | |
| Mobile Production Vehicle | | | | |
| Mobile Production Van | Customized Sprinter-type van used for housing Flypack (Studio in a Box). Van should include heating and cooling for equipment during productions and also to include cabling pass-through or internal/external patching. Van should also include a generator. | \$120,000 | 1 | \$120,000 |
| Sub Total-Mobile Production Van | | | | \$120,000 |
| PhillyCAM Conference | | | | |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. 3 cameras. | \$10,000 | 3 | \$30,000 |
| Misc. HD D/A's and cabling | Miscellaneous cabling, distribution and wall plates to be used to connect cameras from various rooms to production equipment | \$5,000 | 1 | \$5,000 |
| Sub Total-Headend/Playback-Whole Facility | | | | \$35,000 |
| Infrastructure | | | | |
| Video over Ethernet Encoder/Decoder Pair | Capable of transmitting HD-SDI video and audio over IP networks. | \$25,000 | 1 | \$25,000 |
| Optical Transmitters/Receivers | One per channel. Used for receiving and transmitting encoded signals over fiber optic connections; should include transmitters/receivers. | \$2,000 | 10 | \$20,000 |
| SDI cabling | Price range is per foot and for regular shielding or plenum (fire-retardant) shielding. Cabling should be able to accept both SD-SDI and HD-SDI signals. Actual costs are dependent on lengths needed, and should be quoted from an integrator. Cost includes cabling and installation. | \$2.50 | 1000 | \$2,500 |
| SDI routing | Routing and cabling need to have bandwidth capable of HD. Costs vary widely depending on number of inputs and outputs needed. This baseline should provide a 32X32 HD router. | \$50,000 | 1 | \$50,000 |
| SDI patching | Costs are per patch bay and final costs could vary widely depending on number of patch bays needed. Standard configuration is usually 24 inputs per bay and should be wired in at the same time as the router install. | \$1,500 | 2 | \$3,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|-----------|----------|------------------|
| Signal Converters | For up-converting any legacy equipment that is analog or down-converting any newer equipment such as HD to SD. We recommend signal converters that work as "Swiss Army knives", i.e. have the ability to up-convert and down-convert any signal from HD to analog to VGA and even HDMI. | \$3,500 | 2 | \$7,000 |
| Sub Total-Infrastructure-Whole Facility | | | | \$107,500 |
| Archival/Storage | | | | |
| Storage Server | Budgets should account for increased storage costs for HD. Costs on storage can vary widely depending on the number of users, the amount of storage needed, speed, etc. Price per terabyte decreases with the number of terabytes purchased. This price reflects roughly 64 terabytes of storage assuming \$1800/terabyte. Should also have redundant power supplies and be RAID 6 protected. | \$115,200 | 1 | \$115,200 |
| External Archive Storage | Tape drive external backup system to be used for long term archival as well as backup of archival storage server. Budget for 32 terabyte unit in year 1 and another 32 terabyte halfway through the franchise. (~\$1,000 per terabyte) | \$32,000 | 2 | \$64,000 |
| Sub Total-Archival/Storage Staff Production | | | | \$179,200 |
| Headend/Playback | | | | |
| Server-based Playback System | Replacement headend/playback equipment should be HD or HD compatible. Minimum bit rates should be 20 Mb/sec for HD. Capable of replaying 5 channels. | \$70,000 | 1 | \$70,000 |
| Character Generator | Prices vary greatly depending on features, I/O, and single/multi-channel systems. System could include multiple I/O, simultaneous HD animations on 2 channels, built in DVEs, built-in stillstore, 3D graphics, and motion clip playback. | \$20,000 | 1 | \$20,000 |
| Sub Total-Headend/Playback-Whole Facility | | | | \$90,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|--|-----------|----------|------------------|
| On Demand/Streaming | | | | |
| Encoders | 24/7 content. Price varies depending on format and performance. Price represents a professional turnkey single-channel encoder system, which includes hardware and software capable of running 24/7. Could be used as part of the playback system. | \$2,000 | 5 | \$10,000 |
| Sub Total-On Demand Streaming-Whole Facility | | | | \$10,000 |
| Total-Whole Facility | | | | \$541,700 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|--|-----------|----------|------------------|
| Public Access Studio | | | | |
| Express Studio Acquisition | | | | |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. 3 cameras. These cameras should be on stand-alone tripods with quick release capability. | \$10,000 | 3 | \$30,000 |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage, character generator and multi-viewer output. | \$25,000 | 1 | \$25,000 |
| LED Studio Lighting System | Includes small lighting system capable of multi-colored lighting, and dimmer control and capable of upgradable emitter technology. | \$10,000 | 1 | \$10,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 1 | \$1,500 |
| Sub Total-Express Studio Acquisition | | | | \$66,500 |
| Main Studio Acquisition | | | | |
| Cameras | Capable of HD production. Costs listed are per camera and include CCU, camera head, studio viewfinder, tripod adapter, and lens. | \$25,000 | 3 | \$75,000 |
| Studio Monitoring | Capable of HD signal. Prices are per monitor. To be used for confidence and on-set. | \$1,200 | 2 | \$2,400 |
| LED Studio Lighting System | Includes multiple LED fixtures capable of multi-colored lighting, and dimmer control and capable of upgradable emitter technology. | \$40,000 | 1 | \$40,000 |
| Virtual Set Technology | Includes digital sets, backdrops for chromakey/green screen; HD versions, with greater depth and camera motion compensation. Could also include a full cyc wall capable of full body shots. | \$30,000 | 1 | \$30,000 |
| Sub Total-Studio Acquisition | | | | \$147,400 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|------------------------------------|---|-----------|----------|------------------|
| Studio Control | | | | |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage and multi-viewer output. | \$40,000 | 1 | \$40,000 |
| Character Generator | Prices vary greatly depending on features, I/O, and single/multi-channel systems. System would include multiple I/O, built in DVEs, built-in still store and single channel. A separate CG might be optional depending on the type of switcher, as some switchers have this type of functionality built in. | \$15,000 | 1 | \$15,000 |
| Digital Audio Mixing Consoles | Price includes the cost of DPS audio mixing of 16 channels of audio. | \$3,000 | 1 | \$3,000 |
| Multiviewer Monitoring | Monitors to be used to display multiviewer images. Assuming 60" monitor. | \$2,000 | 1 | \$2,000 |
| Solid-State Recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 2 | \$6,000 |
| Blu-ray DVD Recorder | Capable of recording to blu-ray discs. Should include multiple inputs for video and audio, HDMI and FireWire. | \$4,500 | 1 | \$4,500 |
| Misc. HD D/A's and cabling | This is for miscellaneous distribution of signals from the HD equipment | \$5,000 | 1 | \$5,000 |
| Engineering/Confidence Monitoring | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Sub Total-Studio Controls | | | | \$78,500 |
| Total-Public Access Studios | | | | \$292,400 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|-------------------------------|--|-----------|----------|------------------|
| Youth Production | | | | |
| Editing Systems | Computer system capable of editing video as well as utilizing other software programs for graphics, web design and other media related activities. | \$5,000 | 4 | \$20,000 |
| Cameras | These cameras are HD robotic cameras on stand-alone tripods capable of panning and zooming. Should include camera, lens and robotic head. 3 cameras. | \$10,000 | 3 | \$30,000 |
| Camera Field Packages | One consumer grade HD camera, one channel wireless audio and accessories, one tripod, small lighting package. | \$6,000 | 4 | \$24,000 |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage, character generator and multi-viewer output. | \$25,000 | 1 | \$25,000 |
| Studio Monitoring | Capable of HD signal. Prices are per monitor. To be used for confidence and on-set. | \$1,200 | 2 | \$2,400 |
| LED Studio Lighting System | Includes small lighting system capable of multi-colored lighting, and dimmer control and capable of upgradable emitter technology. Also includes lighting for Chroma-key/cyclorama technology. | \$10,000 | 1 | \$10,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 1 | \$1,500 |
| Total Youth Production | | | | \$112,900 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|---|-----------|----------|--------------------|
| Ancillary Equipment | | | | |
| Ancillary Equipment** | | | | |
| Ancillary Equipment | Ancillary/ Support Equipment such as microphones, teleprompters, stands, tripods, portable production accessories, racks, batteries, cards, physical sets, office equipment, etc. will be an aggregated total in the summary spreadsheet. Should also included replacement parts for the Mobile Production Vehicle. | \$30,000 | 1 | \$30,000 |
| Sub Total-Ancillary Equipment | | | | \$30,000 |
| Total-Ancillary Equipment | | | | \$30,000 |
| SubTotal One Time Transition Cost | | | | \$1,300,000 |
| 20% Installation/Training/Warranty | | | | \$260,000 |
| Total One Time Transition Cost | | | | \$1,560,000 |
| * Description of type of equipment needed for each major item in a functional area, and brief purpose. Longer form discussion is included in the narrative report. HD costs are based on 1080p format. | | | | |
| ** This is included as a unit cost in the one-time transition cost calculation to ensure that it is reflected. In actuality, the one time cost for ancillary equipment will likely be higher until it reflects the next replacement of each item. The maximum extended costs would be the 10 year total of \$300,000 (plus 20% Installation/ Training/Warranty) | | | | |
| Youth Production Space | | | | |
| Youth Production Space | Production room (Remodel) | \$250 | 2100 | \$525,000 |
| Sub Total Youth Production Remodel | | | | \$525,000 |
| PhillyCAM Total Facility Space | | | | |
| Facility Space | Facility Space | \$250 | 10000 | \$2,500,000 |
| Sub Total-PhillyCAM Facility Space | | | | \$2,500,000 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|-----------|------------------|------------------|-----------------|------------------|-----------------|------------|------------------|------------------|-----------------|------------------|-----------------|------------------|
| PhillyCAM/Public Access | | | | | | | | | | | | | | |
| Field Acquisition | | | | | | | | | | | | | | |
| Camera Field Packages | \$15,000 | 6 | \$90,000 | | | \$45,000 | | | \$45,000 | | | \$45,000 | | \$135,000 |
| Camera Field Packages | \$6,000 | 6 | \$36,000 | | \$18,000 | | \$18,000 | | \$18,000 | | \$18,000 | | \$18,000 | \$90,000 |
| Flypack | \$110,000 | 1 | \$110,000 | \$110,000 | | | | | | \$110,000 | | | | \$220,000 |
| Sub Total-Field Acquisition | | | \$236,000 | | | | | | | | | | | |
| Media Lab/Editing | | | | | | | | | | | | | | |
| Editing Systems | \$5,000 | 8 | \$40,000 | | | \$40,000 | | | \$40,000 | | | \$40,000 | | \$120,000 |
| Sub Total-Media Lab/Editing | | | \$40,000 | | | | | | | | | | | |
| Post Production | | 5 systems | | | | | | | | | | | | |
| Portable Edit Systems | \$4,000 | 3 | \$12,000 | \$12,000 | | | \$12,000 | | | \$12,000 | | | \$12,000 | \$48,000 |
| Ingestion | \$2,000 | 2 | \$4,000 | | | \$2,000 | \$2,000 | | \$2,000 | \$2,000 | | \$2,000 | \$2,000 | \$12,000 |
| Digital Audio Mixing Consoles | \$1,500 | 2 | \$3,000 | | | \$1,500 | \$1,500 | | \$1,500 | \$1,500 | | \$1,500 | \$1,500 | \$9,000 |
| Monitoring | \$3,000 | 2 | \$6,000 | | | \$3,000 | \$3,000 | | \$3,000 | \$3,000 | | \$3,000 | \$3,000 | \$18,000 |
| Edit Equipment | \$8,000 | 2 | \$16,000 | | | \$8,000 | \$8,000 | | \$8,000 | \$8,000 | | \$8,000 | \$8,000 | \$48,000 |
| Solid State Recorder | \$3,000 | 2 | \$6,000 | | | \$3,000 | \$3,000 | | \$3,000 | \$3,000 | | \$3,000 | \$3,000 | \$18,000 |
| Sub Total-Post Production | | | \$47,000 | | | | | | | | | | | |
| Total Field Production/Media Lab/Post Production | | | \$323,000 | \$122,000 | \$18,000 | \$102,500 | \$47,500 | \$0 | \$120,500 | \$139,500 | \$18,000 | \$102,500 | \$47,500 | \$718,000 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|--|-----------|----------|----------------|-----------|----------|-----|----------|-----|----------|-----|-----------|----------|----------|---------------|
| Whole Facility | | | | | | | | | | | | | | |
| Mobile Production Vehicle | | | | | | | | | | | | | | |
| Mobile Production Vehicle | \$120,000 | 1 | \$120,000 | \$120,000 | | | | | | | \$120,000 | | | \$240,000 |
| Sub Total- Mobile Production Vehicle | | | \$120,000 | | | | | | | | | | | |
| PhillyCAM Conference | | | | | | | | | | | | | | |
| Cameras | \$10,000 | 3 | \$30,000 | \$30,000 | | | | | | | \$30,000 | | | \$60,000 |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | \$5,000 | | | | | | | \$5,000 | | | \$10,000 |
| Sub Total- Headend- Playback Whole Facility | | | \$35,000 | | | | | | | | | | | |
| Infrastructure | | | | | | | | | | | | | | |
| Video over Ethernet Encoder/Decoder Pair | \$25,000 | 1 | \$25,000 | \$25,000 | | | | | | | \$25,000 | | | \$50,000 |
| Optical Transmitters/Receivers | \$2,000 | 10 | \$20,000 | \$20,000 | | | | | | | \$20,000 | | | \$40,000 |
| SDI cabling | \$2.50 | 1000 | \$2,500 | | | | | | | | | | \$2,500 | \$2,500 |
| SDI routing | \$50,000 | 1 | \$50,000 | \$50,000 | | | | | | | | \$50,000 | | \$100,000 |
| SDI patching | \$1,500 | 2 | \$3,000 | \$3,000 | | | | | | | | | | \$3,000 |
| Signal Converters | \$3,500 | 2 | \$7,000 | \$7,000 | | | | | | | | \$7,000 | | \$14,000 |
| Sub Total- Infrastructure Whole Facility | | | \$107,500 | | | | | | | | | | | |
| Archival Storage | | | | | | | | | | | | | | |
| Storage Server | \$115,200 | 1 | \$115,200 | \$57,600 | \$11,520 | | \$11,520 | | \$11,520 | | \$11,520 | | \$11,520 | \$115,200 |
| External Archive Storage | \$32,000 | 2 | \$64,000 | \$32,000 | \$6,400 | | \$6,400 | | \$6,400 | | \$6,400 | | \$6,400 | \$64,000 |
| Sub Total- Archival Storage-Whole Facility | | | \$179,200 | | | | | | | | | | | |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|----------------|-----------|----------|-----|----------|----------|----------|-----|-----------|----------|-----------|---------------|
| Headend-Playback | | | | | | | | | | | | | | |
| Server-based Playback System | \$70,000 | 1 | \$70,000 | | | | | \$70,000 | | | | | \$70,000 | \$140,000 |
| Character Generator | \$20,000 | 1 | \$20,000 | \$20,000 | | | | | | | \$20,000 | | | \$40,000 |
| Sub Total-Headend-Playback Whole Facility | | | \$90,000 | | | | | | | | | | | |
| On Demand Streaming | | | | | | | | | | | | | | |
| Encoders | \$2,000 | 5 | \$10,000 | | | | | \$10,000 | | | | | \$10,000 | \$20,000 |
| Sub Total-On Demand Streaming Whole Facility | | | \$10,000 | | | | | | | | | | | |
| Total-Whole Facility | | | \$541,700 | \$369,600 | \$17,920 | \$0 | \$17,920 | \$80,000 | \$17,920 | \$0 | \$237,920 | \$57,000 | \$100,420 | \$898,700 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|----------------|----------|----------|----------|----------|----------|-----|-----|----------|----------|-----------|---------------|
| Public Access Studio | | | | | | | | | | | | | | |
| Express Studio Acquisition | | | | | | | | | | | | | | |
| Cameras | \$10,000 | 3 | \$30,000 | \$30,000 | | | | | | | \$30,000 | | | \$60,000 |
| Switcher | \$25,000 | 1 | \$25,000 | | | | | \$25,000 | | | | | \$25,000 | \$50,000 |
| LED Studio Lighting System | \$10,000 | 1 | \$10,000 | \$10,000 | | | | | | | \$10,000 | | | \$20,000 |
| Digital Audio Mixing Consoles | \$1,500 | 1 | \$1,500 | \$1,500 | | | | | | | \$1,500 | | | \$3,000 |
| Sub Total-Express Studio Acquisition | | | \$66,500 | | | | | | | | | | | |
| Main Studio Acquisition | | | | | | | | | | | | | | |
| Cameras | \$25,000 | 3 | \$75,000 | | | | \$75,000 | | | | | | | \$75,000 |
| Studio Monitoring | \$1,200 | 2 | \$2,400 | | \$2,400 | | | | | | | \$2,400 | | \$4,800 |
| LED Studio Lighting System | \$40,000 | 1 | \$40,000 | | | | | | | | \$40,000 | | | \$40,000 |
| Virtual Set Technology | \$30,000 | 1 | \$30,000 | | \$30,000 | | | | | | | \$30,000 | | \$60,000 |
| Sub Total-Studio Acquisition | | | \$147,400 | | | | | | | | | | | |
| Studio Control | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | | | \$40,000 | | | | | | | \$40,000 | \$80,000 |
| Character Generator | \$15,000 | 1 | \$15,000 | | | \$15,000 | | | | | | | \$15,000 | \$30,000 |
| Digital Audio Mixing Consoles | \$3,000 | 1 | \$3,000 | | | \$1,500 | | | | | | | \$1,500 | \$3,000 |
| Multiviewer | | | | | | | | | | | | | | |
| Monitoring | \$2,000 | 1 | \$2,000 | | | \$4,000 | | | | | | | \$4,000 | \$8,000 |
| Solid State Recorder | \$3,000 | 2 | \$6,000 | | | \$6,000 | | | | | | | \$6,000 | \$12,000 |
| Blu-ray Recorder | \$4,500 | 1 | \$4,500 | | | \$4,500 | | | | | | | \$4,500 | \$9,000 |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | | \$5,000 | | | | | | | \$5,000 | \$10,000 |
| Engineering-Confidence Monitor | \$3,000 | 1 | \$3,000 | | | \$3,000 | | | | | | | \$3,000 | \$6,000 |
| Sub Total-Studio Control | | | \$78,500 | | | | | | | | | | | |
| Total-Public Access Studio | | | \$292,400 | \$41,500 | \$32,400 | \$79,000 | \$75,000 | \$25,000 | \$0 | \$0 | \$81,500 | \$32,400 | \$104,000 | \$470,800 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|-----------------------------------|-----------|----------|------------------|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------------|
| Youth Production | | | | | | | | | | | | | | |
| Editing Systems | \$5,000 | 4 | \$20,000 | \$20,000 | | | | | | | | | | \$20,000 |
| Cameras | \$10,000 | 3 | \$30,000 | \$30,000 | | | | | | | | | | \$30,000 |
| Camera Field Packages | \$6,000 | 4 | \$24,000 | \$24,000 | | | | | | | | | | \$24,000 |
| Switcher | \$25,000 | 1 | \$25,000 | \$25,000 | | | | | | | | | | \$25,000 |
| Studio Monitoring | \$1,200 | 2 | \$2,400 | \$2,400 | | | | | | | | | | \$2,400 |
| LED Studio Lighting System | \$10,000 | 1 | \$10,000 | \$10,000 | | | | | | | | | | \$10,000 |
| Digital Audio Mixing Consoles | \$1,500 | 1 | \$1,500 | \$1,500 | | | | | | | | | | \$1,500 |
| Sub Total Youth Production | | | \$112,900 | | | | | | | | | | | |
| Total Youth Production | | | \$112,900 | \$112,900 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$112,900 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|--|-----------|----------|----------------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|---------------|
| Ancillary Equipment | | | | | | | | | | | | | | |
| Ancillary Equipment | | | | | | | | | | | | | | |
| Ancillary Equipment | \$30,000 | 1 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$300,000 |
| Sub Total- Ancillary Equipment | | | \$30,000 | | | | | | | | | | | |
| Total-Ancillary Equipment | | | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$300,000 |
| | | | | | | | | | | | | | | |
| Yearly Equipment Totals | | | | \$676,000 | \$98,320 | \$211,500 | \$170,420 | \$135,000 | \$168,420 | \$169,500 | \$367,420 | \$221,900 | \$281,920 | \$2,500,400 |
| 20% Inst/Train/Warranty | | | | \$135,200 | \$19,664 | \$42,300 | \$34,084 | \$27,000 | \$33,684 | \$33,900 | \$73,484 | \$44,380 | \$56,384 | \$500,080 |
| TOTAL | | | | \$811,200 | \$117,984 | \$253,800 | \$204,504 | \$162,000 | \$202,104 | \$203,400 | \$440,904 | \$266,280 | \$338,304 | \$3,000,480 |
| Total One Time Transition Cost | | | \$1,300,000 | | | | | | | | | | | |
| 15% Inst/Train/Warranty | | | \$260,000 | | | | | | | | | | | |
| Total One Time Transition Cost | | | \$1,560,000 | | | | | | | | | | | |
| Youth Production Space | | | | | | | | | | | | | | |
| Youth Production Space | \$250 | 2000 | \$525,000 | \$525,000 | | | | | | | | | | \$525,000 |
| Sub Total Youth Production Remodel | | | \$525,000 | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| PhillyCAM Facility Space | | | | | | | | | | | | | | |
| Facility Space | \$250 | 10000 | \$2,500,000 | | | | | \$2,500,000 | | | | | | \$2,500,000 |
| Sub Total- PhillyCAM Facility Space | | | \$2,500,000 | | | | | | | | | | | \$2,500,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|------------------------------------|---|-----------|--------------|------------------|
| Governmental Access | | | | |
| Field Acquisition | | | 3 field kits | |
| Camera Field Packages | One HD camera, one tripod, lighting package, 2 channels wireless audio and accessories. A 10 year replacement schedule indicates replacement of this equipment be a 5-year replacement as opposed to a 7-year because of anticipated wear and tear. | \$30,000 | 3 | \$90,000 |
| Flypack (Studio in a Box) | Includes 3 stand-alone, robotic cameras, portable switcher capable of switching live camera feeds, computer inputs and includes a CG, robotic camera controller, 8-input audio mixer, 4"x4" LCD input monitor, fiber encoder and tapeless recorder and cellular transmission capability. Housed in a flight case. This is intended to be used at remote locations. This Flypack is also intended for use in the accompanying Mobile Production Vehicle. | \$135,000 | 1 | \$135,000 |
| Sub Total-Field Acquisition | | | | \$225,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|----------------------------------|---|-----------|-----------|---------------------------|
| Post Production | | | 4 systems | 2 Traditional, 2 Portable |
| Ingestion | The editing ingestion process needs to match the Field Acquisition technology. Also needs to be capable of dual ingestion supporting legacy equipment. The price reflects the cost for ingestion needed for editing. | \$2,000 | 2 | \$4,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 2 | \$3,000 |
| Monitoring | Capable of at least SDI/HD, or SDI/HDMI inputs. Includes multi-standard, multi-format digital waveform monitor. Prices are per monitor. | \$3,000 | 2 | \$6,000 |
| Edit Equipment | Price is for a turnkey (including both hardware and software) dual quad-core computer with I/O card with dual monitors. Performance will be slower when trying to edit HD on older computers. Turnkey systems can vary in cost depending on storage, graphics cards, I/O cards and system RAM needed. Should also include network capability. | \$8,000 | 2 | \$16,000 |
| Solid-State Recorder | Capable of multi-format type recording and consistent with entire facility workflow. | \$3,000 | 2 | \$6,000 |
| Portable Edit System | Portable laptop computer system with card reader configured for non-linear editing. | \$4,000 | 2 | \$8,000 |
| Sub Total-Post Production | | | | \$43,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|------------|----------|-----------------|
| Whole Facility | | | | |
| Mobile Production Vehicle | | | | |
| Mobile Production Van | Customized Sprinter-type van used for housing Flypack (Studio in a Box). Van should include heating and cooling for equipment during productions and also to include cabling pass-through or internal/external patching. Van should also include a generator and fiber optic transport. | \$95,000 | 1 | \$95,000 |
| Sub Total-Mobile Production Van | | | | \$95,000 |
| Infrastructure | | | | |
| Video over Ethernet Encoder/Decoder Pair | Capable of transmitting multichannel HD-SDI video and audio over IP networks. | \$25,000 | 1 | \$25,000 |
| Optical Transmitters/Receivers | One per channel. Used for receiving and transmitting encoded signals over fiber optic connection; should include transmitters/receivers. Fiber connections to Love Park, OEM, One Parkway, City Hall Plaza and MSB. | \$2,000 | 5 | \$10,000 |
| Fiber Cabling | Price is per foot, including cabling and installation for internal connection from CATV Unit master control to termination frame to serve Courtyard and Dilworth Plaza. | \$1,200.00 | 3 | \$3,600 |
| Fiber Cable Termination Unit | Lockable wall mounted termination frame, including weather resistant housing, internal termination and connection hardware and installation. | \$2,500.00 | 1 | \$2,500 |
| SDI cabling | Price is per foot and for regular shielding or plenum (fire-retardant) shielding. Cabling should be able to accept both SD-SDI and HD-SDI signals. Actual costs are dependent on lengths needed, and should be quoted from an integrator. Cost includes cabling and installation. | \$2.50 | 1000 | \$2,500 |
| SDI routing | Routing and cabling need to have bandwidth capable of HD. Costs vary widely depending on number of inputs and outputs needed. This baseline should provide a 32X32 HD router. | \$50,000 | 1 | \$50,000 |
| SDI patching | Costs are per patch bay and final costs could vary widely depending on number of patch bays needed. Standard configuration is usually 24 inputs per bay and should be wired in at the same time as the router install. | \$1,500 | 2 | \$3,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|-----------|----------|------------------|
| Signal Converters | For up-converting any legacy equipment that is analog or down-converting any newer equipment such as HD to SD. We recommend signal converters that work as "Swiss Army knives", i.e. have the ability to up-convert and down-convert any signal from HD to analog to VGA and even HDMI. | \$3,500 | 2 | \$7,000 |
| Sub Total-Infrastructure-Whole Facility | | | | \$103,600 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|---|-----------|----------|------------------|
| Archival/Storage | | | | |
| Storage Server | Budgets should account for increased storage costs for HD. Costs on storage can vary widely depending on the number of users, the amount of storage needed, speed, etc. Price per terabyte decreases with the number of terabytes purchased. This price reflects roughly 32 terabytes of storage assuming \$1200/terabyte to be distributed through the life of the franchise. Should also have redundant power supplies and be RAID protected. | \$38,400 | 1 | \$38,400 |
| Sub Total- Archival/Storage Staff Production | | | | \$38,400 |
| Headend/Playback | | | | |
| Server-based Playback System | Replacement headend/playback equipment should be HD or HD compatible. Minimum bit rates should be 20 Mb/sec for HD. Capable of multi-channel playback | \$60,000 | 1 | \$60,000 |
| Character Generator | Prices vary greatly depending on features, I/O, and single/multi-channel systems. System could include multiple I/O, simultaneous HD animations on 2 channels, built in DVEs, built-in stillstore, 3D graphics, and motion clip playback. | \$20,000 | 1 | \$20,000 |
| Sub Total- Headend/Playback-Whole Facility | | | | \$80,000 |
| On Demand/Streaming | | | | |
| Encoders | Need one encoder per channel for streaming live 24/7 content. Price varies depending on format and performance. Price represents a professional turnkey single-channel encoder system, which includes hardware and software capable of running 24/7. Could be used as part of the playback system. | \$2,000 | 2 | \$4,000 |
| Sub Total-On Demand Streaming-Whole Facility | | | | \$4,000 |
| Total-Whole Facility | | | | \$321,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|-------------------------------------|--|-----------|----------|------------------|
| City Hall | | | | |
| Studio Acquisition | | | | |
| | | | 1 studio | |
| Cameras | Should be capable of HD production. Costs listed are per camera and include CCU, camera head, studio viewfinder, tripod adapter, and lens. | \$25,000 | 3 | \$75,000 |
| Studio Monitoring | Capable of HD signal. Prices are per monitor. To be used for confidence and on-set. | \$1,200 | 1 | \$1,200 |
| LED Studio Lighting System | Includes multiple LED fixtures capable of multi-colored lighting, and dimmer control and capable of upgradable emitter technology. | \$20,000 | 1 | \$20,000 |
| Virtual Set Technology | Includes digital sets, backdrops for chromakey/green screen; HD versions, with greater depth and camera motion compensation. Could also include a full cyc wall capable of full body shots. | \$30,000 | 1 | \$30,000 |
| Sub Total-Studio Acquisition | | | | \$126,200 |
| Studio Control | | | | |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage, character generator and multi-viewer output. | \$40,000 | 1 | \$40,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 1 | \$1,500 |
| Engineering/Confidence Monitor | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Misc. HD D/A's and cabling | This is for miscellaneous distribution of signals from the HD equipment | \$10,000 | 1 | \$10,000 |
| Digital recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Sub Total-Studio Control | | | | \$57,500 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|-------------------------------------|--|-----------|----------|------------------|
| Council Chambers | | | | |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. 4 cameras. | \$10,000 | 4 | \$40,000 |
| Audio Microphones (Wired) | Wired microphones with Mute functions and lectern microphones. \$175 each. | \$175 | 22 | \$3,850 |
| Digital DSP Audio Mixing System | System includes all DSP audio functions. Complete with gating limiting and automatic audio mixing of all microphone inputs. | \$50,000 | 1 | \$50,000 |
| Projection System | Projection system includes 5000 lumens projector and cabling to interface to all inputs and to control room. | \$10,000 | 1 | \$10,000 |
| TV Monitors | 55 inch. 2 monitors | \$1,500 | 2 | \$3,000 |
| TV Monitor | 9 inch to be used as the Audio Desk confidence monitor | \$500 | 1 | \$500 |
| Sub Total Council Chambers | | | | \$107,350 |
| Council Chamber Control Room | | | | |
| Switcher | Should be capable of HD production. Also have the ability to incorporate virtual set and multiviewer technology. Switcher should also have capabilities such as external device control, clip store, customizable configuration, have multiple keying technology both upstream and downstream and have the ability to do macros. | \$40,000 | 1 | \$40,000 |
| Robotic Camera Control | Controller should be capable of controlling multiple cameras with the ability of stored presets and camera setup capability | \$2,500 | 1 | \$2,500 |
| Character Generator | Prices vary greatly depending on features, I/O, and single/multi-channel systems. System would include multiple I/O, built in DVEs, built-in still store and dual channel. A separate CG might be optional depending on the type of switcher, as some switchers have this type of functionality built in. | \$25,000 | 1 | \$25,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing and encoding to facility. Digital audio conversion is not necessary immediately, but should be provided for all new upgrades and can be transitioned as needed. Price is for 32 channel digital audio mixer capable of multi-channel output including SAP/MAP audio. | \$5,000 | 1 | \$5,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|--|-----------|----------|-----------------|
| Multiviewer Monitoring | Monitors to be used to display multiviewer images. Assuming 2- 48" monitors. | \$1,500 | 2 | \$3,000 |
| Solid-State Recorder/ Digital recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Misc. HD D/A's and cabling | This is for miscellaneous distribution of signals from the HD equipment | \$5,000 | 1 | \$5,000 |
| Engineering/Confidence Monitor | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Sub Total-Council Chambers Control Room Room 201 | | | | \$86,500 |
| AV Cabling | Audio and video cabling needed to send & receive signals to Council Control. Should include HD-SDI for SDI video, audio, intercom return and video confidence if needed. Current cabling techniques could include combining these types of feeds/signals all over CAT-5 network cable. | \$5,000 | 1 | \$5,000 |
| Sub Total Room 201 | | | | \$5,000 |
| Room 202 | | | | |
| AV Cabling | Audio and video cabling needed to send & receive signals to Council Control. Should include HD-SDI for SDI video, audio, intercom return and video confidence if needed. Current cabling techniques could include combining these types of feeds/signals all over CAT-5 network cable. | \$5,000 | 1 | \$5,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|-----------------------------------|--|-----------|----------|------------------|
| Room 202 Control | | | | |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage, character generator and multi-viewer output. | \$40,000 | 1 | \$40,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 1 | \$1,500 |
| Engineering/Confidence Monitor | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. Cameras will be mounted on stand-alone tripods with dollies. 3 cameras. These 3 cameras are intended to be used in all 3 conference rooms | \$11,000 | 3 | \$33,000 |
| Digital recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Sub Total Room 202 Control | | | | \$80,500 |
| Sub Total Room 202 | | | | \$85,500 |
| Courtyard | | | | |
| AV Cabling | Audio and video cabling needed to send & receive signals to Council Control. Should include HD-SDI for SDI video, audio, intercom return and video confidence if needed. Current cabling techniques could include combining these types of feeds/signals all over CAT-5 network cable. | \$5,000 | 1 | \$5,000 |
| Sub Total Courtyard | | | | \$5,000 |
| Total City Hall | | | | \$473,050 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|--|-----------|----------|------------------|
| One Parkway Building | | | | |
| Mayors Conference Room | | | | |
| Misc. HD D/A's and cabling | Miscellaneous cabling, distribution and wall plates to be used to connect cameras from various rooms to production equipment | \$5,000 | 1 | \$5,000 |
| Sub Total Mayor Conference Room | | | | \$5,000 |
| Planning Commission Conference Room | | | | |
| Misc. HD D/A's and cabling | Miscellaneous cabling, distribution and wall plates to be used to connect cameras from various rooms to production equipment | \$5,000 | 1 | \$5,000 |
| High Tech Podium | System includes touchscreen control with the capability of switching multiple video and audio sources | \$8,000 | 1 | \$8,000 |
| Sub Total Planning Commission Room | | | | \$13,000 |
| Conference Room | | | | |
| Misc. HD D/A's and cabling | Miscellaneous cabling, distribution and wall plates to be used to connect cameras from various rooms to production equipment | \$5,000 | 1 | \$5,000 |
| Sub Total Conference Room | | | | \$5,000 |
| 3-Room Control/Acquisition | This control room is intended to be used to capture video from all three rooms listed. | | | |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage, character generator and multi-viewer output. | \$40,000 | 1 | \$40,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 1 | \$1,500 |
| Engineering/Confidence Monitor | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. Cameras will be mounted on stand-alone tripods with dollies. 3 cameras. These 3 cameras are intended to be used in all 3 conference rooms | \$11,000 | 3 | \$33,000 |
| Digital recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Sub Total-Studio Control | | | | \$80,500 |
| Total One Parkway | | | | \$103,500 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---------------------------------------|--|-----------|----------|------------------|
| MSB Building | | | | |
| Philly Stat Room | | | | |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. 4 cameras. | \$10,000 | 4 | \$40,000 |
| Microphones | Wired gooseneck microphones with Mute functions. \$175 each. | \$175 | 6 | \$1,050 |
| Microphones | Wired Boundary microphones used for flexible applications and can come in either cardioid, super cardioid or omni-directional patterns. | \$175 | 2 | \$350 |
| Sub Total Stat Room | | | | \$41,400 |
| Philly Stat Control Room | | | | |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage, character generator and multi-viewer output. | \$25,000 | 1 | \$25,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 1 | \$1,500 |
| Misc. HD D/A's and cabling | This is for miscellaneous distribution of signals from the HD equipment | \$5,000 | 1 | \$5,000 |
| Engineering/Confidence Monitor | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Solid-State Recorder/Digital recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Sub Total Stat Control Room | | | | \$37,500 |
| Total MSB Building | | | | \$78,900 |
| Total All Buildings | | | | \$655,450 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|-----------|-------------|--------------------|
| Ancillary Equipment | | | | |
| Ancillary Equipment** | | | | |
| Ancillary Equipment | Ancillary/ Support Equipment such as microphones, teleprompters, stands, tripods, portable production accessories, racks, batteries, cards, physical sets, office equipment, etc. will be an aggregated total in the summary spreadsheet. | \$30,000 | 1 | \$30,000 |
| Sub Total-Ancillary Equipment | | | | \$30,000 |
| Total-Ancillary Equipment | | | | \$30,000 |
| SubTotal One Time Transition Cost | | | | \$1,274,450 |
| 20% Installation/Training/Warranty | | | | \$254,890 |
| Total One Time Transition Cost | | | | \$1,529,340 |
| * Description of type of equipment needed for each major item in a functional area, and brief purpose. Longer form discussion is included in the narrative report. HD costs are based on 1080p format. | | | | |
| ** This is included as a unit cost in the one-time transition cost calculation to ensure that it is reflected. In actuality, the one time cost for ancillary equipment will likely be higher until it reflects the next replacement of each item. The maximum extended costs would be the 10 year total of \$300,000 (plus 20% Installation/ Training/Warranty). | | | | |
| Facility Baseline | | | | |
| New Studio and Associated Production Space | 30x30 Studio Space (900 SqFt) and 200 SqFt control room, plus 1,000 square foot of post production, field equipment storage and master control operations space. | \$325 | 2100 | \$682,500 |
| Remodel Office and Ancillary Space | Renovation of existing office space to accommodate new staff and discrete channel operations | \$175 | 900 | \$157,500 |
| Total-Facility Baseline | | | 3000 | \$840,000 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|------------------------------------|-----------|-----------|------------------|-----------------|------------------|----------------|------------|------------|-----------------|-----------------|------------------|-----------------|----------------|------------------|
| Governmental Access | | | | | | | | | | | | | | |
| Field Acquisition | | | | | | | | | | | | | | |
| Camera Field Packages | \$30,000 | 3 | \$90,000 | \$60,000 | \$30,000 | | | | \$60,000 | \$30,000 | | | | \$180,000 |
| Flypack | \$135,000 | 1 | \$135,000 | | \$135,000 | | | | | | \$135,000 | | | \$270,000 |
| Sub Total-Field Acquisition | | | \$225,000 | \$60,000 | \$165,000 | \$0 | \$0 | \$0 | \$60,000 | \$30,000 | \$135,000 | \$0 | \$0 | \$450,000 |
| Post Production | | 4 systems | | | | | | | | | | | | |
| Ingestion | \$2,000 | 2 | \$4,000 | \$2,000 | \$2,000 | | | | | | \$2,000 | \$2,000 | | \$8,000 |
| Digital Audio Mixing Consoles | \$1,500 | 2 | \$3,000 | \$1,500 | \$1,500 | | | | | | \$1,500 | \$1,500 | | \$6,000 |
| Monitoring | \$3,000 | 2 | \$6,000 | \$3,000 | \$3,000 | | | | | | \$3,000 | \$3,000 | | \$12,000 |
| Edit Equipment | \$8,000 | 2 | \$16,000 | \$8,000 | \$8,000 | | | | | | \$8,000 | \$8,000 | | \$32,000 |
| Solid State Recorder | \$3,000 | 2 | \$6,000 | \$3,000 | \$3,000 | | | | | | \$3,000 | \$3,000 | | \$12,000 |
| Portable Edit Equipment | \$4,000 | 2 | \$8,000 | | | \$8,000 | | | | | | | \$8,000 | \$16,000 |
| Sub Total-Post Production | | | \$43,000 | \$17,500 | \$17,500 | \$8,000 | \$0 | \$0 | \$0 | \$0 | \$17,500 | \$17,500 | \$8,000 | \$86,000 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|----------------|----------|----------|-----|-----|----------|-----|-----|----------|----------|----------|---------------|
| Whole Facility | | | | | | | | | | | | | | |
| Mobile Production Vehicle - All PEG | | | | | | | | | | | | | | |
| Mobile Production Van | \$95,000 | 1 | \$95,000 | | \$95,000 | | | | | | \$95,000 | | | \$190,000 |
| Sub Total- Mobile Production Vehicle | | | \$95,000 | | | | | | | | | | | |
| Infrastructure | | | | | | | | | | | | | | |
| Video over Ethernet Encoder/Decoder Pair | \$25,000 | 1 | \$25,000 | \$25,000 | | | | | | | | \$25,000 | | \$50,000 |
| Optical Transmitters/Receivers | \$2,000 | 5 | \$10,000 | \$10,000 | | | | | | | | | \$10,000 | \$20,000 |
| Fiber Cabling | \$1,200 | 3 | \$3,600 | \$3,600 | | | | | | | | | \$3,600 | \$7,200 |
| Fiber Cable Termination Unit | \$2,500 | 1 | \$2,500 | \$2,500 | | | | | | | | | \$2,500 | \$5,000 |
| SDI cabling | \$2.50 | 1000 | \$2,500 | \$500 | | | | | | | | | \$500 | \$1,000 |
| SDI routing | \$50,000 | 1 | \$50,000 | \$50,000 | | | | | | | \$50,000 | | | \$100,000 |
| SDI patching | \$1,500 | 2 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Signal Converters | \$3,500 | 2 | \$7,000 | \$7,000 | | | | | | | \$7,000 | | | \$14,000 |
| Sub Total- Infrastructure | | | | | | | | | | | | | | |
| Whole Facility | | | \$103,600 | | | | | | | | | | | |
| Archival Storage | | | | | | | | | | | | | | |
| Storage Server | \$38,400 | 1 | \$38,400 | \$19,200 | | | | \$19,200 | | | | | | \$38,400 |
| Sub Total- Archival Storage-Whole Facility | | | \$38,400 | | | | | | | | | | | |
| Headend-Playback | | | | | | | | | | | | | | |
| Server-based Playback System | \$60,000 | 1 | \$60,000 | \$60,000 | | | | | | | \$60,000 | | | \$120,000 |
| Character Generator | \$20,000 | 1 | \$20,000 | \$20,000 | | | | | | | \$20,000 | | | \$40,000 |
| Sub Total- Headend-Playback Whole Facility | | | \$80,000 | | | | | | | | | | | |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|-------------------------------|-----------|----------|----------------|-----------|----------|-----|-----|----------|-----|-----|-----------|----------|----------|---------------|
| On Demand Streaming | | | | | | | | | | | | | | |
| Encoders | \$2,000 | 2 | \$4,000 | \$4,000 | | | | | | | | | \$4,000 | \$8,000 |
| Sub Total-On Demand Streaming | | | | | | | | | | | | | | |
| Whole Facility | | | \$4,000 | | | | | | | | | | | |
| Total-Whole Facility | | | \$321,000 | \$204,800 | \$95,000 | \$0 | \$0 | \$19,200 | \$0 | \$0 | \$235,000 | \$25,000 | \$20,600 | \$599,600 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|------------------|----------|-----|-----|-----|-----|-----|-----|----------|---------|------|---------------|
| City Hall | | | | | | | | | | | | | | |
| Studio Acquisition | | 1 studio | | | | | | | | | | | | |
| Cameras | \$25,000 | 3 | \$75,000 | \$75,000 | | | | | | | \$75,000 | | | \$150,000 |
| Studio Monitoring | \$1,200 | 1 | \$1,200 | \$2,400 | | | | | | | | \$2,400 | | \$4,800 |
| LED Studio Lighting System | \$20,000 | 1 | \$20,000 | \$20,000 | | | | | | | \$20,000 | | | \$40,000 |
| Virtual Set Technology | \$30,000 | 1 | \$30,000 | \$30,000 | | | | | | | \$30,000 | | | \$60,000 |
| Sub Total-Studio Acquisition | | | \$126,200 | | | | | | | | | | | |
| Studio Control | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | \$40,000 | | | | | | | \$40,000 | | | \$80,000 |
| Digital Audio Mixing Consoles Engineering\ Confidence Monitor | \$1,500 | 1 | \$1,500 | \$1,500 | | | | | | | \$1,500 | | | \$3,000 |
| Misc. HD D/A's and cabling | \$3,000 | 1 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| | \$10,000 | 1 | \$10,000 | \$10,000 | | | | | | | \$10,000 | | | \$20,000 |
| Digital Recorder | \$3,000 | 1 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Sub Total-Studio Control | | | \$57,500 | | | | | | | | | | | |
| Council Chamber | | | | | | | | | | | | | | |
| Cameras Audio | \$10,000 | 4 | \$40,000 | \$40,000 | | | | | | | \$40,000 | | | \$80,000 |
| Microphones (Wired) | \$175 | 22 | \$3,850 | \$3,850 | | | | | | | \$3,850 | | | \$7,700 |
| Digital DSP Audio System | \$50,000 | 1 | \$50,000 | \$50,000 | | | | | | | \$50,000 | | | \$100,000 |
| Projection System | \$10,000 | 1 | \$10,000 | \$10,000 | | | | | | | \$10,000 | | | \$20,000 |
| TV Monitors | \$1,500 | 2 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| TV Monitors | \$500 | 1 | \$500 | \$500 | | | | | | | \$500 | | | \$1,000 |
| Sub Total-Council Chamber | | | \$107,350 | | | | | | | | | | | |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|----------------|-----------|-----|-----|-----|-----|-----|-----|-----------|---------|------|---------------|
| Council Chamber Control Room | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | \$20,000 | | | | | | | \$20,000 | | | \$40,000 |
| Robotic Camera Control | \$2,500 | 1 | \$2,500 | \$2,500 | | | | | | | \$2,500 | | | \$5,000 |
| Character Generator | \$25,000 | 1 | \$25,000 | \$25,000 | | | | | | | \$25,000 | | | \$50,000 |
| Digital Audio Mixing Consoles | \$5,000 | 1 | \$5,000 | \$5,000 | | | | | | | \$5,000 | | | \$10,000 |
| Multi-view Monitoring | \$1,500 | 2 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Solid State Recorder | \$3,000 | 1 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | \$5,000 | | | | | | | \$5,000 | | | \$10,000 |
| Engineering\Confidence Monitor | \$3,000 | 1 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Sub Total- Council Chambers Control Room | | | \$86,500 | | | | | | | | | | | |
| Room 201 | | | | | | | | | | | | | | |
| AV Cabling | \$5,000 | 1 | \$5,000 | \$5,000 | | | | | | | \$5,000 | | | \$10,000 |
| Sub Total-Room 201 | | | \$5,000 | | | | | | | | | | | |
| Room 202 | | | | | | | | | | | | | | |
| AV Cabling | \$5,000 | 1 | \$5,000 | \$5,000 | | | | | | | \$5,000 | | | \$10,000 |
| Room 202 Control | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | \$40,000 | | | | | | | \$40,000 | | | \$80,000 |
| Digital Audio Mixing Consoles | \$1,500 | 1 | \$1,500 | \$1,500 | | | | | | | \$1,500 | | | \$3,000 |
| Engineering\Confidence Monitor | \$3,000 | 1 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Cameras | \$11,000 | 3 | \$33,000 | \$33,000 | | | | | | | \$33,000 | | | \$66,000 |
| Digital Recorder | \$3,000 | 1 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Sub Total-202 Control | | | \$80,500 | | | | | | | | | | | |
| Sub Total-Room 202 | | | \$85,500 | | | | | | | | | | | |
| Courtyard | | | | | | | | | | | | | | |
| AV Cabling | \$5,000 | 1 | \$5,000 | \$5,000 | | | | | | | \$5,000 | | | \$10,000 |
| Sub Total- Courtyard | | | \$5,000 | | | | | | | | | | | |
| Total City Hall | | | \$473,050 | \$454,250 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$451,850 | \$2,400 | \$0 | \$908,500 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|--|-----------|----------|----------------|---------|----------|-----|-----|-----|-----|---------|----------|----------|------|---------------|
| One Parkway Building | | | | | | | | | | | | | | |
| Mayors Conference Room | | | | | | | | | | | | | | |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | \$5,000 | | | | | | \$5,000 | | | \$10,000 |
| Sub Total-Mayor's Conference Room | | | \$5,000 | | | | | | | | | | | |
| Planning Commission Conference Room | | | | | | | | | | | | | | |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | \$5,000 | | | | | | \$5,000 | | | \$10,000 |
| High Tech Podium | \$8,000 | 1 | \$8,000 | \$8,000 | | | | | | \$8,000 | | | | \$16,000 |
| Sub Total-Planning Commission Room | | | \$13,000 | | | | | | | | | | | |
| Conference Room | | | | | | | | | | | | | | |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | \$5,000 | | | | | | \$5,000 | | | \$10,000 |
| Sub Total-Planning Commission Room | | | \$5,000 | | | | | | | | | | | |
| 3-Room Control/Acquisition | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | | \$40,000 | | | | | | | \$40,000 | | \$80,000 |
| Digital Audio Mixing Consoles | \$1,500 | 1 | \$1,500 | | \$1,500 | | | | | | | \$1,500 | | \$3,000 |
| Engineering\Confidence Monitor | \$3,000 | 1 | \$3,000 | | \$3,000 | | | | | | | \$3,000 | | \$6,000 |
| Cameras | \$11,000 | 3 | \$33,000 | | \$33,000 | | | | | | | \$33,000 | | \$66,000 |
| Digital Recorder | \$3,000 | 1 | \$3,000 | | \$3,000 | | | | | | | \$3,000 | | \$6,000 |
| Sub Total-Conference Control | | | \$80,500 | | | | | | | | | | | |
| Total One Parkway | | | \$103,500 | \$8,000 | \$15,000 | \$0 | \$0 | \$0 | \$0 | \$8,000 | \$15,000 | \$0 | \$0 | \$46,000 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|------------------------------------|-----------|----------|----------------|-----------|----------|----------|-----|-----|-----|---------|-----------|---------|----------|---------------|
| MSB Building | | | | | | | | | | | | | | |
| Philly Stat Room | | | | | | | | | | | | | | |
| Cameras | \$10,000 | 4 | \$40,000 | | | \$40,000 | | | | | | | \$40,000 | \$80,000 |
| Microphones | \$175 | 6 | \$1,050 | | | \$1,050 | | | | | | | \$1,050 | \$2,100 |
| Microphones | \$175 | 2 | \$350 | | | \$350 | | | | | | | \$350 | \$700 |
| Sub Total Stat Room | | | \$41,400 | | | | | | | | | | | |
| Philly Stat Control Room | | | | | | | | | | | | | | |
| Switcher | \$25,000 | 1 | \$25,000 | | | \$25,000 | | | | | | | \$25,000 | \$50,000 |
| Digital Audio Mixing Consoles | \$1,500 | 1 | \$1,500 | | | \$1,500 | | | | | | | \$1,500 | \$3,000 |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | | \$5,000 | | | | | | | \$5,000 | \$10,000 |
| Engineering/Confidence Monitor | \$3,000 | 1 | \$3,000 | | | \$3,000 | | | | | | | \$3,000 | \$6,000 |
| Digital Recorder | \$3,000 | 1 | \$3,000 | | | \$3,000 | | | | | | | \$3,000 | \$6,000 |
| Sub Total Stat Control Room | | | \$37,500 | | | | | | | | | | | |
| Total MSB Building | | | \$78,900 | \$0 | \$0 | \$78,900 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$78,900 | \$157,800 |
| Total All Buildings | | | \$655,450 | \$462,250 | \$15,000 | \$78,900 | \$0 | \$0 | \$0 | \$8,000 | \$466,850 | \$2,400 | \$78,900 | \$1,112,300 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|--|-----------|----------|----------------|-----------|-----------|-----------|----------|----------|-----------|----------|-------------|----------|-----------|---------------|
| Ancillary Equipment | | | | | | | | | | | | | | |
| Ancillary Equipment | | | | | | | | | | | | | | |
| Ancillary Equipment | \$30,000 | 1 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$300,000 |
| Sub Total- Ancillary Equipment | | | \$30,000 | | | | | | | | | | | |
| Total-Ancillary Equipment | | | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$30,000 | \$300,000 |
| | | | | | | | | | | | | | | |
| Yearly Equipment Totals | | | | \$774,550 | \$322,500 | \$116,900 | \$30,000 | \$49,200 | \$90,000 | \$68,000 | \$884,350 | \$74,900 | \$137,500 | \$2,547,900 |
| 20% Inst/Train/Warranty | | | | \$154,910 | \$64,500 | \$23,380 | \$6,000 | \$9,840 | \$18,000 | \$13,600 | \$176,870 | \$14,980 | \$27,500 | \$509,580 |
| TOTAL | | | | \$929,460 | \$387,000 | \$140,280 | \$36,000 | \$59,040 | \$108,000 | \$81,600 | \$1,061,220 | \$89,880 | \$165,000 | \$3,057,480 |
| Total One Time Transition Cost | | | \$1,274,450 | | | | | | | | | | | |
| 20% Inst/Train/Warranty | | | \$254,890 | | | | | | | | | | | |
| Total One Time Transition Cost | | | \$1,529,340 | | | | | | | | | | | |
| Facility Baseline | | | | | | | | | | | | | | |
| New Studio and Associated Production Space | \$325 | 2100 | \$682,500 | \$682,500 | | | | | | | | | | \$682,500 |
| Remodel Office and Ancillary Space | \$175 | 900 | \$157,500 | \$157,500 | | | | | | | | | | \$157,500 |
| Sub Total- Facility Baseline | | | \$840,000 | | | | | | | | | | | \$840,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|--|-----------|----------|------------------|
| School District of Philadelphia/Educational Access | | | | |
| Field Acquisition | | | | |
| Camera Field Packages | One HD camera, one tripod, lighting package, 2 channels wireless audio and accessories. A 10 year replacement schedule indicates replacement of this equipment be a 5-year replacement as opposed to a 7-year because of anticipated wear and tear. | \$15,000 | 5 | \$75,000 |
| Camera Field Packages | One prosumer grade HD camera, two channels wired audio and accessories, one tripod, small lighting package. To be distributed to High Schools in the district. | \$3,000 | 10 | \$30,000 |
| Camera Field Packages | One consumer grade HD camera, one channel wired audio and accessories, one tripod, small lighting package. Used for the Elementary and Middle Schools | \$700 | 20 | \$14,000 |
| Sub Total-Field Acquisition | | | | \$119,000 |
| Post Production | | | | |
| Ingestion | The editing ingestion process needs to match the Field Acquisition technology. Also needs to be capable of dual ingestion supporting legacy equipment. The price reflects the cost for ingestion needed for editing. | \$2,000 | 2 | \$4,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing. Digital audio conversion is not necessary immediately, but should be considered for migration during the life of the franchise. This cost reflects the price of a digital mixing console of 8-10 inputs. | \$1,500 | 2 | \$3,000 |
| Monitoring | Capable of at least SDI/HD, or SDI/HDMI inputs. Includes multi-standard, multi-format digital waveform monitor. Prices are per monitor. | \$3,000 | 2 | \$6,000 |
| Edit Equipment | Price is for a turnkey (including both hardware and software) at minimum, a state-of-the art computer with I/O card and dual monitors. Performance will be slower when trying to edit HD on older computers. Turnkey systems can vary in cost depending on storage, graphics cards, I/O cards and system RAM needed. Should also include network capability. | \$8,000 | 2 | \$16,000 |
| Solid-State Recorder | Capable of multi-format type recording and consistent with entire facility workflow. | \$3,000 | 2 | \$6,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|-----------|----------|------------------|
| Editing Systems | Computer system capable of editing video as well as utilizing other software programs for graphics, web design and other media related activities. To be distributed to various schools. Capable of running i-Movie | \$5,000 | 20 | \$100,000 |
| Sub Total-Post Production | | | | \$135,000 |
| Total-Field Acquisition and Post Production | | | | \$254,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|---|-----------|----------|------------------|
| School District of Philadelphia Studio | | | | |
| Main Studio Acquisition | | | | |
| Cameras | Capable of HD production. Costs listed are per camera and include CCU, camera head, studio viewfinder, tripod adapter, and lens. | \$30,000 | 3 | \$90,000 |
| Studio Monitoring | Capable of HD signal. Prices are per monitor. To be used for confidence and on-set. | \$1,200 | 2 | \$2,400 |
| LED Studio Lighting System | Includes multiple LED fixtures capable of multi-colored lighting, and dimmer control and capable of upgradable emitter technology. | \$40,000 | 1 | \$40,000 |
| Virtual Set Technology | Includes digital sets, backdrops for chromakey/green screen; HD versions, with greater depth and camera motion compensation. Could also include a full cyc wall capable of full body shots. | \$30,000 | 1 | \$30,000 |
| Sub Total-Studio Acquisition | | | | \$162,400 |
| Studio Control | | | | |
| Switcher | Capable of HD production. Includes one M/E capable of upstream and downstream keying, file storage and multi-viewer output. | \$40,000 | 1 | \$40,000 |
| Digital Audio Mixing Consoles | Price includes the cost of DPS audio mixing of 16 channels of audio. | \$3,000 | 1 | \$3,000 |
| Multiviewer Monitoring | Monitors to be used to display multiviewer images. Assuming 2- 48" monitors. | \$1,500 | 2 | \$3,000 |
| Solid-State Recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Misc. HD D/A's and cabling | This is for miscellaneous distribution of signals from the HD equipment | \$5,000 | 1 | \$5,000 |
| Engineering/Confidence Monitoring | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Sub Total-Studio Control | | | | \$57,000 |
| Total-Studio | | | | \$219,400 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|--|-----------|----------|-----------------|
| School Board | | | | |
| School Board Auditorium | | | | |
| Cameras | These cameras are HD robotic cameras capable of panning and zooming. Should include camera, lens and robotic head. | \$10,000 | 4 | \$40,000 |
| Audio Microphones (Wired) | Gooseneck style wired microphones with Mute functions. | \$175 | 12 | \$2,100 |
| Audio Microphones (Wireless) | Wireless microphone systems with transmitter and receiver. | \$400 | 12 | \$4,800 |
| Monitoring | 55 inch. 2 monitors | \$1,000 | 2 | \$2,000 |
| Digital DSP Audio Mixing System | System includes all DSP audio functions. Complete with gating limiting and automatic audio mixing of all microphone inputs. (8 inputs per rack unit) | \$2,500 | 3 | \$7,500 |
| Projection System | Projection system includes 5000 lumens projector and cabling to interface to all inputs and to control room. | \$10,000 | 1 | \$10,000 |
| Scan Converter | Capable of converting computer output to SDI video. Should be capable of HD output. | \$1,200 | 1 | \$1,200 |
| Sub Total School Board | | | | \$67,600 |
| School Board Auditorium Control | | | | |
| Switcher | Should be capable of HD production. Also have the ability to incorporate virtual set and multiviewer technology. Switcher should also have capabilities such as external device control, clip store, customizable configuration, have multiple keying technology both upstream and downstream and have the ability to do macros. | \$40,000 | 1 | \$40,000 |
| Robotic Camera Control | Controller should be capable of controlling multiple cameras with the ability of stored presets and camera setup capability | \$2,500 | 1 | \$2,500 |
| Character Generator | Prices vary greatly depending on features, I/O, and single/multi-channel systems. System would include multiple I/O, built in DVEs, built-in still store and dual channel. A separate CG might be optional depending on the type of switcher, as some switchers have this type of functionality built in. | \$25,000 | 1 | \$25,000 |
| Digital Audio Mixing Consoles | Price for adding stereo digital audio mixing and encoding to facility. Digital audio conversion is not necessary immediately, but should be provided for all new upgrades and can be transitioned as needed. Price is for 16 channel digital audio mixer capable of multi-channel output including SAP/MAP audio. | \$2,500 | 1 | \$2,500 |
| Multiviewer Monitoring | Monitors to be used to display multiviewer images. Assuming 2- 48" monitors. | \$1,500 | 2 | \$3,000 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|--|-----------|----------|------------------|
| Solid-State Recorder/ Digital recorder | Recorder should be capable of multiple SD, compact flash cards, or solid state and should integrate with entire facility workflow. | \$3,000 | 1 | \$3,000 |
| Misc. HD D/A's and cabling | This is for miscellaneous distribution of signals from the HD equipment | \$5,000 | 1 | \$5,000 |
| Engineering/Confidence Monitor | Used for monitoring video output signal. Should incorporate built-in waveform/vector scope. Capable of analyzing digital signals including HD. | \$3,000 | 1 | \$3,000 |
| Sub Total-School Board Control Room | | | | \$84,000 |
| Total School Board Auditorium | | | | \$151,600 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|--|---|-----------|----------|-----------------|
| Whole Facility | | | | |
| Infrastructure | | | | |
| Video over Ethernet Encoder/Decoder Pair | Capable of transmitting HD-SDI video and audio over IP networks. | \$15,000 | 1 | \$15,000 |
| Optical Transmitters/Receivers | One per channel. Used for receiving and transmitting encoded signals over fiber optic connections; should include transmitters/receivers. | \$2,000 | 1 | \$2,000 |
| SDI cabling | Price range is per foot and for regular shielding or plenum (fire-retardant) shielding. Cabling should be able to accept both SD-SDI and HD-SDI signals. Actual costs are dependent on lengths needed, and should be quoted from an integrator. Cost includes cabling and installation. | \$2.50 | 1000 | \$2,500 |
| SDI routing | Routing and cabling need to have bandwidth capable of HD. Costs vary widely depending on number of inputs and outputs needed. This baseline should provide a 32X32 HD router. | \$25,000 | 1 | \$25,000 |
| SDI patching | Costs are per patch bay and final costs could vary widely depending on number of patch bays needed. Standard configuration is usually 32 inputs per bay and should be wired in at the same time as the router install. | \$1,500 | 1 | \$1,500 |
| Signal Converters | For up-converting any legacy equipment that is analog or down-converting any newer equipment such as HD to SD. We recommend signal converters that work as "Swiss Army knives", i.e. have the ability to up-convert and down-convert any signal from HD to analog to VGA and even HDMI. | \$3,500 | 1 | \$3,500 |
| Sub Total-Infrastructure-Whole Facility | | | | \$49,500 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|--|-----------|----------|------------------|
| Archival/Storage | | | | |
| Storage Server | Budgets should account for increased storage costs for HD. Costs on storage can vary widely depending on the number of users, the amount of storage needed, speed, etc. Price per terabyte decreases with the number of terabytes purchased. This price reflects roughly 60 terabytes of storage, assuming \$1200/terabyte. Should also have redundant power supplies and be RAID protected. | \$72,000 | 1 | \$72,000 |
| LTO Tape Backup system | System is designed to be a backup to the storage server and uses tape as the storage media. Cartridges can be loaded into the system when needed. | \$4,000 | 1 | \$4,000 |
| Sub Total- Archival/Storage | | | | \$76,000 |
| Headend/Playback | | | | |
| Server-based Playback System | Replacement headend/playback equipment should be HD or HD compatible. Minimum bit rates should be 20 Mb/sec for HD. | \$50,000 | 1 | \$50,000 |
| Character Generator | Prices vary greatly depending on features, I/O, and single/multi-channel systems. System could include multiple I/O, simultaneous HD animations on 2 channels, built in DVEs, built-in stillstore, 3D graphics, and motion clip playback. This may not be needed if the character generator is included in the playback system. | \$20,000 | 1 | \$20,000 |
| Sub Total- Headend/Playback-Whole Facility | | | | \$70,000 |
| On Demand/Streaming | | | | |
| Encoders | Need one encoder per channel for streaming live 24/7 content. Price varies depending on format and performance. Price represents a professional turnkey single-channel encoder system, which includes hardware and software capable of running 24/7. Could be used as part of the playback system. | \$2,000 | 1 | \$2,000 |
| Sub Total-On Demand Streaming-Whole Facility | | | | \$2,000 |
| Total-Whole Facility | | | | \$197,500 |

