THE CONNECTICUT TITLE VI WORKSHOP: CHARTING A COORDINATED STRATEGY

Draft

CTLS 13 - XX

by

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1.0 INTRODUCTION

1.1 MOTIVATION

The state of Connecticut and its planning regions plan, operate and maintain a diverse and vital transit system. The organizational structure of the state and its transit systems is somewhat unique, especially in that the State itself operates the largest transit system in the state and further, that the state serves as the primary recipient for a large portion of the federal transit funds that flow into the state. Such a centralized transit system naturally calls for centralized efforts in meeting challenges and opportunities posed by planning, operating and maintaining federal compliance. This document summarizes the results of a workshop held November 20, 2012 in Hartford, Connecticut to discuss a centralized effort to meet the Federal Transit Administration’s (FTA) Title VI reporting requirements, and how this effort might serve as a catalyst for other collaborative efforts to streamline aspects of transit system planning and management. This document also outlines a strategy for meeting the reporting challenges posed by new Title VI guidance and suggests near-term action items accordingly.

The University of Connecticut (UConn) served as the organizer of the two-day workshop and facilitated discussions on mechanisms to coordinate Title VI and other transit system management efforts. In particular, UConn presented a new technology for managing Title VI and transit system data that leverage the university’s experience in database development, management, software development and transit system modeling. Named t-HUB, the database rests on the geo-database foundation provided by the Connecticut State Data Center (CSDC), housed in the Homer Babbidge Library at UConn.

Figure 1.1: t-HUB Development Progression

t-HUB is a multi-disciplinary effort between civil engineering, computer science engineering and geography to create a single-stop web-accessible database tool for transit system data, demographic data, socio-economic data, and other relevant transit system data for the entire state
of Connecticut. Importantly, the database not only houses the data, but links it in a meaningful way such that operational data and spatial data interact and can be brought to bear in meeting the spatial analysis needs of Title VI and other transit management efforts. The benefits of a coordinated effort for Title VI and transit data management include:

i. Streamline data management processes saving time and resources.
ii. Avoid duplicative efforts by the 30+ transit operators and planning agencies in CT.
iii. Best practices in data collection and management more easily spread throughout the state.
iv. Centralize burden of data storage and management
v. Leverage the infrastructure and flexibility of UConn’s computational resources.
vi. Leverage UConn research expertise in data mining and analysis.
vii. Educate students – creating talent to manage Big Data for ConnDOT.
viii. Build a single, centralized access point for data needs – such as Title VI requirements.
ix. Improve connection between transit practitioners, UConn researchers and students.

1.2 TITLE VI BACKGROUND

Title VI of the Civil Rights Act of 1964 (42 U.S.C. Section 2000d) states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Chapter V of the FTA Circular 4702.1B details the data collection and monitoring requirements of recipients and subrecipients of Federal Transit Administration (FTA) funds. In particular, requirements are given for:

- The requirement to collect demographic data
- The requirement to set system-wide service standards
- The requirement to set system-wide service policies
- The requirement to evaluate service and fare changes
- The requirement to monitor transit service
- The requirement to develop a Title VI evaluation plan

These federal requirements presents several challenges to the state of Connecticut, as there are 14 Regional/Metropolitan Planning organizations in Connecticut, along with 15+ transit operators in the state receiving federal funds and therefore may be impacted by CTDOT’s Title VI reporting and monitoring requirements. In particular, there are challenges regarding:

- Data collection and management
- Survey development, implementation and analysis
- Statewide adoption and implementation consistency

Not all Connecticut operators and planning agencies have the same requirements – the data collection requirement for direct recipients and large operators is much more stringent than for smaller systems and agencies that may be secondary recipients. However, nearly every operator
or planning agency receiving federal transit funding is at some point a subrecipient of the state of Connecticut and thereby required to adhere to the State’s Title VI requirements for that portion of the funding. The FTA outlines (Appendix L of FTA Circular 4702.1B) instances in which an agreement needs to be drawn up between the two organizations to establish Title VI reporting and compliance standards and procedures when the organizations involved receive FTA funding in multiple ways. This would be inefficient if the State is to enter agreements with a large number of planning organizations and operators bilaterally. It is logical that the 30 organizations in the state work together at the onset to establish standards and procedures for Title VI compliance, combine efforts and resources where practical and warrant and utilize other state resources, such as UConn, as to enable consistent and efficient Title VI compliance.

1.3 SUMMARY

FTA requires monitoring transit service and this is the most direct reason for engaging in this discussion. Many other reasons exist for pursuing effective and systematic monitoring of transit system equity. Equitable service provision increases market penetration across service area demographics, which can lead to increases in ridership. Integrating equity into the transit planning process will also increase customer service to critical ridership populations; increasing customer satisfaction. Credibility within the community stands to gain from an established process that embraces equity in service provision. Furthermore, a strong argument can and should be made that equity in transit service provision is an important part of building livable communities and promoting economic development in our cities and towns.

