National Broadband Map data for the Community Anchor Institutions and FCC Form 477 data - SHLB Coalition

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TIME ESTIMATE INTRODUCTION

This time estimate represents the total number of hours required to construct each Type or Category of GIS/web mapping task(s) for National Broadband Map data for the Community Anchor Institutions and FCC Form 477 data - SHLB Coalition - 2017. Appended is the Request for Proposal Text for reference.

Abbreviations & Acronyms

AI - Anchor Institutions

FCC - Federal Communications Commission

GIS - Geographic Information Systems (computer, web mapping tools)

NYC GIS Team - New York City Geographic Information Systems/Web mapping Team

SHLB - Schools, Health & Libraries Broadband Coalition

Target Temporal Resolution for Data

The target time for data for this project is 2016-2017. Some datasets may require earlier dates if less recent datasets are available.

Study Area

"Proposals should provide such estimates for the entire United States, including territories." The NYC GIS Team will use publicly available datasets and thus is limited by what is currently available in US territories.

Assumptions & limitations

- Item 6 in the Tasks establishes a deliverable time estimate as mid-September 2017. The NYC GIS Team will work quickly to achieve a target of mid-September but may require until September 18th, 2017 for the estimation variables and by September 25th, 2017 for web mapping applications. This assumes no major data shortcomings or communication delays with SHLB.
- Data obtained from U.S. government open data portals and websites for this project is assumed to be of usable and up-to-date quality. The NYC GIS Team will provide checks on the output data quality in that the variables are correct, but will not thoroughly review the input datasets for data quality and data integrity.
- Calculated distances are radial distances (a.k.a. as-the-crow-flies, line-of-sight), not road network distances.
- The NYC GIS Team reserves the right to select the web framework and technology of any web mapping applications delivered.

TASKS OVERVIEW

The following tasks and key points have been identified by the NYC GIS Team from the Request for Proposals;

(1) **Use data from the National Broadband Map, the FCC's data collected from broadband companies through the FCC's Form 477, and other relevant data**.

(2) **Estimates of those anchor institutions with connections to fiber cable to their premises**, not just to the census block, census tract or other surrounding area.

(3) **Estimate the distance of the anchor institution from the nearest fiber interconnection** point, such as a central office, a carrier hotel, a backbone fiber with an **point of interconnection**.

(4) Proposals are also expected to **provide assistance to the SHLB Coalition in conducting an estimate of the cost of connecting anchor institutions to these interconnection points**.

(5) **Proposals should provide such estimates for the entire United States, including territories**.

(6) **These estimates and analysis should be provided to the SHLB Coalition by the middle of September, 2017**.

(7) **The firm shall be expected to review and provide suggestions and edits to the SHLB Coalition's written analysis.**

(8) **Include a separate cost for analyzing the population included in a circle of x radius around each anchor institution representing the expected population that could be served by a wireless broadband connection from the anchor institution to the surrounding residential customers**.

TASKS IN DETAIL

Data and Data Preparation

Data acquisition, becoming familiar and confident with the data, reviewing the variables and the data dictionary and ingestion into a GIS system for analysis is a larger up-front cost time-wise but is necessary for project execution. At this stage their may be some back and forth regarding which data to use.

(1) **Use data from the National Broadband Map, the FCC's data collected from broadband companies through the FCC's Form 477, and other relevant data**.

(5) **Proposals should provide such estimates for the entire United States, including territories**.

The SHLB project data sets include;

Data and Data Preparation	Low Estimate	High Estimate
AI Locations	10	12
FCC Form 477 Data	10	12
National Broadband Map Data	10	12
Total	20	24

Estimate Anchor Institutions (AIs) with connections to fiber cable to their premises

This task will involve geoprocessing of prepared data from the Data and Data Preparation task. If agreed upon, this task will be further defined in the scope of work.

(2) **Estimates of those anchor institutions with connections to fiber cable to their premises**, not just to the census block, census tract or other surrounding area.

AIs with connections to fiber cable to their premises	Low Estimate	High Estimate
Coding and processing for caclulations	6	8
Total	6	8

Distance estimate of Anchor Institutions (AIs) to nearest fiber interconnection point

This task will involve geoprocessing of prepared data from the Data and Data Preparation task. If agreed upon, this task will be further defined in the scope of work.

(3) **Estimate the distance of the anchor institution from the nearest fiber interconnection** point, such as a central office, a carrier hotel, a backbone fiber with an **point of interconnection**.

Distance estimate of AIs to nearest fiber interconnection point	Low Estimate	High Estimate
Coding and processing for caclulations	6	8
Total	6	8

Cost Estimate Assistance

While SHLB will be provided a Distance Estimations Table from NYC GIS Team, it is possible there may be some coordination and communication with SHLB, Joanne Hovis and her team.