| Functional Area | Comments* | Unit Cost | Quantity | Extended Costs |
|---|---|-----------|----------|--------------------|
| Ancillary Equipment | | | | |
| Ancillary Equipment** | | | | |
| Ancillary Equipment | Ancillary/ Support Equipment such as microphones, teleprompters, stands, tripods, portable production accessories, racks, batteries, cards, physical sets, etc. will be an aggregated total in the summary spreadsheet. | \$20,000 | 1 | \$20,000 |
| Sub Total-Ancillary Equipment | | | | \$20,000 |
| Total-Ancillary Equipment | | | | \$20,000 |
| SubTotal One Time Transition Cost | | | | \$842,500 |
| 20% Installation/Training/Warranty | | | | \$168,500 |
| Total One Time Transition Cost | | | | \$1,011,000 |
| * Description of type of equipment needed for each major item in a functional area, and brief purpose. Longer form discussion is included in the narrative report. HD costs are based on 1080p format. | | | | |
| ** This is included as a unit cost in the one-time transition cost calculation to ensure that it is reflected. In actuality, the one time cost for ancillary equipment will likely be higher until it reflects the next replacement of each item. The maximum extended costs would be the 10 year total of \$200,000 (plus 20% Installation/ Training/Warranty) | | | | |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|------------------|------------------|------------------|------------|------------|------------|------------------|------------|------------------|------------|------------|------------------|
| School District of Philadelphia/Educational Access | | | | | | | | | | | | | | |
| Field Acquisition | | | | | | | | | | | | | | |
| Camera Field Packages | \$15,000 | 5 | \$75,000 | \$75,000 | | | | | \$75,000 | | | | | \$150,000 |
| Camera Field Packages | \$3,000 | 10 | \$30,000 | \$30,000 | | | | | \$30,000 | | | | | \$60,000 |
| Camera Field Packages | \$700 | 20 | \$14,000 | \$14,000 | | | | | \$14,000 | | | | | \$28,000 |
| Sub Total-Field Acquisition | | | \$119,000 | | | | | | | | | | | |
| Post Production | | | | | | | | | | | | | | |
| Ingestion | \$2,000 | 2 | \$4,000 | \$4,000 | | | | | | | \$4,000 | | | \$8,000 |
| Digital Audio Mixing Consoles | \$1,500 | 2 | \$3,000 | \$3,000 | | | | | | | \$3,000 | | | \$6,000 |
| Monitoring | \$3,000 | 2 | \$6,000 | \$6,000 | | | | | | | \$6,000 | | | \$12,000 |
| Edit Equipment | \$8,000 | 2 | \$16,000 | \$16,000 | | | | | | | \$16,000 | | | \$32,000 |
| Solid State Recorder | \$3,000 | 2 | \$6,000 | \$6,000 | | | | | | | \$6,000 | | | \$12,000 |
| Editing Systems | \$5,000 | 20 | \$100,000 | \$100,000 | | | | | | | \$100,000 | | | \$200,000 |
| Sub Total-Post Production | | | \$135,000 | | | | | | | | | | | |
| Total-Field Acquisition/Post Production | | | \$254,000 | \$254,000 | \$0 | \$0 | \$0 | \$0 | \$119,000 | \$0 | \$135,000 | \$0 | \$0 | \$508,000 |
| School District of Philadelphia Studio | | | | | | | | | | | | | | |
| Main Studio Acquisition | | | | | | | | | | | | | | |
| Cameras | \$30,000 | 3 | \$90,000 | | \$90,000 | | | | | | \$90,000 | | | \$180,000 |
| Studio Monitoring LED Studio | \$1,200 | 2 | \$2,400 | | \$2,400 | | | | | | \$2,400 | | | \$4,800 |
| Lighting System | \$40,000 | 1 | \$40,000 | | \$40,000 | | | | | | \$40,000 | | | \$80,000 |
| Virtual Set Technology | \$30,000 | 1 | \$30,000 | | \$30,000 | | | | | | \$30,000 | | | \$60,000 |
| Sub Total-Studio Acquisition | | | \$162,400 | | | | | | | | | | | |
| Studio Control | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | | \$40,000 | | | | | | \$40,000 | | | \$80,000 |
| Digital Audio Mixing Consoles | \$3,000 | 1 | \$3,000 | | \$3,000 | | | | | | \$3,000 | | | \$6,000 |
| Multiviewer | \$1,500 | 2 | \$3,000 | | \$3,000 | | | | | | \$3,000 | | | \$6,000 |
| Solid-State Recorder | \$3,000 | 1 | \$3,000 | | \$3,000 | | | | | | \$3,000 | | | \$6,000 |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | \$5,000 | | | | | | \$5,000 | | | \$10,000 |
| Engineering/Confidence Monitoring | \$3,000 | 1 | \$3,000 | | \$3,000 | | | | | | \$3,000 | | | \$6,000 |
| Sub Total-Studio Control | | | \$57,000 | | | | | | | | | | | |
| Total-Studio/Studio Control | | | \$219,400 | \$0 | \$219,400 | \$0 | \$0 | \$0 | \$0 | \$0 | \$219,400 | \$0 | \$0 | \$438,800 |
| School Board | | | | | | | | | | | | | | |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|--|-----------|----------|------------------|------------|------------|------------|------------|------------|------------------|------------|------------|------------|------------|------------------|
| School Board Auditorium | | | | | | | | | | | | | | |
| Cameras | \$10,000 | 4 | \$40,000 | | | | | | \$40,000 | | | | | \$40,000 |
| Audio Microphones (Wired) | \$175 | 12 | \$2,100 | | | | | | \$2,100 | | | | | \$2,100 |
| Audio Microphones (Wireless) | \$400 | 12 | \$4,800 | | | | | | \$4,800 | | | | | \$4,800 |
| Monitoring | \$1,000 | 2 | \$2,000 | | | | | | \$2,000 | | | | | \$2,000 |
| Digital DSP Audio System | \$2,500 | 3 | \$7,500 | | | | | | \$7,500 | | | | | \$7,500 |
| Projection System | \$10,000 | 1 | \$10,000 | | | | | | \$10,000 | | | | | \$10,000 |
| Scan Converter | \$1,200 | 1 | \$1,200 | | | | | | \$1,200 | | | | | \$1,200 |
| Sub Total-School Board Auditorium | | | \$67,600 | | | | | | | | | | | |
| School Board Auditorium Control | | | | | | | | | | | | | | |
| Switcher | \$40,000 | 1 | \$40,000 | | | | | | \$40,000 | | | | | \$40,000 |
| Robotic Camera Control | \$2,500 | 1 | \$2,500 | | | | | | \$2,500 | | | | | \$2,500 |
| Character Generator | \$25,000 | 1 | \$25,000 | | | | | | \$25,000 | | | | | \$25,000 |
| Digital Audio Mixing Consoles | \$2,500 | 1 | \$2,500 | | | | | | \$2,500 | | | | | \$2,500 |
| Multi-view Monitoring | \$1,500 | 2 | \$3,000 | | | | | | \$3,000 | | | | | \$3,000 |
| Solid State Recorder | \$3,000 | 1 | \$3,000 | | | | | | \$3,000 | | | | | \$3,000 |
| Misc. HD D/A's and cabling | \$5,000 | 1 | \$5,000 | | | | | | \$5,000 | | | | | \$5,000 |
| Engineering Confidence Monitor | \$3,000 | 1 | \$3,000 | | | | | | \$3,000 | | | | | \$3,000 |
| Sub Total-School Board Auditorium Control | | | \$84,000 | | | | | | | | | | | |
| Total School Board Auditorium | | | \$151,600 | \$0 | \$0 | \$0 | \$0 | \$0 | \$151,600 | \$0 | \$0 | \$0 | \$0 | \$151,600 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|---|-----------|----------|------------------|------------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|----------------|----------------|------------------|
| Whole Facility | | | | | | | | | | | | | | |
| Infrastructure | | | | | | | | | | | | | | |
| Video over Ethernet Encoder/Decoder Pair | \$15,000 | 1 | \$15,000 | \$15,000 | | | | | | \$15,000 | | | | \$30,000 |
| Optical Transmitters/Receivers | \$2,000 | 1 | \$2,000 | \$2,000 | | | | | | \$2,000 | | | | \$4,000 |
| SDI cabling | \$2.50 | 1000 | \$2,500 | \$2,500 | | | | | | \$2,500 | | | | \$5,000 |
| SDI routing | \$25,000 | 1 | \$25,000 | \$25,000 | | | | | | \$25,000 | | | | \$50,000 |
| SDI patching | \$1,500 | 1 | \$1,500 | \$1,500 | | | | | | \$1,500 | | | | \$3,000 |
| Signal Converters | \$3,500 | 1 | \$3,500 | \$3,500 | | | | | | \$3,500 | | | | \$7,000 |
| Sub Total-Infrastructure | | | | | | | | | | | | | | |
| Whole Facility | | | \$49,500 | | | | | | | | | | | |
| Archival Storage | | | | | | | | | | | | | | |
| Storage Server | \$72,000 | 1 | \$72,000 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$7,200 | \$72,000 |
| LTO Backup System | \$4,000 | 1 | \$4,000 | \$4,000 | | | | | | \$4,000 | | | | \$8,000 |
| Sub Total-Archival Storage-Whole Facility | | | \$76,000 | | | | | | | | | | | |
| Headend-Playback | | | | | | | | | | | | | | |
| Server-based Playback System | \$50,000 | 1 | \$50,000 | \$50,000 | | | | | | \$50,000 | | | | \$100,000 |
| Character Generator | \$20,000 | 1 | \$20,000 | \$20,000 | | | | | | \$20,000 | | | | \$40,000 |
| Sub Total-Headend-Playback Whole Facility | | | \$70,000 | | | | | | | | | | | |
| On Demand Streaming | | | | | | | | | | | | | | |
| Encoders | \$2,000 | 1 | \$2,000 | | | \$2,000 | | | | | | | \$2,000 | \$4,000 |
| Sub Total-On Demand Streaming Whole Facility | | | \$2,000 | | | | | | | | | | | |
| Total-Whole Facility | | | \$197,500 | \$130,700 | \$7,200 | \$9,200 | \$7,200 | \$7,200 | \$7,200 | \$130,700 | \$7,200 | \$7,200 | \$9,200 | \$323,000 |