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![Figure 1.2: Social policy as part of the continuum towards sustainable cities. Source: HiTrans (2005), which investigates European city and transit planning policies and design.](image-url)
Providing equal access to public transit has the potential, more than any other mode of travel, of freeing up income in households that most need that freedom. This additional income can either go directly back into the economy as discretionary spending (as opposed to meeting basic needs), or as additional free time – improving quality of life, quality of family life, and paying long-term dividends. Figure 1.2, borrowed from the HiTrans guides for transit planning, summarizes the idea that equity and social policy are one level of integrating transit into the transportation planning process – but there are bigger ideas that can build upon these important, regulated aspects.
2.0 FTA TITLE VI CIRCULAR 4702.1B

2.1 OVERVIEW

FTA Circular 4702.1B “Title VI Requirements and Guidelines for Federal Transit Administration Recipients” provides recipients of FTA financial assistance with instructions and guidance necessary to carry out the U.S. Department of Transportation’s Title VI regulations (49 CFR part 21). FTA Circular 4702.1B effective as of October 1, 2012 is an update to and supersedes FTA Circular 4702.1A “Title VI and Title VI-Dependent Guidelines for FTA Recipients,” which was last revised in 2007. Key updates are outlined in the Quick Reference to Title VI Circular 4702.1B in Appendix A.

2.2 DATA REQUIREMENTS

The following outlines data needed to satisfy requirements put forth by FTA Title VI Circular 4702.1B.

2.2.1 Census Data

The FTA suggests transit providers use decennial census data to develop maps and charts until the next decennial census or they may use American Community Survey (ACS) data between decennial censuses. This can pose challenges to organizations as ACS data, which is updated annually, requires processing to be integrated in a GIS environment ready for analysis. The CSDC already provides this service and makes ACS data available. t-HUB will leverage this existing expertise. The following outlines where agencies are likely to require census data in preparing their Title VI programs.

1. **The number or proportion of LEP persons eligible to be served or likely to be encountered by the program or recipient.** Agencies must identify LEP communities, and assess the number or proportion of LEP persons from each language group to determine the appropriate language services required for each language group. As of now, this data is best found in the American Community Survey.

2. **Demographic and Service Profile Maps and Charts.** Transit providers are required to prepare demographic and service profile maps and charts after each decennial census and prior to proposed service reductions or eliminations. The first is a base map of the transit provider’s service area that overlays Census tract, Census block or block group, traffic analysis zone (TAZ), or other locally available geographic data with transit facilities. A second map must then shade those Census tracts, blocks, block groups, TAZs, or other geographic zones where the percentage of the total minority population residing in these...
areas exceeds the average percentage of minority populations for the service area as a whole.

3. **Service equity analysis.** Large transit providers (defined as those transit providers that operate 50 or more fixed route vehicles in peak service and are located in a UZA of 200,000 or more in population) must perform service equity analysis when making a “major service change” as defined by the recipient in their Title VI program. They must choose to use either American Community Survey (ACS) census blocks, block groups, or traffic analysis zone (TAZ) level or ridership data in their analysis. The FTA Circular provides examples and this document discusses later, situations when ridership data should be used rather than ACS data. When relying on ACS data instead of ridership data, the choice of dataset should be the smallest geographic area that reasonably has access to the bus or rail stop or station. The circular uses the example that passengers will generally walk up to one-quarter mile to a bus stop or one-half mile to a light or heavy rail station. The demographics of neighborhoods within those distances should be the data used for the equity analysis. Transit providers may use the data from an entire census block or block group when a portion of the area is within the walking or driving distance described above.

It should be noted that not all data is available at the highest spatial resolution suggested by FTA, that is, at the block group (BG) level. The table below highlights data availability by spatial scale.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Source</th>
<th>Block Group</th>
<th>Census Tract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Census 2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Population</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Race</td>
<td>Census 2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Race</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Age (Distribution)</td>
<td>Census 2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Age (Distribution)</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Age (Median)</td>
<td>Census 2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Age (Median)</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Income (Distribution)</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Income (Median)</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Poverty (%)</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Ability to Speak English</td>
<td>ACS 2006-2010</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

### 2.2.2 System Data

Monitoring transit service is a requirement for large transit operators, and represents the bulk of system data needed for Title VI analysis. System data is needed for creating the demographic
maps which display the agency’s transit facilities such as transit routes and transit stops. The FTA requires that large transit providers monitor the performance of their transit system relative to their system-wide service standards and service policies (i.e., vehicle load, vehicle assignment, transit amenities, etc.) no less than every three years. These metrics are outlined by the following.

1. **Vehicle load for each mode.** The FTA suggests vehicle load be expressed as the ratio of passengers to the total number of seats on a vehicle, and be expressed in terms of peak and off-peak times.

2. **Vehicle headway for each mode.** The FTA defines vehicle headway as the amount of time between two vehicles traveling in the same direction on a given line or combination of lines. Vehicle headways are measured in minutes (e.g., every 15 minutes); service frequency is measured in vehicles per hour (e.g., 4 buses per hour).

3. **On-time performance for each mode.** The FTA defines on-time performance as a measure of runs completed as scheduled. This criterion first must define what is considered to be “on time.” For example, on-time performance can be measured against route origins and destinations only, or against origins and destinations as well as specified time points along the route. Some transit providers set an on-time performance standard that prohibits vehicles from running early (i.e., ahead of schedule) while others allow vehicles to run early within a specified window of time (e.g., up to five minutes ahead of schedule). An acceptable level of performance must be defined (expressed as a percentage). The percentage of runs completed system-wide or on a particular route or line within the standard must be collected and measured for the determined standard.

4. **Service availability for each mode.** The FTA defines service availability as a general measure of the distribution of routes within a transit provider’s service area. For example, a transit provider might set a service standard to distribute routes such that a specified percentage of all residents in the service area are within a one-quarter mile walk of bus service or a one-half mile walk of rail service. Another standard might also indicate the maximum distance between stops or stations. These measures related to coverage and stop/station distances might also vary by population density.