(4) Proposals are also expected to **provide assistance to the SHLB Coalition in conducting an estimate of the cost of connecting anchor institutions to these interconnection points**.

Cost Estimate Assistance	Low Estimate	High Estimate
Cost Estimate Assistance	2	4
Total	2	4

Report Review

The NYC GIS Team will review the SHLB report text and accompanying figures.

(7) **The firm shall be expected to review and provide suggestions and edits to the SHLB Coalition's written analysis.**

Report Review	Low Estimate	High Estimate
Report Review	2	4
Total	2	4

Population Radius Estimation Web Mapping Application

In addition: This estimate is for a web mapping application, likely a client-side application that does not require server technology and upkeep.

(8) **Include a separate cost for analyzing the population included in a circle of x radius around each anchor institution representing the expected population that could be served by a wireless broadband connection from the anchor institution to the surrounding residential customers**.

Population Radius Estimation Web Mapping Application	Low Estimate	High Estimate
Web Mapping Application **[does not include Distance Estimations Web Map functionality]**	30	34
Total	30	34

Deliverables

Deliverables packaging, documentation, deployment and correspondence may require a few hours for each deliverable.

(6) **These estimates and analysis should be provided to the SHLB Coalition by the middle of September, 2017**.

Deliverables	Low Estimate	High Estimate
Distance Estimations Table - September 18th, 2017	1.5	2
Distance Estimations Web Map - undefined	1.5	2
Population Radius Estimation Web Mapping Application - September 25th, 2017	1.5	2
Total	4.5	6

TASK TOTALS

TIME ESTIMATE TOTALS

	Low Estimate	High Estimate
Data and Data Preparation	20	24
AIs with connections to fiber cable to their premises	6	8
Distance estimate of AIs to nearest fiber interconnection point	6	8
Cost Estimate Assistance	2	4
Report Review	2	4
Population Radius Estimation Web Mapping Application	30	34
Deliverables	4.5	6
Total in Hours:	**70.5**	**88**
Total in Days:	**8.8125**	**11**
Total in Weeks:	**1.7625**	**2.2**
Hourly Rate:	**$100.00**	**$100.00**
Total in Dollar Amount:	**$7,050.00**	**$8,800.00**

QUESTIONS AND ITEMS FOR CLARIFICATION BY SHLB

- Please specifically review the TASKS OVERVIEW section to make sure these are in fact the correct expected output and tasks.

- Task items 2 and 3 seem very similar;

  (2) **Estimates of those anchor institutions with connections to fiber cable to their premises**, not just to the census block, census tract or other surrounding area.

  (3) **Estimate the distance of the anchor institution from the nearest fiber interconnection** point, such as a central office, a carrier hotel, a backbone fiber with an **point of interconnection**.

  The team may require some clarification as to whether these are the same deliverables or different.

- While there is Population Radius Estimation Web Mapping Application defined there is no explicit request for a Distance Estimations Web Map. Is this to be included in the Population Radius Estimation Web Mapping Application Population Radius Estimation Web Mapping Application?

APPENDIX 1

Request for Proposal Text

The Schools, Health & Libraries Broadband (SHLB) Coalition welcomes proposals from firms that can identify the locations of community anchor institutions in the U.S. that have and do not have at least one fiber optic broadband connection at the anchor institution's premises. This data will then be used to help the SHLB Coalition develop an estimate of the cost of deploying fiber broadband infrastructure to those community anchor institutions.

Proposals are expected to **(1) use data from the National Broadband Map, the FCC's data collected from broadband companies through the FCC's Form 477, and other relevant data**. Proposals should offer to provide reasonable **(2) estimates of those anchor institutions with connections to fiber cable to their premises**, not just to the census block, census tract or other surrounding area.

Proposals are also expected to **(3) estimate the distance of the anchor institution from the nearest fiber interconnection point**, such as a central office, a carrier hotel, a backbone fiber with an **point of interconnection**. Proposals are also expected to **(4) provide assistance to the SHLB Coalition in conducting an estimate of the cost of connecting anchor institutions to these interconnection points**.

(5) Proposals should provide such estimates for the entire United States, including territories. **(6) These estimates and analysis should be provided to the SHLB Coalition by the middle of September, 2017**. The SHLB Coalition will be responsible for writing up the cost estimate analysis, based on the data supplied by the firm. **(6) The firm shall be expected to review and provide suggestions and edits to the SHLB Coalition's written analysis.**

In addition, proposals should **(7) include a separate cost for analyzing the population included in a circle of x radius around each anchor institution representing the expected population that could be served by a wireless broadband connection from the anchor institution to the surrounding residential customers**.

Data and analysis provided to the SHLB Coalition will be the property of the SHLB Coalition.