| Functional Area | Unit Cost | Quantity | Extended Costs | YR1 | YR2 | YR3 | YR4 | YR5 | YR6 | YR7 | YR8 | YR9 | YR10 | 10 Year Total |
|--------------------------------|-----------|----------|----------------|-----------|-----------|----------|----------|----------|-----------|-----------|-----------|----------|----------|---------------|
| Ancillary Equipment | | | | | | | | | | | | | | |
| Ancillary Equipment | | | | | | | | | | | | | | |
| Ancillary Equipment | \$20,000 | 1 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$200,000 |
| Sub Total- Ancillary Equipment | | | \$20,000 | | | | | | | | | | | |
| Total-Ancillary Equipment | | | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$20,000 | \$200,000 |
| | | | | | | | | | | | | | | |
| Yearly Equipment Totals | | | | \$404,700 | \$246,600 | \$29,200 | \$27,200 | \$27,200 | \$297,800 | \$150,700 | \$381,600 | \$27,200 | \$29,200 | \$1,621,400 |
| 20% Inst/Train/Warranty | | | | \$80,940 | \$49,320 | \$5,840 | \$5,440 | \$5,440 | \$59,560 | \$30,140 | \$76,320 | \$5,440 | \$5,840 | \$324,280 |
| TOTAL | | | | \$485,640 | \$295,920 | \$35,040 | \$32,640 | \$32,640 | \$357,360 | \$180,840 | \$457,920 | \$32,640 | \$35,040 | \$1,945,680 |
| Total One Time Transition Cost | | | \$842,500 | | | | | | | | | | | |
| 20% Inst/Train/Warranty | | | \$168,500 | | | | | | | | | | | |
| Total One Time Transition Cost | | | \$1,011,000 | | | | | | | | | | | |