### 2.2.3 Ridership Data

As with system data, the majority of ridership data needs fall under the requirements put forth for large transit providers. Ridership data is only mandated for all agencies during LEP analysis when determining the frequency with which LEP persons use the service. Ridership data is required to determine how often the service is used and the frequency of each fare medium used by each LEP community. Furthermore, the FTA suggests that when performing any sort of analysis, ridership data should be used whenever ridership is not reflected by the characteristics of the census block, block group, or traffic analysis zone.

The remaining requirements outlined below are for large transit providers.
1. **Requirement to collect and report survey data regarding customer demographics and travel patterns, specifically:**

   - Race
   - National origin
   - English proficiency
   - Language spoken at home
   - Household income
   - Fare usage by fare type among minority users
   - Travel pattern data (specifics unspecified)

   This ridership data listed represent a minimum solely for Title VI analysis. When deploying a ridership survey it is likely that plenty of additional data will also be collected. Furthermore, since the FTA does not suggest what type of travel pattern data should be collected, an investigation into best practices should be conducted.

2. **Service equity analysis.** Ridership data should be used for service equity analysis when making headway changes, eliminating a route, or increasing service to an area currently served by the transit system. The appropriate comparison population here is ridership, and the transit provider must compare the ridership of the affected route(s) with the ridership of the system. When the transit provider determines that the correct population base is ridership, the transit provider shall document the reasons for selecting this population base and analyze any available information generated from ridership surveys to determine the minority and non-minority population ridership of the affected route(s) and the minority and nonminority ridership of the entire system.

3. **Fare equity analysis.** The FTA states that for proposed changes that would increase or decrease fares on the entire system, or on certain transit modes, or by fare payment type or fare media, the transit provider shall analyze any available information generated from ridership surveys indicating whether minority and/or low-income riders are disproportionately more likely to use the mode of service, payment type, or payment media that would be subject to the fare change. Census data is not appropriate data for fare analyses because it is impossible to determine what fare media people are using from it. The transit provider shall describe the dataset(s) the transit provider used as well as describe what techniques and/or technologies were used to collect the data.

**2.3 DATA IMPLICATIONS FOR SMALL TRANSIT OPERATORS**

The most comprehensive forms of data needed for Title VI analysis fall under the requirements of large transit providers to collect and report data regarding customer demographics and travel patterns, conduct service and fare equity analysis, and provide results from transit service monitoring. These requirements exist for transit agencies which operate 50 or more fixed-route vehicles in peak-hour service, and operate in urbanized areas of over 200,000. Currently the FTA has only CTDOT listed as one of these large operators, however there are other transit
systems in the state which may want to think ahead, as statistics from the National Transit Database suggest they currently near the threshold. Furthermore, in an effort to meet the spirit of Title VI requirements and integrate equity into transit system planning and management, all operators and RPOs stand to gain from more accurate and comprehensive data regarding their ridership.

Additionally, although such requirements in the circular are not specified for smaller agencies, the FTA may reserve the right to ask for more detailed information, as stated in the Federal Register Notice on Circular 4702.1B (77 FR 52116):

> We have retained the provision that allows the Director of the Office of Civil Rights, in consultation with the FTA Administrator, to require a recipient to submit a more comprehensive Title VI Program, as when a transit provider has a one-time or ongoing issue, likely related to a complaint or otherwise compliance-related.

In specific regard to small transit operators who do not reach the large operator threshold:

> ...it is important for transit providers to know if their routes are running on time and how often or whether there is standing-room-only space on the bus. These measures are not difficult to capture, and this sort of basic data helps transit providers plan and ensure they are providing a quality service. It is likely that FTA would only ask for monitoring data from these transit providers in the event there is a complaint or a problem noted in a compliance review.

From the above, it can be advised that although smaller agencies are not explicitly required to collect and analyze the more comprehensive data required for large operators, it may be in their best interests to adopt such practices in preparation for future needs.

### 2.4 SUMMARY

The data requirements of the new FTA guidance are substantial. This is especially true for operators of large systems, of which Connecticut currently has only one: CTDOT. However, there are several systems that may benefit from addressing the requirements today, should those systems grow in the future. Furthermore, if equity in transit service provision is to become integrated in the transportation planning process, all systems stand to benefit from examining their system regularly and doing so in a quantitative, data-driven fashion. As the next section suggests, not all organization possess the resources for this type of data management and analysis – meaning a role for centralized data resources exists.
3.0 TITLE VI PRE-WORKSHOP SURVEY

3.1 BACKGROUND

A pre-workshop survey was distributed to all regional/metropolitan planning organizations and transit operators in the state of Connecticut several weeks prior. The purpose of the survey was twofold: to identify topics of interest for the workshop itself and to better understand the state of the practice for Title VI compliance and the needs of stakeholders. Table 1 displays the agencies completing the survey along with a breakdown of the agency’s function. If any agency would like to complete the survey that has not already done so, please visit: http://pubtransys engr uconn edu survey/index php sid=87713&newtest=Y&lang=en. In the discussion below, we aggregate the responses into two types: RPOs and operators (which includes transit districts).