| Philadelphia PEG Access Equipment Projections Short Summary | | | | | | | | | | | | |
|---|--|---|------------------|------------------|------------------|--------------------|------------------|------------------|--------------------|------------------|------------------|---------------------|
| | One-Time Transition Cost (Includes 20% Training/Install/ Warranty cost) | 10-Year Projected Replacement cost (Includes 20% Train/Install/Warranty cost) | | | | | | | | | | |
| Entity | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Total |
| PhillyCAM | \$1,560,000 | \$811,200 | \$117,984 | \$253,800 | \$204,504 | \$162,000 | \$202,104 | \$203,400 | \$440,904 | \$266,280 | \$338,304 | \$3,000,480 |
| - Youth Production Space | \$525,000 | \$525,000 | | | | | | | | | | \$525,000 |
| - Facility Space | \$2,500,000 | | | | | \$2,500,000 | | | | | | \$2,500,000 |
| Government Access | \$1,529,340 | \$929,460 | \$387,000 | \$140,280 | \$36,000 | \$59,040 | \$108,000 | \$81,600 | \$1,061,220 | \$89,880 | \$165,000 | \$3,057,480 |
| - New and Remodeled Space | \$840,000 | \$840,000 | | | | | | | | | | \$840,000 |
| School District of Philadelphia | \$1,011,000 | \$485,640 | \$295,920 | \$35,040 | \$32,640 | \$32,640 | \$357,360 | \$180,840 | \$457,920 | \$32,640 | \$35,040 | \$1,945,680 |
| Totals | \$7,965,340 | \$3,591,300 | \$800,904 | \$429,120 | \$273,144 | \$2,753,680 | \$667,464 | \$465,840 | \$1,960,044 | \$388,800 | \$538,344 | \$11,868,640 |

EXHIBIT C-1

Proposed Dark Fiber Network
Design Spreadsheets



EXHIBIT C.1

PROPOSED DARK FIBER NETWORK DESIGN
SPREADSHEETS

Proposed Dark Fiber Network

The following tables show in spreadsheet format CBG’s high level conceptual design of the dark fiber network CBG proposes to replace the approximately 338 existing circuits, connecting 208 City facilities, that now make up the City’s networks. Each City facility in the proposed network is identified by a City “Location ID” number. The Inner City ring links 15 major facilities located in or near Center City (Location IDs with the prefix IC). The City-wide Ring consists of nine facilities that are City hubs serving the facilities outside Center City, by circuits running from each hub to a group of those facilities in a “star” configuration (Location IDs with the prefix CW). The two Rings interconnect at two locations, Location IDs IC-1 & IC-12, which are therefore shown as sites on both Rings but each having only one Location ID with an IC prefix. Tables showing the “star” circuits for each hub, identified as Hub A through Hub H at the top of the table, follow the table for the City-wide Ring. Each circuit is identified by a “Beginning Address” and “End Address” (see explanation of “End Addresses” below). Each site that connects to a hub has a Location ID matching that Hub. For example, all "star" circuits that connect to Hub A will have a Location ID prefix of A. The existing Circuit ID’s and platform type are also shown, for informational purposes. The proposed network will replace these existing circuits.

Where NA is listed as the End Address in the tables, that entity is co-located with or close to another entity connected to the hub, making a short cable run from the nearby site more cost effective than a discrete circuit directly back to the hub. Because the length of the run, hence the cost to connect these locations to the network, are minimal, the circuit length is listed as 0 miles, the cost is listed as \$0, and the NA site does not have a separate address on the spreadsheet.

Where a street name only is listed as the End Address in the tables, with no specific address (street number) – e.g. “Broad Street” in the table for the 24th Street Hub, page 4 – the end point is a splice to a circuit installed along the street (usually a major corridor). Such splice points reduce the length of independent fiber runs to minimize construction costs. For example, Location ID A-9 connects back to Hub A via a “backbone” circuit running along Broad Street. The Mileage and Cost shown on the spreadsheet for ID A-9 is for the full cost of the entire 3.2 mile run between them, which constitutes a “backbone” with additional fibers available at splice points for short cable runs to addresses near Broad Street, such as Location IDs A-10, A-12 and A-14. Splicing short runs to nearby sites from the Broad Street circuit minimizes independent fiber run lengths to these locations and reduces fiber construction overall (e.g. ID A-12 reaches Hub A by being spliced to the Broad Street circuit with a run of .3 miles instead of a direct, two mile run from ID A-12 to Hub A). This significantly reduces construction cost.

Estimated costs are shown for fiber “Mileage”; for circuit construction cost (“Site to Connection Point Cost”), based on circuit mileage estimated from street maps; and for “Connection Cost” to enter the facility and terminate the circuit at a LAN or other demarcation point. The average costs assumed by these estimates, based on CBG’s recent experience in I-Net design and construction, are shown at the top of each table. The design, as noted, is a conceptual design and in collaboration with Comcast, would be translated into a detailed network design based on inspection of all sites and routes, with walk-outs, to minimize fiber construction, existing City and Comcast fiber available for the network, and inspection of each facility and entry point. Construction costs would be further refined and estimated based on the detailed design. These costs are for a newly constructed, stand-alone dark fiber I-Net replacing the City’s existing network. As discussed in the report, the conceptual design would apply to an I-Net of dark fiber on Comcast’s system as well, in that such a network would replicate the interconnected two ring architecture, with facilities outside Center served by “star” circuits from outer ring hubs, though as noted in the report, CBG anticipates that fiber construction costs would be significantly less than the table estimates if Comcast makes existing fiber and conduit available for the network.

Throughout the spreadsheets, the circuit length (Mileage) and Cost listed for spliced sites is for only the short run to connect the site to a splice point on the “backbone” circuit. The cost of a “backbone” circuit is reflected in the Cost and Mileage for the site at the far end of the “backbone” circuit – i.e. the site with the longest circuit length from the hub (ID A-9 in this example). This practice of sharing circuits by splicing nearby locations to major circuits is used throughout the network design to minimize construction costs. It must be noted that removing a site at the far end of a "backbone" run will increase the cost to build out the other connections that are designed to splice into the backbone.

Inner-City Ring (IC)

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost (dual entry) |
|-----------------------------|------------------------------------|----------------------------------|------------------------|---|
| Aerial | \$28,500 | 10% | \$2,850 | |
| Underground | \$110,000 | 90% | \$99,000 | |
| | | Average Blended Cost Per Mile | \$101,850 | \$4,500 |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$101,850) | Site Connection Cost (\$4,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|---|----------------------|-----------------------|----------|---------|---|------------------------------------|----------------------|
| IC-1 | 106 | Fire Dept | 240 SPRING GARDEN ST | 843 N 8TH ST | Fiber | 0.8 | \$81,480 | \$4,500 | \$85,980 |
| IC-2 | 107 | Police Forensic Lab - Passport 8006 | 843 N 8TH ST | 990 SPRING GARDEN ST | Fiber | 0.6 | \$61,110 | \$4,500 | \$65,610 |
| IC-3 | 214 | Human Services - Spring Garden - Passport 8606 | 990 SPRING GARDEN ST | 1515 ARCH ST | Fiber | 1.4 | \$142,590 | \$4,500 | \$147,090 |
| IC-4 | 115 - 116 | Human Services Pkwy Bldg -Arch- (2) Passport 8610 | 1515 ARCH ST | 1401 ARCH ST | Fiber | 0.2 | \$20,370 | \$4,500 | \$24,870 |
| | | Human Services Pkwy Bldg -Arch- (2) Passport | | | Fiber | 0.0 | \$0 | \$0 | \$0 |
| IC-5 | 201 | AOPC Adult Probation - 1401 Arch - Passport | 1401 ARCH ST | 1401 JFK BLVD | Fiber | 0.2 | \$20,370 | \$4,500 | \$24,870 |
| IC-6 | 157-158 | MSB - JFK BLVD - (2) Passport 8610 | 1401 JFK BLVD | 1400 JFK BLVD | Fiber | 0.2 | \$20,370 | \$4,500 | \$24,870 |
| | 119-200 | MSB - JFK BLVD - (2) Passport 8610 | | | Fiber | 0.0 | \$0 | \$0 | \$0 |
| IC-7 | 117-118 | City Hall | 1400 JFK BLVD | 1301 FILBERT ST | Fiber | 0.3 | \$30,555 | \$4,500 | \$35,055 |
| | | MDO | | | Fiber | 0.0 | \$0 | \$0 | \$0 |
| IC-8 | 203 | District Attorney | 1301 FILBERT ST | 1234 MARKET ST | Fiber | 0.3 | \$30,555 | \$4,500 | \$35,055 |
| IC-9 | 66-98 | MOIS - (3) Passport 8610 | 1234 MARKET ST | 1339 CHESTNUT ST | Fiber | 0.3 | \$30,555 | \$4,500 | \$35,055 |
| | | MOIS - (3) Passport 8610 | | | Fiber | 0.0 | \$0 | \$0 | \$0 |
| | | MOIS - (3) Passport 8610 | | | Fiber | 0.0 | \$0 | \$0 | \$0 |
| IC-10 | 113 | AOPC Dist. Attorney - CHESTNUT - Passport | 1339 CHESTNUT ST | 1 S BROAD ST | Fiber | 0.2 | \$20,370 | \$4,500 | \$24,870 |
| IC-11 | 114 | Courts - PASSPORT 8610 | 1 S BROAD ST | 100 S BROAD ST | Fiber | 0.2 | \$20,370 | \$4,500 | \$24,870 |
| IC-12 | 112 | Human Services Dept - Passport | 100 S BROAD ST | 34 S 11TH ST | Fiber | 0.5 | \$50,925 | \$4,500 | \$55,425 |
| IC-13 | 99 | Domestic Relations | 34 S 11TH ST | 1101 MARKET ST | Fiber | 0.3 | \$30,555 | \$4,500 | \$35,055 |
| IC-14 | 204 | Water - 1101 Market - Passport 8610 | 1101 MARKET ST | 1 FRANKLIN SQ | Fiber | 0.6 | \$61,110 | \$4,500 | \$65,610 |
| IC-15 | 104-105 | Police Admin Bldg - FRANKLIN - (2) Passport | 1 FRANKLIN SQ | 240 SPRING GARDEN ST | Fiber | 1.1 | \$112,035 | \$4,500 | \$116,535 |
| | | Police Admin Bldg - FRANKLIN - (2) Passport | 1 FRANKLIN SQ | | Fiber | 0.0 | \$0 | \$0 | \$0 |
| 15 | Unique Addresses | | | Inner-City Ring Total | | 7.2 | \$733,320 | \$67,500 | \$800,820 |

City-wide Ring (CW)

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost (dual entry) |
|-----------------------------|------------------------------------|----------------------------------|------------------------|---|
| Aerial | \$28,500 | 80% | \$22,800 | |
| Underground | \$100,000 | 20% | \$20,000 | |
| | | Average Blended Cost Per Mile | \$42,800 | \$4,500 |

| Location ID | Existing Circuit ID # | | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$42,800) | Site Connection Cost (\$4,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|--|---|----------------------|----------------------|----------|---------|--|------------------------------------|----------------------|
| IC-1 | 106 | | Fire Dept | 240 SPRING GARDEN ST | 100 S BROAD ST | Fiber | 2.3 | \$98,440 | \$4,500 | \$102,940 |
| IC-12 | 112 | | Human Services Dept - Passport (Redundant link) | 100 S BROAD ST | 2310 S 24TH ST | Fiber | 2.7 | \$115,560 | \$4,500 | \$120,060 |
| CW-1 | 18 | | Police District 01 South - Juniper EX4200 | 2310 S 24TH ST | 3900 LANCASTER AVE | TLS | 3.7 | \$158,360 | \$4,500 | \$162,860 |
| CW-2 | 57 | | Police District 16 West - Juniper EX4200 | 3900 LANCASTER AVE | 2801 W CAMBRIA ST | TLS | 4.3 | \$184,040 | \$4,500 | \$188,540 |
| CW-3 | 236 | | Water 29th St. - Baystack 420 | 2801 W CAMBRIA ST | 131 E CHELTEN AVE | TLS | 3.7 | \$158,360 | \$4,500 | \$162,860 |
| CW-4 | 281 | | Health Center #9 - Juniper EX4200 | 131 E CHELTEN AVE | 4210 G ST | TLS | 4.5 | \$192,600 | \$4,500 | \$197,100 |
| CW-5 | 251 | | Police Narcotics-Field-E - Juniper EX4200 | 4210 G ST | 2230 COTTMAN AVE | TLS | 4.2 | \$179,760 | \$4,500 | \$184,260 |
| CW-6 | 298 | | Health Center #10 - Juniper EX4200 | 2230 COTTMAN AVE | 8201 STATE RD | TLS | 3.7 | \$158,360 | \$4,500 | \$162,860 |
| CW-7 | 308 | | Prisons HOC - Passport 8610 | 8001 STATE RD | 240 SPRING GARDEN ST | Fiber | 9.8 | \$419,440 | \$4,500 | \$423,940 |
| 7 | Unique Addresses | | | | City-wide Ring Total | | 38.9 | \$3,961,965 | \$40,500 | \$2,723,440 |

*Sites in red are counted with IC locations, not CW locations

Hub A - 2310 S 24TH ST

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |
| | | | | \$2,500 |

| Location ID | Existing Circuit ID # | | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|--|--|-----------------------|--------------------|----------|---------|---|---------------------------------------|----------------------|
| A-1 | 2 | | Fire Dept | 8201 TINICUM AVE | 2310 S 24th St Hub | T1 | 5.0 | \$166,125 | \$2,500 | \$168,625 |
| A-2 | 3 | | Fleets Dept | 4269 ISLAND AVE | Bartram Ave | T1 | 1.0 | \$33,225 | \$2,500 | \$35,725 |
| A-3 | 4 | | Fleets Dept | 8200 ENTERPRISE AVE | Bartram Ave | T1 | 1.6 | \$53,160 | \$2,500 | \$55,660 |
| | 5 | | southwest | 8200 ENTERPRISE AVE | NA | T1 | 0.0 | \$0 | \$0 | \$0 |
| A-4 | 6 | | Fire Dept | 3061 ISLAND AVE | Bartram Ave | T1 | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| A-5 | 7 | | airport | 8800 ESSINGTON AVE | Bartram Ave | T1 | 2.2 | \$73,095 | \$2,500 | \$75,595 |
| | 8 | | Fire Dept | 8800 ESSINGTON AVE | NA | T1 | 0.0 | \$0 | \$0 | \$0 |
| A-6 | 9 | | Police HIDTA Essington - Juniper EX4200 | 7801 ESSINGTON AVE | Bartram Ave | TLS | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| A-7 | 11 | | Police Auto Impound - Juniper EX4200 | 7992 PENROSE FERRY RD | Bartram Ave | TLS | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| A-8 | 12 | | waterbrc | 7800 PENROSE FERRY RD | Bartram Ave | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| A-9 | 14 | | Police Traffic Unit - Juniper EX4200 | 4500 S BROAD ST | 2310 S 24th St Hub | TLS | 3.2 | \$106,320 | \$2,500 | \$108,820 |
| A-10 | 15 | | Fairmount Park | 1800 PATTISON AVE | Broad St | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| A-11 | 16 | | Fire Dept | 3100 W PASSYUNK AVE | 2310 S 24th St Hub | T1 | 1.1 | \$36,548 | \$2,500 | \$39,048 |
| A-12 | 17 | | Recreation FDR Park | 1500 PATTISON AVE | Broad St | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| A-13 | 19 | | Fire Dept | 2301 S 24TH ST | 2310 S 24th St Hub | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| A-14 | 21 | | Fire Dept | 2612 S 13TH ST | Broad St | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| A-15 | 22 | | Fire Dept | 3031 GRAYS FERRY AVE | 2310 S 24th St Hub | T1 | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| A-16 | 23 | | southeast | 25 PATTISON AVE | Broad St | T1 | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| A-17 | 24 | | health2 | 1720 S BROAD ST | 2310 S 24th St Hub | T1 | 1.3 | \$43,193 | \$2,500 | \$45,693 |
| A-18 | 25 | | Fire Dept | 1200 S 20TH ST | 22nd St | T1 | 0.4 | \$13,290 | \$2,500 | \$15,790 |
| A-19 | 26 | | Police District 17 - Juniper EX4200 | 2000 FEDERAL ST | 2310 S 24th St Hub | TLS | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| A-20 | 27 | | Fire Dept | 414 SNYDER AVE | Passyunk Ave | T1 | 1.3 | \$43,193 | \$2,500 | \$45,693 |
| A-21 | 28 | | Fire Dept | 1357 S 12TH ST | Broad St | T1 | 0.4 | \$13,290 | \$2,500 | \$15,790 |
| A-22 | 29 | | License and Inspection 1100 Wharton - AN | 1100 WHARTON ST | 2310 S 24th St Hub | T1 | 2.4 | \$79,740 | \$2,500 | \$82,240 |
| | 30 | | Police District 03/04 - Juniper/EX4200 | 1100 WHARTON ST | NA | TLS | 0.0 | \$0 | \$0 | \$0 |
| A-23 | 31 | | Fleets Dept | 1117 REED ST | Broad St | T1 | 0.3 | \$9,968 | \$0 | \$9,968 |
| 23 | Unique Addresses | | | | Hub A Total | | 27.8 | \$923,655 | \$45,000 | \$696,210 |