Table 3.1: Pre-Workshop Survey Respondents

<table>
<thead>
<tr>
<th>Agency</th>
<th>Agency Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitol Region COG</td>
<td></td>
</tr>
<tr>
<td>Litchfield Hills CEO</td>
<td></td>
</tr>
<tr>
<td>Lower CT River Valley COG</td>
<td></td>
</tr>
<tr>
<td>South Central Regional COG</td>
<td></td>
</tr>
<tr>
<td>Southeastern Connecticut COG</td>
<td></td>
</tr>
<tr>
<td>South Western RPA</td>
<td></td>
</tr>
<tr>
<td>Northeastern CT COG/TD</td>
<td>Fixed-route</td>
</tr>
<tr>
<td>Central Connecticut RPA</td>
<td></td>
</tr>
<tr>
<td>Estuary Transit District</td>
<td></td>
</tr>
<tr>
<td>Greater Bridgeport Transit</td>
<td></td>
</tr>
<tr>
<td>Middletown Transit District</td>
<td></td>
</tr>
<tr>
<td>Milford Transit District</td>
<td></td>
</tr>
<tr>
<td>Southeast Area Transit District</td>
<td></td>
</tr>
<tr>
<td>Greater Hartford Transit District</td>
<td></td>
</tr>
<tr>
<td>Windham Regional Transit District</td>
<td></td>
</tr>
</tbody>
</table>

3.2 STATEWIDE VIEW ON TITLE VI

The survey first sought to characterize attitudes towards Title VI requirements and the resources needed to meet the requirements. The questions used a Likert scale to gauge the level of agreement of the respondent with a particular statement: the questions asked the respondent to rate their agency’s agreement with statements from one to seven where 1 = Strongly Disagree, 4 = Neutral, and 7 = Strongly Agree. The statements, as well as the subsequent ratings can be seen below in Figure 3.1.
The survey found that on average, respondents, both operators and RPOs had a neutral attitude toward the resource requirements of Title VI. An important caveat to this result is that these three questions had high variability associated with them, as shown in Table 3.2. In such a case, the average value can be a poor representation of the actual responses, as in this case. For example, the second question, “Title VI compliance requires more human and data resources than our agency has to spare” had an average response of 4.4, but a standard deviation of 2.2. In this example, the neutral average masks the fact that two of the respondents strongly disagreed with these statements, indicating a lack of human and data resources.

Table 3.2: Scale Rating Response Statistics

<table>
<thead>
<tr>
<th>Statement</th>
<th>Non-RPOs</th>
<th>RPOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Our agency has adequate human resources to comply with Title VI LEP requirements”</td>
<td>4.6</td>
<td>4.0</td>
</tr>
<tr>
<td>“Our agency has the data management resources to remain up to date with Title VI compliance”</td>
<td>4.3</td>
<td>4.4</td>
</tr>
<tr>
<td>“Title VI compliance requires more human and data resources than our agency has to spare”</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>“Our agency has GIS and other analytical capabilities to adequately maintain Title VI compliance”</td>
<td>3.4</td>
<td>5.6</td>
</tr>
<tr>
<td>“A centralized system of Title VI data management and analysis would benefit our organization”</td>
<td>6.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Figures and diagrams are not included in the text. The questions regarding GIS and data management capabilities saw a decoupling of the RPO and operator responses. Operator/Transit District (TD) responses show a general lack in confidence of their organization’s abilities in GIS and data analysis and a favorable view of centralized data management efforts. RPOs, not surprisingly, were more confident in their GIS and analytical capabilities and were neutral in their assessment of the benefits of centralization. The mandate of the RPO implies a greater focus on spatial data management and analysis, and as such, this
result should not be surprising. Importantly, both organization types saw some value in centralized data management for transit; in the operators’ case as new capacity for their organization, for RPOs, likely as a supplement.

### 3.3 RANKING OF TITLE VI CONCERNS

A subsequent question asked each respondent to rank their agency’s Title VI concerns from a list of nine options. The options can be seen in Table 2 along with the average ranking order by each agency type.

#### Table 3.3: Average Ranking of Title VI Concerns by Agency Type

<table>
<thead>
<tr>
<th>Rank</th>
<th>RPO’s</th>
<th>Operators/TDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reporting Requirements</td>
<td>Data Management Expertise</td>
</tr>
<tr>
<td>2</td>
<td>Human Resources</td>
<td>Data Management Resources</td>
</tr>
<tr>
<td>3</td>
<td>Equity Analysis</td>
<td>Equity Analysis</td>
</tr>
<tr>
<td>4</td>
<td>Limited English Proficiency</td>
<td>Reporting Requirements</td>
</tr>
<tr>
<td>5</td>
<td>Data Management Resources</td>
<td>GIS Experience</td>
</tr>
<tr>
<td>6</td>
<td>Analytical Resources</td>
<td>Limited English Proficiency</td>
</tr>
<tr>
<td>7</td>
<td>Data Management Expertise</td>
<td>Analytical Resources</td>
</tr>
<tr>
<td>8</td>
<td>Complaint Resolution</td>
<td>Human Resources</td>
</tr>
<tr>
<td>9</td>
<td>GIS Experience</td>
<td>Complaint Resolution</td>
</tr>
</tbody>
</table>

Note: A rank of 1 is equal to the top concern, and a rank of 9 is equal to the least concern.

Focusing on the top three concerns, RPOs were most concerned with reporting requirements, human resources, and equity analysis. Operators were most concerned with data management expertise, data management resources, and equity analysis as well. The most striking result is the operators’ concern with data management and analysis - though equity analysis ranks highly with RPOs as well. Table 3.3 highlights this difference, showing that a majority of operators do not have in-house data management capabilities, whereas nearly all RPOs do. Interestingly enough, most of the top-ranking concerns stand to benefit from a coordinated, centralized data system. It appears that top concerns focus on the newer FTA requirements necessitating additional data and analysis effort, whereas continuing requirements, such as complaint resolution do not have the same level of urgency.
Table 3.4: Agency Details

<table>
<thead>
<tr>
<th>Agency</th>
<th>Number of Agency Members with Direct Responsibility for Title VI Elements</th>
<th>In-House Data Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPO 1</td>
<td>All (About 20)</td>
<td>✓</td>
</tr>
<tr>
<td>RPO 2</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>RPO 3</td>
<td>3</td>
<td>✓</td>
</tr>
<tr>
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<tr>
<td>Operator 7</td>
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<td>✓</td>
</tr>
</tbody>
</table>

Note: Agency names are omitted to preserve anonymity

The range in agency staff members devoted to Title VI is also noteworthy. Larger organizations tend to have more staff devoted to Title VI, and many of these staff have GIS, analysis and data management expertise – the benefit they derive from centralize data management may be significant, but will be somewhat marginal. However, six of the responding organizations report one or fewer staff focusing on Title VI – meaning that the increase in capability for these organizations will be substantial, in some cases providing data analysis and management capability where none current exists.