Hub B - 3900 LANCASTER AVE

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|---|----------------------|-------------------------|----------|---------|---|---------------------------------------|----------------------|
| B-1 | 35 | Fire Dept | 6500 WOODLAND AVE | 3900 LANCASTER AVE | T1 | 3.7 | \$122,933 | \$2,500 | \$125,433 |
| B-2 | 36 | Police District 12 - Juniper EX4200 | 6446 WOODLAND AVE | 6500 WOODLAND AVE | TLS | 0.1 | \$3,323 | \$2,500 | \$5,823 |
| B-3 | 37 | Fleets Dept | 3033 S 63RD ST | Lindbergh Blvd | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| B-4 | 39 | area1 | 5100 GRAYS AVE | 5100 Grays Ave | TI | 0.1 | \$3,323 | \$2,500 | \$5,823 |
| B-5 | 40 | water4950 | 4950 PASCHALL AVE | S 49th St | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| B-6 | 41 | Streets 49th & Botanic Sanitation - ANH | 4900 BOTANIC AVE | Grays Ave | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| B-7 | 44 | Fire Dept | 783 S 52ND ST | S 38th St | T1 | 1.9 | \$63,128 | \$2,500 | \$65,628 |
| B-8 | 46 | Police District 18 SW - Juniper EX4200 | 5510 PINE ST | Baltimore Ave | TLS | 0.9 | \$29,903 | \$2,500 | \$32,403 |
| B-9 | 47 | Fire Dept | 5559 CHESTNUT ST | 5510 PINE ST | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| B-10 | 48 | Police District 19 - Juniper EX4200 | 1300 N 61ST ST | 5510 PINE ST | TLS | 1.6 | \$53,160 | \$2,500 | \$55,660 |
| B-11 | 49 | Health Center #3 - Juniper EX4200 | 555 S 43RD ST | Baltimore Ave | TLS | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| B-12 | 50 | Prisons 600 University - Juniper EX4200 | 600 S UNIVERSITY AVE | S 38th St | TLS | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| B-13 | 51 | Health - Medical Examiner - ASN2 | 321 S UNIVERSITY AVE | 600 S UNIVERSITY AVE | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| B-14 | 52 | 4225mkt | 4225 MARKET ST | 3900 LANCASTER AVE | T1 | 0.7 | \$23,258 | \$2,500 | \$25,758 |
| B-15 | 53 | Recreation Dept | 1400 N 42ND ST | 3900 LANCASTER AVE | T1 | 1.3 | \$43,193 | \$2,500 | \$45,693 |
| B-16 | 54 | Fire Dept | 4221 MARKET ST | 4225 MARKET ST | T1 | 0.1 | \$3,323 | \$2,500 | \$5,823 |
| B-17 | 55 | Health Center #4- Juniper EX4200 | 4400 HAVERFORD AVE | 3900 LANCASTER AVE | TLS | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| B-18 | 56 | Police Chestnut Street - AN2 | 3940 CHESTNUT ST | 3900 LANCASTER AVE | | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| B-19 | 58 | Courts | 3101 MARKET ST | S 38th St | TLS | 0.8 | \$26,580 | \$2,500 | \$29,080 |
| B-20 | 59 | Fire Dept | 3420 HAVERFORD AVE | 3900 LANCASTER AVE | T1 | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| B-21 | 110 | Fire Dept | 2108 MARKET ST | S 38th St | T1 | 1.2 | \$39,870 | \$2,500 | \$42,370 |
| B-22 | 111 | Courts | 1880 JFK BLVD | 3101 MARKET ST | T1 | 0.8 | \$26,580 | \$2,500 | \$29,080 |
| B-23 | 202 | Police 9th - Juniper EX4200 | 401 N 20TH ST | JFK Blvd | TLS | 0.8 | \$26,580 | \$2,500 | \$29,080 |
| B-24 | 272 | belmont | 4300 FORD RD | 3900 LANCASTER AVE | T1 | 3.2 | \$106,320 | \$2,500 | \$108,820 |
| B-25 | 225 | Fire Dept | 1923 N 63RD ST | Belmont & Lancaster Ave | T1 | 2.3 | \$76,418 | \$2,500 | \$78,918 |
| B-26 | 226 | Streets 1st Highway District - ANH | 4800 PARKSIDE AVE | Belmont & Lancaster Ave | T1 | 0.8 | \$26,580 | \$2,500 | \$29,080 |
| B-27 | NEW | New Police HQ & Medical Examiner's Office | 4601 Market St | 4225 MARKET ST | | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| 27 | Unique Addresses | | | Hub B Total | | 25.2 | \$837,270 | \$67,500 | \$904,770 |

Hub C - 240 SPRING GARDEN ST

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |
| | | | | \$2,500 |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|---|---------------------------|------------------------|----------|---------|--|------------------------------------|----------------------|
| C-1 | 32 | Fire Dept | 200 WASHINGTON AVE | S Columbus Blvd | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| C-2 | 60 | Fire Dept | 711 S BROAD ST | S Columbus Blvd | T1 | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| C-3 | 61 | health305 | 305 S 13TH ST | South St | T1 | 0.4 | \$13,290 | \$2,500 | \$15,790 |
| C-4 | 62 | southst | 905 SOUTH ST | South St | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-5 | 63 | Fire Dept | 1000 S DELAWARE AVE | S Columbus Blvd | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| C-6 | 64 | Police Marine Unit # 1 - AN | 1 WASHINGTON AVE | S Columbus Blvd | TLS | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| C-7 | 65 | Fire Dept | 601 SOUTH ST | S Columbus Blvd | T1 | 0.7 | \$23,258 | \$2,500 | \$25,758 |
| C-8 | 100 | Police PPD-CCD - Juniper EX4200 | 150 S INDEPENDENCE MALL W | S Columbus Blvd | TLS | 0.8 | \$26,580 | \$2,500 | \$29,080 |
| C-9 | 101 | Redevelopment Authority | 251 N 13TH ST | S Columbus Blvd | T1 | 1.6 | \$53,160 | \$2,500 | \$55,660 |
| C-10 | 102 | Fire Dept | 133 N 10TH ST | Race St | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| C-11 | 103 | Fire Dept | 101 N 4TH ST | Race St | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| C-12 | 108 | Fire Dept | 611 N 2ND ST | 240 SPRING GARDEN ST | T1 | 0.3 | \$9,968 | \$2,500 | \$12,468 |
| C-13 | 109 | Fire Dept | 400 W GIRARD AVE | 240 SPRING GARDEN ST | T1 | 0.9 | \$29,903 | \$2,500 | \$32,403 |
| C-14 | 224 | Health Center #6 - Juniper EX4200 | 321 W GIRARD AVE | 400 W GIRARD AVE | TLS | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-15 | 223 | fourthst | 1241 N 4TH ST | 400 W GIRARD AVE | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-16 | 222 | Fire Dept | 1201 N 6TH ST | 400 W GIRARD AVE | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-17 | 213 | Emergency Services | 1360 RIDGE AVE | 240 SPRING GARDEN ST | T1 | 1.1 | \$36,548 | \$2,500 | \$39,048 |
| C-18 | 212 | Health - Nursing Home 3 - GIRARD - AN2 | 2030 W GIRARD AVE | 400 W GIRARD AVE | T1 | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| C-19 | 215 | Fire Dept | 1541 PARRISH ST | W GIRARD AVE | T1 | 0.4 | \$13,290 | \$2,500 | \$15,790 |
| C-20 | 217 | Recreation MLK - AN? | 2101 CECIL B MOORE AVE | W GIRARD AVE | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| C-21 | 218 | Fire Dept | 1901 W OXFORD ST | W GIRARD AVE | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| C-22 | 220 | Health Center #5 - Juniper EX4200 | 1900 N 20TH ST | 2101 CECIL B MOORE AVE | TLS | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| C-23 | 221 | Police District 22/23 - Juniper EX4200 | 1747 N 17TH ST | W GIRARD AVE | TLS | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| C-24 | 243 | Police EAP - Juniper EX4200 | 1341 N DELAWARE AVE | S Columbus Blvd | TLS | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-25 | 245 | Fire Dept | 2601 BELGRADE ST | Richmond St | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| C-26 | 252 | northeast | 3895 RICHMOND ST | Richmond St | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-27 | 253 | Streets Sanitation Area 5 / Fleet - ANH | 3901 N DELAWARE AVE | Richmond St | T1 | 0.9 | \$29,903 | \$2,500 | \$32,403 |
| C-28 | 255 | fleets3900 | 3900 RICHMOND ST | Richmond St | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-29 | 259 | Fire Dept | 4750 RICHMOND ST | Richmond St | T1 | 0.2 | \$6,645 | \$2,500 | \$9,145 |
| C-30 | 13 | Police District 26 - Juniper EX4200 | 615 E GIRARD AVE | Delaware Ave | TLS | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| C-31 | 45 | Police District 06 - Juniper EX4200 | 235 N 11TH ST | Race St | TLS | 0.6 | \$19,935 | \$2,500 | \$22,435 |
| 31 | Unique Addresses | | | Hub C Total | | 17.2 | \$571,470 | \$77,500 | \$648,970 |

Hub D - 2801 W CAMBRIA ST

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |
| | | | | \$2,500 |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|--|-----------------------------|-------------------------|----------|---------|--|------------------------------------|----------------------|
| D-1 | 205 | waterwork1 | 640 WATER WORKS DR | 2801 W CAMBRIA ST | T1 | 3.2 | \$106,320.0 | \$2,500 | \$108,820.0 |
| | 206 | waterwork2 | 640 WATER WORKS DR | NA | T1 | 0.0 | \$0.0 | \$0 | \$0.0 |
| D-2 | 207 | Fairmount Park | 1 BOATHOUSE ROW | N 29th St | T1 | 0.5 | \$16,612.5 | \$2,500 | \$19,112.5 |
| D-3 | 208 | Fire Dept | 1301 N 28TH ST | N 29th St | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| D-4 | 209 | Health 1901 Fairmount | 1901 FAIRMOUNT AVE | N 29th St | T1 | 1.4 | \$46,515.0 | \$2,500 | \$49,015.0 |
| D-5 | 210 | Fleets Dept | 2559 W MASTER ST | N 29th St | T1 | 0.5 | \$16,612.5 | \$2,500 | \$19,112.5 |
| | 211 | Police Accident Investigation - Juniper EX4200 | 2559 W MASTER ST | NA | TLS | 0.0 | \$0.0 | \$0 | \$0.0 |
| D-6 | 216 | Streets Sanitation PMBC / Fleet - ANH | 2600 W GLENWOOD AVE | N 29th St | T1 | 0.4 | \$13,290.0 | \$2,500 | \$15,790.0 |
| D-7 | 219 | Health Strawberry Mansion Clinic - Juniper | 2840 W DAUPHIN ST | N 29th St | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| D-8 | 227 | Fire Dept | 1517 BELMONT AVE | 4800 PARKSIDE AVE | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| D-9 | 228 | Fairmount Park | 4301 Parkside Ave | 4800 PARKSIDE AVE | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| D-10 | 229 | Fairmount Park | 4231 AVENUE OF THE REPUBLIC | 4800 PARKSIDE AVE | T1 | 0.5 | \$16,612.5 | \$2,500 | \$19,112.5 |
| D-11 | 230 | water4305 | 4305 MONUMENT RD | 2801 W CAMBRIA ST | T1 | 3.0 | \$99,675.0 | \$2,500 | \$102,175.0 |
| D-12 | 231 | Fairmount Park | 2120 MARTIN LUTHER KING DR | Ford Rd | T1 | 1.4 | \$46,515.0 | \$2,500 | \$49,015.0 |
| D-13 | 232 | Fairmount Park | 3900 FORD RD | Ford Rd | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| D-14 | 233 | Fairmount Park | 1700 WEST RIVER | 2120 MARTIN LUTHER KING | T1 | 0.1 | \$3,322.5 | \$2,500 | \$5,822.5 |
| D-15 | 234 | Fire Dept | 2505 W YORK ST | 2801 W CAMBRIA ST | T1 | 0.8 | \$26,580.0 | \$2,500 | \$29,080.0 |
| D-16 | 235 | Streets 3rd Highway District Yard - AN2 | 2115 W YORK ST | 2505 W YORK ST | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| D-17 | 237 | Emergency Services | 2150 W SOMERSET ST | 2801 W CAMBRIA ST | T1 | 0.8 | \$26,580.0 | \$2,500 | \$29,080.0 |
| D-18 | 238 | Fleets Dept | 3275 FOX ST | Indiana Ave | T1 | 0.5 | \$16,612.5 | \$2,500 | \$19,112.5 |
| D-19 | 239 | Prisons Cambria Correct. - Juniper EX4200 | 2815 N 17TH ST | 2801 W CAMBRIA ST | TLS | 1.1 | \$36,547.5 | \$2,500 | \$39,047.5 |
| D-20 | 240 | Water Fox St. - 350 Switch | 3201 FOX ST | 3275 FOX ST | TLS | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| D-21 | 241 | Fire Dept | 2900 N PARK AVE | 2815 N 17TH ST | T1 | 0.6 | \$19,935.0 | \$2,500 | \$22,435.0 |
| D-22 | 242 | Domestic Relations | 601 W LEHIGH AVE | 2900 N PARK AVE | T1 | 0.8 | \$26,580.0 | \$2,500 | \$29,080.0 |
| D-23 | 244 | Fire Dept | 2422 N 2ND ST | W Lehigh Ave | T1 | 0.4 | \$13,290.0 | \$2,500 | \$15,790.0 |
| D-24 | 246 | Police Special Victims Unit - Juniper EX4200 | 100 E LEHIGH AVE | 601 W LEHIGH AVE | TLS | 0.7 | \$23,257.5 | \$2,500 | \$25,757.5 |
| D-25 | 274 | 4700ridge | 4700 RIDGE AVE | 4208 RIDGE AVE | T1 | 0.6 | \$19,935.0 | \$2,500 | \$22,435.0 |
| D-26 | 275 | Fire Dept | 4208 RIDGE AVE | 2801 W CAMBRIA ST | T1 | 1.8 | \$59,805.0 | \$2,500 | \$62,305.0 |
| D-27 | 276 | Human Service YSC - Henry - 8610 Passport | 3200 HENRY AVE | 2801 W CAMBRIA ST | TLS | 0.9 | \$29,902.5 | \$2,500 | \$32,402.5 |
| D-28 | 277 | Fairmount Park | 3175 HENRY AVE | 3200 HENRY AVE | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| D-29 | 278 | queenla | 3110 W QUEEN LN | 3200 HENRY AVE | T1 | 0.9 | \$29,902.5 | \$2,500 | \$32,402.5 |
| 29 | Unique Addresses | | | Hub D Total | | 22.8 | \$757,530.0 | \$72,500 | \$830,030.0 |

Hub E - 4210 G ST

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|--|-------------------------|-------------------------|----------|---------|--|------------------------------------|----------------------|
| E-1 | 247 | Fire Dept | 2937 BOUDINOT ST | 4210 G ST | T1 | 1.9 | \$63,127.50 | \$2,500 | \$65,627.50 |
| E-2 | 248 | Fire Dept | 2520 E ONTARIO ST | 3528 I ST | T1 | 1.4 | \$46,515.00 | \$2,500 | \$49,015.00 |
| E-3 | 249 | Police Highway-Swat - Juniper EX4200 | 660 E ERIE AVE | G ST & Erie Ave | TLS | 0.2 | \$6,645.00 | \$2,500 | \$9,145.00 |
| E-4 | 250 | Courts | 3528 I ST | Allegheny Ave & F St | T1 | 0.2 | \$6,645.00 | \$2,500 | \$9,145.00 |
| E-5 | 254 | Fire Dept | 3742 KENSINGTON AVE | 660 E ERIE AVE | T1 | 1.0 | \$33,225.00 | \$2,500 | \$35,725.00 |
| E-6 | 256 | 4501g | 4501 G ST | 4210 G ST | T1 | 0.2 | \$6,645.00 | \$2,500 | \$9,145.00 |
| E-7 | 257 | airmgmnt | 1502 E LYCOMING ST | 1500 E HUNTING PARK AVE | T1 | 0.2 | \$6,645.00 | \$2,500 | \$9,145.00 |
| E-8 | 258 | Water BLS HUNTING PARK - Juniper EX4200 | 1500 E HUNTING PARK AVE | 4210 G ST | T1 | 1.2 | \$39,870.00 | \$2,500 | \$42,370.00 |
| E-9 | 260 | Fire Dept | 4800 LANGDON ST | 4210 G ST | T1 | 1.9 | \$63,127.50 | \$2,500 | \$65,627.50 |
| E-10 | 261 | Fire Dept | 1652 FOULKROD ST | 4800 LANGDON ST | T1 | 0.3 | \$9,967.50 | \$2,500 | \$12,467.50 |
| E-11 | 262 | Police Frankford Arsenal | 5301 TACONY ST | 1500 E HUNTING PARK AVE | TLS | 1.7 | \$56,482.50 | \$2,500 | \$58,982.50 |
| | 263 | Police Narcotic Strike Force - AN | 5301 TACONY ST | NA | TLS | 0.0 | \$0.00 | \$0 | \$0.00 |
| E-12 | 265 | MDO N American - ARN | 4000 N AMERICAN ST | 4210 G ST | T1 | 1.2 | \$39,870.00 | \$2,500 | \$42,370.00 |
| | 266 | Police Abandoned Vehicle Unit - Juniper EX4200 | 4000 N AMERICAN ST | NA | TLS | 0.0 | \$0.00 | \$0 | \$0.00 |
| E-13 | 267 | Fire Dept | 101 W LUZERNE ST | E HUNTING PARK AVE | T1 | 0.3 | \$9,967.50 | \$2,500 | \$12,467.50 |
| E-14 | 268 | Fire Dept | 1127 W LOUDEN ST | E HUNTING PARK AVE | T1 | 1.8 | \$59,805.00 | \$2,500 | \$62,305.00 |
| E-15 | 269 | Health Center Animal Control - ASN2 | 111 W HUNTING PARK AVE | E HUNTING PARK AVE | T1 | 0.2 | \$6,645.00 | \$2,500 | \$9,145.00 |
| E-16 | 270 | hgwybridge | 4040 WHITAKER AVE | 4210 G ST | T1 | 0.7 | \$23,257.50 | \$2,500 | \$25,757.50 |
| E-17 | 271 | Police Garage/Major Crimes - Juniper EX4200 | 4298 MACALESTER ST | E HUNTING PARK AVE | TLS | 0.5 | \$16,612.50 | \$2,500 | \$19,112.50 |
| E-18 | 273 | Fire Dept | 5334 RISING SUN AVE | Wyoming Ave | T1 | 0.8 | \$26,580.00 | \$2,500 | \$29,080.00 |
| E-19 | 303 | robbins | 5100 ROBBINS AVE | TACONY ST | T1 | 0.4 | \$13,290.00 | \$2,500 | \$15,790.00 |
| E-20 | 1 | Police District 24/25 - Juniper EX4200 | 3901 WHITAKER AVE | W LUZERNE ST | TLS | 0.3 | \$9,967.50 | \$2,500 | \$12,467.50 |
| E-21 | 33 | Fire Dept | 2201 W HUNTING PARK AVE | 101 W LUZERNE ST | T1 | 2.2 | \$73,095.00 | \$2,500 | \$75,595.00 |
| | 34 | Police District 39 NW - Juniper EX4200 | 2201 W HUNTING PARK AVE | NA | TLS | 0.0 | \$0.00 | \$0 | \$0.00 |
| 21 | Unique Addresses | | | Hub E Total | | 18.6 | \$617,985.00 | \$52,500 | \$670,485.00 |

Hub F - 8001 STATE RD

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|---|-------------------------|---------------------|----------|---------|---|---------------------------------------|----------------------|
| F-1 | 314 | Prisons Data Center Hub - Passport 8610 | 8201 STATE RD | 8001 STATE RD | Fiber | 1.3 | \$43,192.5 | \$2,500 | \$45,692.5 |
| | 309 | Prisons PICC - 8001 STATE RD - ASN2 | 8001 STATE RD | NA | Fiber | 0.0 | \$0.0 | \$0 | \$0.0 |
| | 310 | Prisons PICC - Passport 8610 | 8001 STATE RD | NA | Fiber | 0.0 | \$0.0 | \$0 | \$0.0 |
| F-2 | 306 | Prisons MIS - Passport 8610 | 8003 STATE RD | 8001 STATE RD | Fiber | 0.1 | \$3,322.5 | \$2,500 | \$5,822.5 |
| F-3 | 313 | Prisons Torresdale Warehouse - Juniper EX4200 | 8201 TORRESDALE AVE | 8201 STATE RD | Fiber | 1.1 | \$36,547.5 | \$2,500 | \$39,047.5 |
| F-4 | 264 | Fire Dept | 4501 VAN KIRK ST | Tacony St | T1 | 0.7 | \$23,257.5 | \$2,500 | \$25,757.5 |
| F-5 | 305 | Prisons CFCF - 7901 STATE - Passport 8610 | 7901 STATE RD | 8001 STATE RD | TLS | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| F-6 | 307 | Fire Dept | 7979 STATE RD | 8001 STATE RD | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| F-7 | 311 | Fire Dept | 7818 FRANKFORD AVE | 8001 STATE RD | T1 | 1.3 | \$43,192.5 | \$2,500 | \$45,692.5 |
| F-8 | 312 | Prisons Prisoner Training - Juniper EX4200 | 8215 TORRESDALE AVE | 8201 TORRESDALE AVE | TLS | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| F-9 | 315 | Prisons Cannery - Juniper EX4200 | 8207 TORRESDALE AVE | 8201 TORRESDALE AVE | TLS | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| F-10 | 316 | torresdale | 8299 TORRESDALE AVE | 8201 TORRESDALE AVE | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| F-11 | 318 | 8501 STATE RD - ANH | 8501 STATE RD | 8001 STATE RD | T1 | 0.7 | \$23,257.5 | \$2,500 | \$25,757.5 |
| | 319 | Police Academy - Juniper EX4200 | 8501 STATE RD | NA | TLS | 0.0 | \$0.0 | \$0 | \$0.0 |
| F-12 | 320 | Fire Dept | 5200 PENNYPACK ST | 8501 STATE RD | T1 | 0.5 | \$16,612.5 | \$2,500 | \$19,112.5 |
| F-13 | 321 | Prisons Sheriff's Trailer - Juniper EX4200 | 5101 PENNYPACK ST | 5200 PENNYPACK ST | TLS | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| F-14 | 322 | Mgr Directors Office - Frankford - ARN | 8747 FRANKFORD AVE | 8299 TORRESDALE AVE | T1 | 0.9 | \$29,902.5 | \$2,500 | \$32,402.5 |
| | 323 | Recreation Frankford Ave | 8747 FRANKFORD AVE | NA | T1 | 0.0 | \$0.0 | \$0 | \$0.0 |
| F-15 | 324 | hgwyyard | 8601 STATE RD | 8501 STATE RD | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| F-16 | 325 | pennypack | 5202 PENNYPACK ST | 5200 PENNYPACK ST | T1 | 0.1 | \$3,322.5 | \$2,500 | \$5,822.5 |
| | 326 | water8601 | 8601 STATE RD | NA | T1 | 0.0 | \$0.0 | \$0 | \$0.0 |
| F-17 | 327 | baxter | 9001 STATE RD | 8501 STATE RD | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| F-18 | 337 | Fire Dept | 812 HENDRIX ST | 1140 BYBERRY RD | T1 | 0.7 | \$23,257.5 | \$2,500 | \$25,757.5 |
| F-19 | 338 | Prisons Internal Affairs - Juniper EX4200 | 1140 BYBERRY RD | 8501 STATE RD | Fiber | 7.2 | \$239,220.0 | \$2,500 | \$241,720.0 |
| F-20 | 328 | Fire Dept | 4000 LINDEN AVE | 9001 STATE RD | T1 | 1.5 | \$49,837.5 | \$2,500 | \$52,337.5 |
| F-21 | 329 | Police District 08 - Juniper EX4200 | 3100 RED LION RD | Academy Rd | TLS | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| F-22 | 330 | Fire Dept | 3270 COMLY RD | 3100 RED LION RD | T1 | 1.1 | \$36,547.5 | \$2,500 | \$39,047.5 |
| F-23 | 331 | 1455 FRANKLIN MILLS CIR - AN2 | 1455 FRANKLIN MILLS CIR | 3270 COMLY RD | T1 | 2.3 | \$76,417.5 | \$2,500 | \$78,917.5 |
| 23 | Unique Addresses | | | Hub F Total | | 21.8 | \$724,305.0 | \$57,500 | \$781,805.0 |

Hub G - 131 E CHELTEN AVE

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | |
| | | | | |
| | | | | \$2,500 |

| Location ID | Existing Circuit ID # | | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|--|---|------------------------|-------------------------|----------|---------|--|------------------------------------|----------------------|
| G-1 | 287 | | Fire Dept | 6630 RIDGE AVE | 131 E CHELTEN AVE | | 3.9 | \$129,577.5 | \$2,500 | \$132,077.5 |
| G-2 | 288 | | Fire Dept | 7722 RIDGE AVE | RIDGE AVE | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| G-3 | 279 | | Police District 14 - Juniper EX4200 | 43 W HAINES ST | 131 E CHELTEN AVE | TLS | 0.5 | \$16,612.5 | \$2,500 | \$19,112.5 |
| G-4 | 282 | | License and Inspection - ARN | 88 E HAINES ST | 43 W HAINES ST | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| G-5 | 280 | | Streets - 4th Hwy. Dist. Yard - STENTON AVE - | 4501 STENTON AVE | 131 E CHELTEN AVE | T1 | 1.5 | \$49,837.5 | \$2,500 | \$52,337.5 |
| G-6 | 283 | | Fire Dept | 302 CHELTEN AVE | 131 E CHELTEN AVE | T1 | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| G-7 | 284 | | Fire Dept | 6900 GERMANTOWN AVE | 131 E CHELTEN AVE | T1 | 1.9 | \$63,127.5 | \$2,500 | \$65,627.5 |
| G-8 | 285 | | Fire Dept | 4447 MAIN ST | 131 E CHELTEN AVE | T1 | 3.6 | \$119,610.0 | \$2,500 | \$122,110.0 |
| G-9 | 286 | | Streets Sanitation Area 4 / Fleet - ANH | 301 DOMINO LN | 4447 MAIN ST | T1 | 1.4 | \$46,515.0 | \$2,500 | \$49,015.0 |
| G-10 | 289 | | Fairmount Park | 120 W NORTHWESTERN AVE | 301 DOMINO LN | T1 | 4.5 | \$149,512.5 | \$2,500 | \$152,012.5 |
| G-11 | 290 | | Fire Dept | 101 W HIGHLAND AVE | 6900 GERMANTOWN AVE | T1 | 1.9 | \$63,127.5 | \$2,500 | \$65,627.5 |
| G-12 | 291 | | Fire Dept | 5931 OLD YORK RD | Broad St | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| G-13 | 292 | | Fire Dept | 1224 OAK LANE AVE | 131 E CHELTEN AVE | T1 | 3.7 | \$122,932.5 | \$2,500 | \$125,432.5 |
| G-14 | 293 | | Fire Dept | 7515 OGONTZ AVE | 1224 OAK LANE AVE | T1 | 2.3 | \$76,417.5 | \$2,500 | \$78,917.5 |
| G-15 | 294 | | Fire Dept | 6000 RISING SUN AVE | 6601 RISING SUN AVE | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| G-16 | 295 | | li6100 | 6100 RISING SUN AVE | 6601 RISING SUN AVE | T1 | 0.3 | \$9,967.5 | \$2,500 | \$12,467.5 |
| G-17 | 296 | | records | 6601 RISING SUN AVE | 1224 OAK LANE AVE | T1 | 2.7 | \$89,707.5 | \$2,500 | \$92,207.5 |
| G-18 | 10 | | 4highway | 6249 WISSAHICKON AVE | Wayne Ave & Chelton Ave | T1 | 0.9 | \$29,902.5 | \$2,500 | \$32,402.5 |
| G-19 | 20 | | Police District 35 North - Juniper EX4200 | 5960 N BROAD ST | 5931 OLD YORK RD | TLS | 0.2 | \$6,645.0 | \$2,500 | \$9,145.0 |
| G-20 | 38 | | Police District 05 - Juniper EX4200 | 6666 RIDGE AVE | 6630 RIDGE AVE | TLS | 0.1 | \$3,322.5 | \$2,500 | \$5,822.5 |
| 20 | Unique Addresses | | | | Hub G Total | | 30.6 | \$1,016,685.0 | \$50,000 | \$1,066,685.0 |

Hub H - 2230 COTTMAN AVE

| Placement of Infrastructure | Average Construction Cost Per Mile | Estimated Aerial/Underground (%) | Allocated Average Cost | Average Site Connection Cost |
|-----------------------------|------------------------------------|----------------------------------|------------------------|------------------------------|
| Aerial | \$28,500 | 85% | \$24,225 | |
| Underground | \$60,000 | 15% | \$9,000 | |
| | | Average Blended Cost Per Mile | \$33,225 | \$2,500 |

| Location ID | Existing Circuit ID # | Location Name | Beginning Address | End Address | Existing | Mileage | Site to Connection Point Cost (mileage X \$33,225) | Site Connection Cost (\$2,500 avg) | Total Link/Site Cost |
|-------------|-----------------------|--|---------------------|---------------------|----------|---------|---|---------------------------------------|----------------------|
| H-1 | 297 | Fire Dept | 1900 COTTMAN AVE | 2230 COTTMAN AVE | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| H-2 | 299 | peco | 7790 DUNGAN RD | 1900 COTTMAN AVE | T1 | 1.4 | \$46,515 | \$2,500 | \$49,015 |
| | 300 | Police Internal-Affairs - Juniper EX4200 | 7790 DUNGAN RD | NA | TLS | 0.0 | \$0 | \$0 | \$0 |
| H-3 | 301 | Fire Dept | 832 RHAWN ST | 7790 DUNGAN RD | T1 | 0.9 | \$29,903 | \$2,500 | \$32,403 |
| H-4 | 302 | Fairmount Park | 8605 ROOSEVELT BLVD | 8205 ROOSEVELT BLVD | T1 | 0.9 | \$29,903 | \$2,500 | \$32,403 |
| H-5 | 304 | Police District 02 NE - Juniper EX4200 | 2931 LEVICK ST | 2230 COTTMAN AVE | TLS | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| H-6 | 332 | Fairmount Park | 8600A VERREE RD | 7790 DUNGAN RD | T1 | 2.4 | \$79,740 | \$2,500 | \$82,240 |
| H-7 | 334 | nearairport | 9700 ASHTON RD | 9239 ROOSEVELT BLVD | T1 | 1.7 | \$56,483 | \$2,500 | \$58,983 |
| H-8 | 335 | Police Aviation Unit - Juniper EX4200 | 9800 ASHTON RD | 9700 ASHTON RD | TLS | 0.7 | \$23,258 | \$2,500 | \$25,758 |
| H-9 | 336 | Fire Dept | 9845 BUSTLETON AVE | 9239 ROOSEVELT BLVD | T1 | 1.5 | \$49,838 | \$2,500 | \$52,338 |
| H-10 | 333 | NE Mini City Hall - ARN | 9239 ROOSEVELT BLVD | 8605 ROOSEVELT BLVD | T1 | 0.5 | \$16,613 | \$2,500 | \$19,113 |
| H-11 | 317 | Fire Dept | 8205 ROOSEVELT BLVD | 2230 COTTMAN AVE | T1 | 1.7 | \$56,483 | \$2,500 | \$58,983 |
| H-12 | 42 | Police District 07 - Juniper EX4200 | 1701 BOWLER ST | 9239 ROOSEVELT BLVD | TLS | 1.4 | \$46,515 | \$2,500 | \$49,015 |
| | 43 | Streets 6th Highway Office - ANH | 1701 BOWLER ST | NA | T1 | 0.0 | \$0 | \$0 | \$0 |
| 12 | Unique Addresses | | | Hub H Total | | 15.1 | \$501,698 | \$30,000 | \$531,698 |

208 Total Unique Location Sites Network Wide

| | | | | | | |
|------------------------|----------|-----------------|-----------------------|--------------|-----------|--------------|
| Average Cost Per Mile: | \$47,273 | Total New Build | <u>Miles</u> 225.2 | \$10,645,883 | \$560,500 | \$11,206,383 |
|------------------------|----------|-----------------|-----------------------|--------------|-----------|--------------|

EXHIBIT D-1

Comcast Physical Plant Random
Sample Audit Findings
Spreadsheets



EXHIBIT D.1

COMCAST PHYSICAL PLANT RANDOM SAMPLE AUDIT FINDINGS SPREADSHEETS

| Random Sample Addresses | | | | | | | | |
|-------------------------|---|---|---|-------------|----------------|--|----------------|--|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop removed. (6/25/2014) | 6/25/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | Kinked cables in vault | | 820.1 | Hard Cable drops were damaged. Resized drops and re-spliced hard cable. Verified Bonding at house. | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Grounded in the basement, customer did not let me move ground outside. (6/16/2014) | 6/16/14 | Comcast reported no problem found |
| | No bond on drop at building | Cable and phone hardlines touching | Cable droops in front of garage door | 235H | 820.1 | Homeowner denied access, ,500 needs attached under deck - ty-wrapped up presently | 6/23/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active customer, knocked on door/called customer with no answer. Common ground inside. (6/25/2014) | 6/25/14 | Not verified - Violation still exists |
| | No drop | Cable hardline less than 3 inches from power distribution wires | | | 820.44 | Busbar clearance corrected - completed | 6/24/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/16/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active customer, knocked on door/called customer with no answer. Common ground inside. (6/25/2014) | 6/25/14 | Not verified - Violation still exists |
| | Drop is 13' 8" above roadway | Already Noted | | Table 232-1 | | No problem found, drops are higher than 14ft. (6/25/2014) | 6/25/14 | Not Complete - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Disconnected customer, knocked on door/called customer with no answer. Common ground inside. | 6/25/14 | Not verified - Violation still exists |
| | No problem found | Cable and phone tangled at pole | | 235H | | Raised plant, Resagged, rebonded - Complete | 6/26/14 | Comcast reported repaired |
| | Cable nearly touching power | Cable nearly touching power | | 235 | 820.44 | Comcast OK, Power raised their plant - OK - Complete | 6/30/14 | Comcast reported repaired |
| | Grounded/bonded to outside water | No problem found | Attach drops to building | | 820.11.B.2.(2) | Ground moved from water. (6/16/2014) | 6/16/14 | Comcast reported repaired |
| | No problem found | Hardline cable is laying on porch roof | | | 820.44 | Reattached building bracket, resagged self support. - Completed | 6/30/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/16/14 | Not verified - Violation still exists |
| | Drop not properly attached to building | No problem found | Numerous drops hanging off bldg., touching phone, in front of doors, etc. | | 820.24 | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/16/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | VERIFIED, drop is grounded inside building next to meter (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | No Drop | Drops touching at tap on building | | | 820.44 | Rerouted drops. | 6/17/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | Replace P hook on building | | 820.1 | | | Not reported on by Comcast |
| | Drop hanging in front of window | No problem found | Drops are generally unworkmanl ke | | 820.24 | VERIFIED, Line in question is not our wire, it belongs to the Phone Company (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | Drop not properly attached to building | No problem found | Drop in front of window | | 820.24 | Not active customer, knocked on door/called customer with no answer. Common ground inside. | 6/18/14 | Not completed, wrong explanation |
| | No bond on drop at building | No problem found | | | 820.1 | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/18/14 | Not verified - Violation still exists |

| Random Sample Addresses | | | | | | | | |
|-------------------------|---|---|------------------------------------|--------------------|----------------|---|----------------|--|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | No bond on drop at building | No problem found | Cable drop touching phone hardline | | 820.1 | FIXED, grounded drop to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Drop touching phone box | No problem found | | 235H | | FIXED, Moved wire off of phone box (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Drop hanging 4' above ground | No problem found | | Table 232-1 | | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/18/14 | Not verified - Violation still exists |
| | Ground wire incorrectly attached to power box screw | Cable and phone hardlines touching | | 235H | 250 | Resagged and corrected clearance - Complete | 6/26/14 | Comcast reports partial repair - Clearance issue reported repaired; drop ground - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, grounded drop to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Drop hanging 4 feet above ground | Cable and phone touching | Generally unworkmanlike | Table 232-1 & 235H | | Easement Pole, dogs in yard, no access, left hanger | 6/30/14 | Repair not completed, Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, grounded drop to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, grounded drop to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Drop hanging 6 feet above sidewalk | No problem found | | Table 232-1 | | VERIFIED, House has no drop (6/17/2014) | 6/17/14 | Comcast reported no problem found |
| | No problem found | Cable and phone hardline and drops touching | | 235H | | Resagged and corrected clearance - Complete | 6/27/14 | Comcast reported repaired |
| | No problem found | Cable and phone touching at pole | | 235H | | Resagged and corrected clearance - Complete | 6/26/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/25/2014) | 6/25/14 | Not verified - Violation still exists |
| | Drop not properly attached to building | No problem found | Generally unworkmanlike | | 820.24 | FIXED, Drop attached to building (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Ground wire incorrectly attached to power box screw | Cable and phone hardline and drops touching | Generally unworkmanlike | 235H | 250 | No hardline issues, cable backside, phone on street side all OK - Completed | 6/25/14 | Comcast reports partial repair - Clearance issue no problem found; drop ground not repaired - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Grounded/bonded to outside water | Abandoned drop wrapped around base of pole | | | 820.100B.2.(2) | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/18/14 | Not verified - Violation still exists |
| | No problem found | Cable and phone touching | | 235H | | Resagged and corrected clearance - Complete | 6/26/14 | Comcast reported repaired |

| Random Sample Addresses | | | | | | | | |
|-------------------------|---|---|---|---------------|-----------|--|----------------|--|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Drop not properly attached to building | Already noted | | | 820.24 | Not active, knocked on door and called customer with no answer to resolve drop issue. There is a new siding on the house that prevents us from ripping down old drop.. (6/25/2014) | 6/25/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/25/2014) | 6/25/14 | Not verified - Violation still exists |
| | Cable and phone drops are touching | Cable and phone touching at pole | Generally unworkmanlike | 235H | 820 | This area has P-poles, no access to gated / fenced area. No one home to allow access. Left door hanger. | 6/27/14 | Not Complete - Violation still exists |
| | Cable and phone drops are touching | Cable and phone touching | Generally unworkmanlike | 235H | 820 | This location will need self-support rerun to complete | 6/27/14 | Not Complete - Violation still exists |
| | Drop hanging 5 feet off ground | No problem found | | Table 232-1 | | VERIFIED Empty Lot, no drop present. (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | Drops laying on roof | No problem found | Drop tie wrapped to power drop | | 820.44B | FIXED I removed old drop on roof (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at | No problem found | | | 820.1 | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/18/14 | Not verified - Violation still exists |
| | Drop not properly attached to building | No problem found | | | 820.24 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/25/2014) | 6/25/14 | Not completed, wrong explanatio - Violation still exists |
| | Drop hanging low from strand | No problem found | | Table 232-1 | | FIXED, removed drop (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | Cable and phone twisted together on pole | Generally unworkmanlike at pole (numerous violations) | 235H | 820.1 | No promlem found, all clearances good, took photo - Completed | 6/24/14 | Comcast reports partial repair - Clearance issue no problem found; drop ground not repaired - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Active customer, knocked on door/called customer with no answer. Common ground inside. | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified address should be 2720 N. Hicks Street |
| | No bond on drop at building | No problem found | | | 820.1 | VERIFIED, Drop grounded in basement to coldwater (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | Cable and phone touching | Already noted | Over Silverwood St. | 235H | | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not completed, wrong explanatio - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | Phone and cable hardlines touching | | 235H | 820.1 | Cable not touching, check in air, - Completed | 6/25/14 | Comcast reports partial repair - Clearance issue reported repaired drop ground not repaired - Violation still exists |
| | Drops are tangled with phone at the pole | Power supply and breaker box not locked | | 235H & 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet There were no drops found tangled at these addresses. | 6/21/14 | Not repaired - incorrect address, should be 3034 Emerald St. |