3.4 SUMMARY

The pre-workshop survey helped identify the varied needs of Title VI stakeholders in Connecticut. While results often showed significant variance from organization to organization, there does appear to be a general trend of operators having a more urgent need for data management resources and analytical capability, with RPOs seeing benefit as a supplement to their current operations. The benefits of a centralized Title VI strategy and data management effort will be most noticeable in those smaller organization that currently possess little or no in-house capabilities to meet Title VI needs – 40% of the responding organization fall into this category and could see large gains in their organizations capabilities and compliance with Title VI.
4.0 TITLE VI AND FTA REPORTING WORKSHOPS

4.1 OVERVIEW

Day 1 of the Connecticut Title VI and FTA Reporting Workshop was held on November 20th at the UConn Graduate Business Learning Center (GBLC) in Hartford, CT. The workshop was a collaborative effort between t-HUB and CTDOT aimed to identify statewide needs and next steps to better prepare recipients and subrecipients of FTA funds for Title VI compliance in light of new guidance. The workshop also provided a forum for the discussion of potentially centralizing efforts to meet the data requirement of new Title VI guidance and to work collaboratively across the state in implementing a compliant and workable Title VI program. The workshop consisted of a number of lectures, panel discussions, and breakout sessions, as detailed below. Workshop presentations, which summarize much of the day’s discussion, may be found at http://www.thub.uconn.edu/resources.

Workshop Agenda Day 1 (November 20, 2012)

Welcome: Michael Sanders, Connecticut DOT
Introduction: Nicholas Lownes, University of Connecticut
Pre-Workshop Survey Results: Nicholas Hart, Connecticut Transportation Institute

Panel: Connecticut Perspectives on Title VI Compliance (Figure 4.1)
  ▪ Michael Sanders, Connecticut DOT
  ▪ David Lee, CT-Transit
  ▪ William Palmquist and Nicole Davis, SWRPA

Lunch Keynote: Mary Beth Mello, FTA Region 1 and Jonathan Ocana, FTA

Breakout Session 1: Details, Details, Details…
  ▪ Title VI General Requirements
  ▪ Service Monitoring and Equity Analysis

Breakout Session 2: Big Data
  ▪ System Data: GTFS, GIS, Census and more
  ▪ Rider Data: Designing and Deploying Surveys
A total of 45 attendees were present at day one of the workshop, representing the following agencies:

Capitol Region COG
Central Connecticut RPA
Connecticut DOT
Connecticut Transportation Institute
CTTransit
FTA Headquarters
FTA Region 1
Greater Bridgeport Regional Council
Greater Bridgeport Transit
Greater Hartford Transit District
Greater New Haven Transit District
Lower CT River Valley COG
Middletown Area Transit
Milford Transit District
Northeastern Connecticut Transit District
Norwalk Transit District
South Central Regional COG
South Western Regional Planning Agency
Southeast Area Transit District
Southeastern Connecticut COG
University of Connecticut
Windham Regional COG
Windham Regional Transit District

Figure 4.1: Connecticut Perspectives on Title VI Compliance Panel

4.2 TITLE VI GENERAL REQUIREMENTS BREAKOUT

The breakout sessions held in the afternoon provided participants an opportunity to have focused discussions on topics relevant to Title VI compliance, data management, and relevant concerns with their peers. Summaries of these discussions are found below, with the moderator presentations available at the t-HUB resources page: http://www.thub.uconn.edu/resources.
4.2.1 Public Participation

The FTA Title VI Circular states recipients must promote inclusive public participation, with integration of the content and considerations of Title VI, the Executive Order on LEP, and the DOT LEP Guidance in the public participation plan or process. The FTA suggests that recipients review Circular 4703.1, “Environmental Justice Policy Guidance for Federal Transit Administration Recipients” which includes many examples of effective strategies for engaging minority and low-income populations.

The general consensus among workshop participants was that it is very difficult to get people to public hearings unless the project is very controversial or the organization is “really messing up.” Many RPOs voiced frustration that even though they follow proper communications methods, very few members of the public show up to their public hearings, which creates concerns for the planning organizations that they may seem “guilty” in the eyes of the FTA of failing to promote inclusive public participation. The workshop consensus was that Connecticut RPOs generally have very small programs, and it takes a serious or controversial project to get people out to hearings.

Action Item: Create mechanism for easy sharing of CT public participation best practices.

4.2.2 Title VI Complaints

The FTA Title VI Circular requires that all FTA recipients develop Title VI complaint procedures and complaint forms. Subrecipients have the option to adopt the Title VI complaint investigation and tracking procedures and complaint form developed by the primary recipient. During the breakout it was discovered most major Title VI complaints and disputes were against FHWA and CTDOT. Transit service providers and RPOs stated they rarely receive Title VI complaints. It was further noted that instances have been reported where Title VI complaints have been sent to the CT Commission on Human Rights and Opportunities (CHRO). This is an incorrect procedure as CHRO is only devoted to investigating Title VII issues (employment discrimination). Even so, CHRO has in the past investigated some of these Title VI complaints even though it is not a part of the organization’s mandate. Other times, the CHRO dismisses or resolves complaints without contacting the organization (CTTRANSIT, RPA, etc) against which the complaint was made.