| Random Sample Addresses | | | | | | | | |
|-------------------------|---|---|--------------------------------|-------------|------------------|---|----------------|---|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | No bond on drop at building | No problem found | Multiple buildings | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | Building address is boarded up | | 820.1 | VERIFIED, abandoned house no customer. Drop removed. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | VERIFIED, Abandoned building, no drop is present. (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | Hardline not attached to building | Hanging by garage door | | 820.24 & 820.100 | Only Drop found near door. Reattaced up higher - Completed | 6/24/14 | Comcast reported partial repair - Clearance issue reported repaired; drop ground not addressed - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, Grounded drop to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Drop hanging to ground | No problem found | | Table 232-1 | | No problem found. (6/17/2014) | 6/17/14 | Comcast reported no problem found |
| | No bond on drop at building | Phone and cable hardlines touching | | 235H | 820.1 | No hardline issues, no touch, OK - Completed | 6/24/14 | Comcast reported partial repair - Clearance issue reported repaired; drop ground not addressed - Violation still exists |
| | No problem found | Phone and cable touching | Generally unworkmanlike | 235H | | Check hardline Clearance from air, rear easement, all OK - Completed | 6/30/14 | Comcast reported no problem found |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded properl to adhere to BRIS standard (6/24/2014) | 6/24/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Customer denied access says he does not have our services. (6/19/2014) | 6/19/14 | Not verified - Violation still exists |
| | Ground wire incorrectly attached to power box screw | No problem found | | | 250 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Cable drop touching phone hardline | Already noted | | 235H | | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was bonded properly. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Grounded/bonded to outside water | Phone and cable hardlines touching | | 235H | 820.100.B.2.(2) | Resagged and corrected clearance - Complete | 6/30/14 | Comcast reported partial repair - Clearance issue reported repaired; drop ground not addressed - Violation still exists |

| Random Sample Addresses | | | | | | | | |
|-------------------------|---|--|--|-------------|-------------------|--|----------------|---|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | No drop | Broken lashing wire | | 214 | | De/RE - Fixed Scan - Completed | 6/24/14 | Comcast reported repaired |
| | Drop not properly attached to building | Cables laying on roof | | | 820.24 & 820.44 | Customer removed brackets to have deck installed referral 3404 was entered to have brackets and cable re-installed properly. | 6/18/14 | Not Complete - Violation still exists |
| | No bond on drop at building | No problem found | At least 3 Comcast boxes in this complex with no bonds | | 820.1 | FIXED, grounded 8 homes to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No problem found | Broken lashing wire | | 214 | | De/Re broken lashing - Completed | 6/30/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded to adhere to BRIS standard. (6/17/2014) | 6/17/14 | Comcast reported repaired |
| | No problem found | Need to transfer cable to new pole | | 214 | | 2 Pole Trans - Complete | 6/30/14 | Comcast reported repaired |
| | Cable drop touching phone hardline | No problem found | | 235H | | FIXED, Drop was raised to adhere to BRIS standard (6/19/2014) | 6/19/14 | Comcast reported repaired |
| | Drop not properly attached to building | No problem found | Hanging in front of window | | 820.24 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not completed, wrong explanation - Violation still exists |
| | Cable and phone drops are touching | No problem found | Amplifier output cable is kinked | 235H | | VERFIED, Our drops are not touching phone, also drop is disconnected at Tap.(6/19/2014) | 6/19/14 | Comcast reported no problem found |
| | No bond on drop at building | Cable and power 3 inches apart on building | | | 820.44 & 820.100 | Bond Checked - OK, Clearance OK on Hardline, Drops close to Power - Complete | 6/25/14 | Comcast reported repaired |
| | Ground wire incorrectly attached to power box screw | No problem found | | | 250 | FIXED, grounded cable to meter outside. (6/17/2014) | 6/17/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded properly. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Drop hanging low from strand | No problem found | | Table 232-1 | | FIXED, Drop was raised to adhere to BRIS standard (6/19/2014) | 6/19/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded properly. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop removed. (6/25/2014) | 6/25/14 | Comcast reported repaired |
| | No bond on drop at building | Power supply and breaker box not locked | | 224B2c | 820.1 | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet There was no address of 6305 found | 6/21/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/17/2014) | 6/17/14 | Not verified - Violation still exists |
| | No bond on drop at building | Cable and power less than 2 inches apart on building | | | 820.133 & 820.100 | This is a Deck location, not must clearance, resagged - Completed | 6/23/14 | Comcast reports partial repair - building attachment reported repaired; drop ground not repaired - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/19/2014) | 6/19/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | Drop hanging in front of garage door | | 820.24 & 820.100 | FIXED, drop was grounded to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |

| Random Sample Addresses | | | | | | | | |
|-------------------------|---|---|--|------------|------------------|---|----------------|---|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | Drop not properly attached to building | No problem found | | | 820.24 | VERIFIED, No problem found with our cable. Dish wire goes up and over building, not ours. (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | No problem found | Power supply and breaker box not locked | No access to bonding | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet | 6/19/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/17/2014) | 6/17/14 | Not verified - Violation still exists |
| | Drop not properly attached to building | No problem found | | | 820.24 | FIXED, drop was grounded to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | Drops touching phone at tap on building | | | 820.44 & 820.100 | FIXED, drop was grounded to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reports partial repair - drop ground reported repaired; building attachment not repaired - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded properly. I also ran a new A/O(6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Drops 3" from power | Hardline 14" from power | | 235 | 820.44 | Resagged and corrected clearance - Complete | 6/30/14 | Comcast reports partial repair: pole issue reported repaired; drop ground not repaired - Violation still exists |
| | Drop touching neighbor's phone drop | No problem found | | 235H | | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Drop touching phone messenger | No problem found | | 235H | | FIXED, I removed drop and cable lines off phone feeder and I hard nailed lines to house. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No bond on drop at building | No problem found | | | 820.1 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | No problem found | Abandoned drop wrapped around tree | | 214 | | FIXED, Removed cable wrapped around tree. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Ground wire incorrectly attached to power box screw | No problem found | | | 250 | FIXED, drop was grounded properly. (6/17/2014) | 6/17/14 | Comcast reported repaired |
| | Drop not properly attached to building | No problem found | Several drops need to be properly attached to building | | 820.24 | FIXED, removed unused drop and ran new drop and properly attached to the house (6/19/2014) | 6/19/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | VERIFIED, Cable goes into basement & grounded to cold water | 6/19/14 | Comcast reported no problem found |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded to adhere to BRIS standard. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | No problem found | Cables not properly attached to pole | | 239 | | OK no problem found | 6/30/14 | Comcast reported no problem found |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded to adhere to BRIS standard. 6/17/2014) | 6/17/14 | Comcast reported repaired |
| | No bond on drop at building | No problem found | | | 820.1 | FIXED, drop was grounded to adhere to BRIS standard. 6/17/2014) | 6/17/14 | Comcast reported repaired |
| | Drop touching phone and power | No problem found | | 232 | | FIXED, Drop was raised up off of the phone line. Phone is hanging low. | 6/17/14 | Comcast reported repaired |

EXHIBIT D-2

Comcast Physical Plant
Non-Random Sample Audit
Findings Spreadsheets



EXHIBIT D.2

COMCAST PHYSICAL PLANT NON-RANDOM SAMPLE AUDIT FINDINGS SPREADSHEETS

| Non-Random Sample Addresses | | | | | | | | |
|-----------------------------|---|---|---|-------------|-----------|--|----------------|--|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | Drop hanging 7 feet off ground | Not inspected | | Table 232-1 | | VERIFIED, drop is fine attached at house above 7 FT (6/17/2014) | 6/17/14 | Comcast reported no problem found |
| | Not inspected | Cable and phone touching at pole | Generally unworkmanlike | 235H | | No Hardline issues - Drops are near each other - Completed | 6/24/14 | Comcast reported no problem found |
| | Drop not buried | Not inspected | | 352 | | VERIFIED, Empty Lot, no drop is present. (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | Drop hanging to ground | Not inspected | | Table 232-1 | | VERIFIED, found everything ok, found no drop was hanging low to ground. (6/18/2014) | 6/18/14 | Comcast reported no problem found |
| | Not inspected | Missing down guy | | 264 | | No Down Guy required, Pole to Pole OK - Complete | 6/27/14 | Comcast reported no problem found |
| | Not inspected | Missing down guy | | 264 | | No need for down guy here, existing Pole to pole OK and tight - Completed | 6/25/14 | Comcast reported no problem found |
| | Not inspected | Cable and phone touching at pole | Generally unworkmanlike | 235H | | Check hardline clearance from air, OK - Completed | 6/25/14 | Comcast reported no problem found |
| | Not inspected | Phone and cable hardlines touching | 7 spans - between Cottage St. & Erdrick St. | 235H | | Comcast OK, Verizon / 3rd party f ber both violating / crosing Comcast plant. - Complete | 6/30/14 | Comcast reported no problem found |
| | Not inspected | Broken lashing wire | | 214 | | Comcast OK, Verizon broken Lashing wire - Completed | 6/30/14 | Comcast reported no problem found |
| | Not inspected | Fiber hanging 5 feet above ground | | Table 232-1 | | Went out and found no issue with low fiber. Re-hung fiber enclosure that was hanging on strand on 6-12-14. | 6/12/14 | Comcast reported no problem found |
| | Not inspected | Broken lashing wire | | 214 | | Comcast Plant / Lashing OK - Verizon Lashing broken here - Completed | 6/25/14 | Comcast reported no problem found |
| | Not inspected | Missing down guy | | 264 | | Comcast OK, Verizon problem | 6/27/14 | Comcast reported no problem found |
| | Not inspected | Broken lashing wire | Multiple locations and spans | 214 | | De/Re broken lashing - Completed | 7/1/14 | Comcast reported repaired |
| | Not inspected | Cable touching phone | Multiple locations and spans | 235H | | Resagged, reframed and corrected clearance - Complete | 7/1/14 | Comcast reported repaired |
| | Cable drop bonded to gas | Not inspected | | | 250 | Ground moved from gas to ground rod outside. (6/16/2014) | 6/16/14 | Comcast reported repaired |
| | Not inspected | Broken Lashing wire | | 214 | | Delash/Relash - Complete | 6/26/14 | Comcast reported repaired |
| | Not inspected | Broken down guy | | 264 | | Removed 2 broken down guides, no anchor in cement. Bell pole to pole OK - Complete | 6/26/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | Cover is missing | 224B2c | | Power Supply Removed. | 6/20/14 | Comcast reported repaired |
| | Not inspected | Cable and Synesis touching | | 235H | | Resagged and corrected clearance - Complete | 6/29/14 | Comcast reported repaired |
| | Not inspected | Broken messenger at the pole | | 264 | | Fixed Broken Strand & Raised - Cmpleted | 7/1/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2C | | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet | 6/17/14 | Comcast reported repaired |

| Non-Random Sample Addresses | | | | | | | | |
|-----------------------------|---|---|--|-------------|-----------|--|----------------|--|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | Not inspected | Phone and cable hardlines touching | | 235H | | Resagged and corrected clearance - Complete | 6/29/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | De/Re broken lashing - Completed | 6/29/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | Between Wallace St. & Mount Vernon St. | 214 | | Delash/Relash Run - Completed | 6/27/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash Fiber Run - Completed | 6/26/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash Run - Completed | 6/27/14 | Comcast reported repaired |
| | Not inspected | Broken down guy | | 264 | | Removed 2 broken down guides, no anchor in cement. Bell pole to pole OK - Complete | 6/26/14 | Comcast reported repaired |
| | Drops hanging 6-7 feet off sidewalk | Not inspected | | Table 232-1 | | FIXED, Removed 4 drops (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Not inspected | Cable and phone touching at pole | Generally unworkmanlike | 235H | | Pole corrected - Completed | 6/24/14 | Comcast reported repaired |
| | Drop 10' 1" above road | Already noted | | Table 232-1 | | Not active, removed all hanging/loose wires.(6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Already noted | sidewalk because lashing wire is broken | | 214 | | Wreck out abandon cable - Complete | 6/24/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash Run - Completed | 6/27/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash Run - Completed | 6/27/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | De/Re broken lashing - Completed | 6/24/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash - Completed | 6/27/14 | Comcast reported repaired |
| | Not inspected | Hardline cable 13' 8" above road | | Table 232-1 | | Resagged and corrected clearance - Complete | 6/27/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash - Completed | 6/26/14 | Comcast reported repaired |
| | Not inspected | Obsoleted power supply on pole | Open doors | 214 | | Power Supply wrecked out | 6/18/14 | Comcast reported repaired |
| | Not inspected | Hardline cable hanging off pole | Roped to power's neutral | Table 232-1 | | Removed rope, checked clearance - OK, - Completed | 6/25/14 | Comcast reported repaired |
| | Not inspected | Hardline support pulled out of building | | 214 | | Reattached & Resagged - Complete | 6/30/14 | Comcast reported repaired |
| | Drops hanging 6' off sidewa k | Not inspected | | Table 232-1 | | FIXED, Removed low hanging drop. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Not inspected | Using power's bracket to tie off to building | | | 820.44 | Reattached & Resagged - Complete | 6/30/14 | Comcast reported repaired |

| Non-Random Sample Addresses | | | | | | | | |
|-----------------------------|---|---|----------------------------------|-------------|-----------|---|----------------|--|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | Not inspected | Loose down guy | | 264 | | Repaired down guy - Complete | 6/30/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | De/Re broken lashing - Completed | 6/30/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | Delash/Relash - Complete | 6/30/14 | Comcast reported repaired |
| | Drops hanging 7 feet off ground | Not inspected | | Table 232-1 | | FIXED, 4 drops were raised to adhere to BRIS standard and 1 was removed. (6/17/2014) | 6/17/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | 150' De / Re - Completed | 6/23/14 | Comcast reported repaired |
| | Drop hanging 5 feet above sidewalk | Not inspected | | Table 232-1 | | FIXED, removed the drop hanging from the midspan. (6/25/2014) | 6/25/14 | Comcast reported repaired |
| | Drops hanging 4' 6" off sidewalk | Not inspected | | Table 232-1 | | FIXED, 3 drops were removed. (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet | 6/19/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet | 6/20/14 | Comcast reported repaired |
| | Not inspected | Cable 10' 1" above road edge | Between Bustleton Ave & Saul St. | Table 232-1 | | Raised plant over roadway - Complete | 6/30/14 | Comcast reported repaired |
| | Drop hanging 5 feet off ground | Not inspected | Remove abandoned drop too | Table 232-1 | | FIXED, removed drop (6/18/2014) | 6/18/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet. Aerial Cabinet | 6/20/14 | Comcast reported repaired |
| | Not inspected | Abandoned power supply w/no covers | | 214 | | Power Supply removed. | 6/20/14 | Comcast reported repaired |
| | Drops hanging 7 feet off ground | Cable using communication company's cable for support | | 235H | | Re-Jack strand, respliced strand, re-sag - completed | 6/25/14 | Comcast reported repaired |
| | Not inspected | Hardline cable hanging off pole | | Table 232-1 | | Reattached raiser to pole, straps & Spacers - Complete | 6/30/14 | Comcast reported repaired |
| | Not inspected | 3 pole transfers not complete | | 214 | | Only two locations, not three - Pole 707428, corner power violation with traffic light, Pole 707429 Completed | 6/25/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | De/Re broken lashing - Completed | 6/29/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet Aerial Cabinet | 6/20/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet Aerial Cabinet | 6/17/14 | Comcast reported repaired |
| | Not inspected | Power supply and breaker box not locked | | 224B2c | | Installed Pad locks on Breaker Box and Supply Cabinet Aerial Cabinet | 6/20/14 | Comcast reported repaired |
| | Not inspected | Broken lashing wire | | 214 | | De/Re broken lashing & PoleTrans - Completed | 6/29/14 | Comcast reported repaired |

| Non-Random Sample Addresses | | | | | | | | |
|-----------------------------|---|---|---|-------------|-----------|---|----------------|---|
| City Findings | | | | | | Comcast's Response | | City's Understanding of Comcast's Resolution |
| Address | At Residence or Facility up to the pole or pedestal/vault | At Pole, Pedestal/Vault or in/over Right-of-Way | Comments | NESC Codes | NEC Codes | Resolution | Date Completed | |
| | Not inspected | Broken lashing wire | 2 spans | 214 | | De/Re broken lashing - Completed | 6/29/14 | Comcast reported repaired |
| | Not inspected | Missing down guy | | 264 | | Comcast OK, No anchor - Completed | 7/1/14 | Comcast's explanation is not clear - Violation still exists |
| | Not inspected | Broken lashing wire | | 214 | | De/Re broken lashing - Completed | 6/24/14 | Duplicate entry by Comcast |
| | Drop is 10' 5" above roadway | Not inspected | 3 separate drops under 13' 6" | Table 232-1 | | No problem found, drops are higher than 14ft. (6/25/2014) | 6/25/14 | Not Complete - Violation still exists |
| | Not inspected | Cable and phone are tangled at the pole | | 235H | | Two plants/strands wrapped, Comcast and 2nd party plant. Needs to be cut, diconnected and respliced, otherwise OK | 6/26/14 | Not Complete - Violation still exists |
| | Not inspected | Missing down buy | 5 poles missing guys | 264 | | No clearance for down guys, drive -ways and Parking lots | 6/30/14 | Not Complete - Violation still exists |
| | Drop laying on roof | Not inspected | | | 820.44 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not completed, wrong explanatio - Violation still exists |
| | Not inspected | Missing down guy | Multiple locations and spans | | | | | issues at this address were reported as repaired) |
| | No apparent bond or ground | Not inspected | | | 820.1 | Not active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Drop laying on roof | Not inspected | | | 820.44 | Active, knocked on door and called customer with no answer. Common ground inside. (6/18/2014) | 6/18/14 | Not verified - Violation still exists |
| | Not inspected | Using Sunesys for support above trolley lines | | 235H | | Strand broken, Need to arrange power shut down on trolly lines - Not Completed | 6/23/14 | Repair not completed, Violation still exists |
| | Not inspected | Broken pole, needs pole transfer | need guy across Frankford, new pole has | 214 & 264 | | No Pole across Frankford in order to place guy. New pole is 15' offset. Can't complete today photos taken | 6/23/14 | Repair not completed, Violation still exists |
| | Not inspected | Missing down guy | | 264 | | No Anchor in Homeowers yard, no access. There would be clearance issue over sideway if anchor was placed. | 6/25/14 | Repair not completed, Violation still exists |