Transit operators and RPOs will need to engage CHRO so that complaints are known to the impacted organizations and so that Title VI complaints can be handled through the proper procedures. Methods of engaging CHRO and other state agencies in address compliant resolution gaps can include centralized databases of complaints, similar to the NYC OpenData project that provides mapping of complaints made to New York City agencies. https://nycopendata.socrata.com/Other/2012-NYC-Noise-Complaints-Heat-Map/sw33-t3vk.

Action Items:

1) Build a common statewide complaint procedure and form
2) Develop electronic complaint submission capability
3) Establish recommended practices for complaint procedure advertising.
4) Engage CHRO in developing statewide coordinated complaint procedures.

4.2.3 Limited English Proficiency

The FTA Title VI Circular requires recipients to take reasonable steps to ensure meaningful access to benefits, services, information, and other important portions of their programs and activities for individuals who are limited-English proficient (LEP). FTA encourages recipients to review the DOT’s LEP guidance on Four Factor Analysis, and states recipients shall develop a Language Assistance Plan based on the results. An FTA representative in the discussion suggested recipients must develop relationships with language minority communities to be able to reach them effectively. The diversity of such communities is what makes it difficult for the FTA to prescribe specific procedures for reaching LEP communities. Some suggestions for reaching the LEP population included (1) go to their places of worship, community centers, and elementary schools and (2) ask schools what languages they encounter in their ESL classes.

A group consensus was reached that agencies may want to collaborate and pool resources to translate Title VI documents uniformly, customizing the end product for individual agencies. This would make professional translation services more feasible, as opposed to using Google Translate or BabelFish. One agency suggested using CT State translation services at the Department of Administrative Services (DAS). However it was pointed out there may be some difficulty in translating the transit- and transportation-specific vocabulary. Language Line was also recommended to handle complaints and calls from non-English speakers, though it was suggested a majority of their services are geared towards medical services.

t-HUB has recruited an expert on using translation and interpretation technology to serve LEP individuals during Day 2 of the Title VI and FTA Reporting Workshop. t-HUB has also done work to identify LEP groups at the census block level per each RPO.

Action Items:

1) Identify a translation tool and pool resources to pursue quality, uniform Title VI document translation.
2) Coordinate efforts in identifying and mapping LEP populations.

4.3 SERVICE MONITORING AND EQUITY ANALYSIS BREAKOUT

4.3.1 Standards and Policy – Performance Measurement

A majority of the discussion on service standards and policy centered on on-time performance. From the FTA Title VI Circular, on-time performance is “a measure of runs completed as scheduled.” One first must define what is considered to be “on time.” For example, a transit provider may consider it acceptable if a vehicle completes a scheduled run between zero and five minutes late.
in comparison to the established schedule. On-time performance can be measured against route origins and destinations only, or against origins and destinations as well as specified time points along the route.

As the only operator currently required to monitor service, CTTRANSIT standards are published in the current draft of the CTDOT Title VI program. CTTRANSIT set different standards for different types of service, such as express, limited express, or standard varying by time-of-day and day of the week. On time performance standards are also affected by the headway of the service.

A concern in setting service standards was raised by a member of a flex route service, as deviations from their main routes create a major difficulty in setting static targets for on-time performance. The FTA representative in the room suggested in this case the operator would define what their definition of late/early, and explain the reasons for setting the standards differently, as “Title VI compliance is a pass/fail and not graded.” This leaves the task of setting such standard to the operator, which presents a serious challenge, requiring field data to support any decisions.

It is important to note that on-time performance does not need to be measured at each stop location, as some agencies may be assuming. Agencies have the option to measure on-time performance over any origin-destination pair(s) along each route. Choosing a longer distance between OD pairs along a route may eliminate unavoidable variations along certain parts, as well as reduce computational burdens. Agencies should be meticulous in selecting and explaining their specified time points.

**Action Item:** Initiate a study of on-time performance measurement and other service standards: emphasis should be placed on including all transit modes, including non-fixed route service.

### 4.3.2 Real-time Monitoring

Only one agency in Connecticut (GBT) currently utilizes Automatic Vehicle Location (AVL) technology – explaining that they use AVL to capture ridership data real-time and perform mapping and post-processing using GIS software. However, several other operators in the state plan to deploy real-time tracking systems in the near-term and smaller operators are contemplating mobile device solutions. Most operators expressed a desire to implement AVL services on their system, but cited costs and resources as a setback. As a result most operators simply used on-board spreadsheets or fare box data for examining ridership and on-time performance.

**Action Item:** Conduct a pilot study with GBT to examine the usage of real-time data in setting performance standards and in supporting Title VI monitoring and reporting.

### 4.3.3 Ridership Surveys

The new FTA guidance implies a heavy reliance on ridership surveys, a tool with which transit operators and planning agencies are well-acquainted. Rider surveys are resource-intensive and
require specialized statistical and experimental design often requiring external expertise. Additionally, rider surveys are very labor-intensive and can stretch an organization’s resources beyond the breaking point.

Workshop participants generally agreed surveys are one of the most difficult management tools from which to achieve their potential value. It was noted that funds for surveys are often drawn from the same funding sources as equipment or operating funds, making decisions to invest in survey data even more difficult. The issue is compounded by the implication of new FTA guidance that surveys are a requirement without additional resources being made available to pursue these data collection activities. Operators are typically hesitant to invest today’s equipment funding in data that may, or may not, help them avoid costly data management issues later.

Participants expressed frustrations with the recruitment process involved in passenger surveys. One agency described success in offering free transit trips to those who complete a survey. However, others shared their experience of hiring staff devoted to in-person passenger recruitment, yet still saw an overall decline in response rate, even with a bilingual survey. Operators must start seeking more technologically advanced recruitment methods to combine with their in-person and paper surveys.

At the conclusion of the session, many participants inquired if t-HUB could aid in creating a generic rider survey for implementation, as it would offer agencies a significant reduction in the burden. There is an opportunity to integrate some of the Title VI passenger survey needs with existing efforts at CTDOT to conduct a full travel survey within the near future to support the development of a new statewide planning model. This is a way to leverage existing efforts at DOT and expertise at UConn.

Action Items:

1) Conduct a needs assessment of rider data for Title VI monitoring and reporting and related transit operations and planning passenger data.
2) Initiate a discussion with the Bureau of Policy and Planning and the Planning Model group at CTDOT to integrate Title VI survey needs into statewide travel survey planning.

4.4 “BIG DATA” BREAKOUT

4.4.1 General Transit Feed Specification (GTFS)

The focus of this discussion was the creation and maintenance of General Transit Feed Specification (GTFS) files. GTFS files are a standard file system required of transit operators to have their systems searchable on Google Maps or Google Transit. There is a requirement to update these files quarterly, though this requirement is not strictly enforced. In Connecticut, few
operators were able to maintain this frequency, as updating the files can be quite labor-intensive. There is flexibility in the actual structuring of GTFS files, meaning that there is significant variability across the state in terms of quality, completeness and organization of GTFS files.

Furthermore, flag-down and flex-route services expressed concerns with GTFS since it requires stop data. This has prevented some RPOs and rural operators from developing GTFS files. This led participants to inquire how the t-HUB project would work for those who do not have or cannot produce GTFS files.

**Action Items:**

1) Coordinate a discussion between GIS and GTFS experts across the multiple CT organizations.
2) Initiate project to develop standard procedures for GTFS files in CT.
3) Conduct a study on the development of GTFS files for non-fixed route transit systems.
4) Make CT GTFS files openly available to the public to leverage individual developers’ ingenuity.

### 4.4.2 t-HUB Database

t-HUB is a database initiative at the University of Connecticut that focuses on the data needs of transit system operators and planners. The initial stages of t-HUB focus on merging the transit system and operational-level data of transit systems in Connecticut with the demographic and socioeconomic data needed for Title VI analysis. The long-term vision is a database and web application system that can serve transit systems’ needs not only for Title VI, but for emergency response planning, public health initiatives, systems operation, system planning and others. It will also serve as an important resource for UConn students in their studies and research. The database and web application are described briefly below.
4.4.3 t-HUB web application

A web application will be developed to aid with visual analytics of Title VI compliance. The web application will leverage spatial, temporal, and demographic data from the t-HUB database. The Title VI web application will allow users to evaluate service changes, perform service equity analysis, and identify LEP populations within the service area. The interface will be designed to be efficient and user-friendly, as seen in Figure 4.3.
Action Items:

1) Identify a pilot application for t-HUB database and web application development
2) Engage workshop participants and CT transit stakeholders in t-HUB interface and tool design
3) Build prototype t-HUB tool and web application.
4) Demonstrate t-HUB tool and collect feedback.

4.5 WORKSHOP AGENDA DAY 2

The second day of the Title VI workshop is organized as detailed below. Information, results and discussion from Day 2 will be integrated into the final strategy document.

Workshop Agenda Day 2 (February 7, 2013)

Welcome: Michael Sanders, Connecticut DOT
Introduction: Nicholas Lownes, University of Connecticut
LEP in Connecticut: Nicholas Hart, Connecticut Transportation Institute
Communication Technologies to Reach LEP Populations: Jessica Sperling, CUNY

Lunch Keynote: Anna Barry, CTDOT Deputy Commissioner
Presentations: t-HUB Initiatives
- Measuring Access: Kelly Bertolaccini and Sha Mamun, UConn
- t-HUB Database Architecture: Timothy Becker and Curtis Denton, UConn
- Connecticut State Data Center: Jeffrey Osleeb and Michael Howser, UConn

Breakout Sessions
- GIS and GTFS: Timothy Becker, Curtis Denton, UConn
- LEP: Nicholas Hart and Jessica Sperling, CTI and CUNY

Title VI Strategy Discussion
- Discussion on strategy document
- Inclusion from the day’s sessions
5.0 STATEWIDE TITLE VI STRATEGY

A coordinated statewide strategy for meeting Title VI reporting needs and requirements is outlined below. First and foremost, the lines of communication need to remain open between the stakeholders in Connecticut and with the FTA. Many of the recommendations below identify coordinated, centralized data management as an important aspect of the Title VI strategy.

5.1 RECOMMENDED ACTION ITEM SUMMARY

The following action items are recommended for Connecticut’s Title VI Strategy. These items are all relatively near-term, and should be considered recommendations for the next one to two years. In addition to the items below, it is recommended that the CT transit community continue the discussions begun with these Title VI workshops through an annual series. This annual workshop would be hosted by UConn, with the annual timing of the event to be determined. As a supplement to these workshops, UConn shall provide a continuously updated database of Title VI resources on its website http://www.thub.uconn.edu/resources

Public Participation Action Item: Create mechanism for easy sharing of CT public participation best practices.

Complaint Procedures Action Item:

1) Build a common statewide complaint procedure and form
2) Develop electronic complaint submission capability
3) Establish recommended practices for complaint procedure advertising.
4) Engage CHRO in developing statewide coordinated complaint procedures.

LEP Action Item:

1) Identify a translation tool and pool resources to pursue quality, uniform Title VI document translation.
2) Coordinate efforts in identifying and mapping LEP populations.

Standards and Policy – Performance Measurement Action Item: Initiate a study of on-time performance measurement and other service standards: emphasis should be placed on including all transit modes, including non-fixed route service.

Passenger Survey Action Items:

1) Conduct a needs assessment of rider data for Title VI monitoring and reporting and related transit operations and planning passenger data.
2) Initiate a discussion with the Bureau of Policy and Planning and the Planning Model group at CTDOT to integrate Title VI survey needs into statewide travel survey planning.

GIS/GTFS Action Items:

1) Coordinate a discussion between GIS and GTFS experts across the multiple CT organizations.
2) Initiate project to develop standard procedures for GTFS files in CT.
3) Conduct a study on the development of GTFS files for non-fixed route transit systems.
4) Make CT GTFS files openly available to the public to leverage individual developers’ ingenuity.

t-HUB Development Action Items:

1) Identify a pilot application for t-HUB database and web application development
2) Engage workshop participants and CT transit stakeholders in t-HUB interface and tool design
3) Build prototype t-HUB tool and web application.
4) Demonstrate t-HUB tool and collect feedback.

Real-time Data Action Item: Conduct a pilot study with GBT to examine the usage of real-time data in Title VI monitoring and reporting.

5.2 CLOSING REMARKS

New requirements and data-intensive methods present many challenges for transit planners and operators. However, there is big opportunity associated with integrating “big data” and collaborative efforts in meetings these challenges. A collective effort can help produce tools that can considerably simplify both compliance reporting and other operational and planning activities. Tools, such as t-HUB, can help perform quality analysis in seconds that might otherwise take hours of individual analyst time. Building partnerships across multiple agency types can improve dissemination of good practices and state-of-the-art analysis tools. Big data and big collaboration are essential pieces of transit systems in the 21st century, especially in a time of constrained resources. The strategy outlined in this document captures important first steps in leveraging limited resources to meet the goals of the Connecticut transit system.
How has the Title VI Circular Changed?
- Provides greater clarity, accountability, transparency, and consistency.
- Provides clarification between Environmental Justice (EJ) and Title VI.
- Provides an extensive appendix with user-friendly templates and checklists to help prepare documents that must be submitted to FTA.
- Provides flow charts to illustrate the responsibilities of the various roles in public transportation, such as recipient, direct recipient, designated recipient, and primary recipient.

The general requirements for Title VI compliance are largely the same. FTA’s revised Title VI Circular:
- Includes regulatory language to show a clear nexus between regulations and requirements.
- Clarifies all requirements, and strengthens some requirements.
- Moves EJ language to the new EJ Circular, with the exception of the service and fare equity analysis section.
- Sets forth the requirements for all FTA recipients and provides specific requirements for MPOs, States, and Transit Providers.

All FTA recipients must submit the following:
- A Title VI Notice to the Public, Complaint Procedure, and Complaint Form
- A Limited English Proficiency Plan and a Public Participation Plan
- A list of investigations, lawsuits and complaints
- A table depicting racial composition of membership of non-elected bodies, membership is selected by the recipient
- Information regarding the Siting of Fixed Facilities (as opposed to a list of construction projects)
- A Title VI Program must be approved by the recipient’s Board of Directors or appropriate governing entity

Transit Providers w/50+ fixed route vehicles operating in Peak service and in a UZA with a population of 200,000 or more must:
- Collect and Report Data regarding customer demographics and travel patterns
- Conduct Service and Fare Equity Analysis;
- Monitor Transit Service (Threshold based).
- Provide results of their monitoring program – to show how they measure up according to their own service standards and policies.

MPOs, State DOTs, and Subrecipients:
- Subrecipients must submit a Title Program to State (as primary recipient)
- State DOTs have an added requirement for demographic maps that overlay the percent minority and non-minority populations, and charts that analyze the impacts of the distribution of State and Federal public transportation funds.
- Includes more definitive guidance on monitoring subrecipients

Compliance Reviews and Complaints
- Redundancies eliminated by removing a letter of resolution and the appeals process; and providing specific conditions for administratively closing complaints
- Compliance Reviews include: specific steps prior to imposing any draw-down restrictions on recipients; more specific guidance on the compliance review process; and requires a Board resolution approving any Remedial Action Plan resulting from a compliance review

Due Dates
- All FTA Recipients must submit a Title VI Program every 3 years
- MPO Due date changes from every 4 to every 3 years
- All Title VI Programs must be submitted via TEAM 60 days prior to expiration
TITLE VI RESOURCES

The following Title VI resources may also be found on the t-HUB website at
http://www.thub.uconn.edu/resources

FEDERAL

Federal Transit Administration

Title VI Circular 4702.1B (10/1/12)
http://www.fta.dot.gov/documents/FTA_Title_VI_FINAL.pdf

Title VI Circular 4702.1B Quick Reference

Environmental Justice Circular 4703.1 (8/15/2012)

Federal Register Notices, Circulars, Regulations, Executive Orders, and Departmental Orders
http://www.fta.dot.gov/about_FTA_11706.html

STATE OF CONNECTICUT

Connecticut Department of Transportation

CTDOT Title VI Program

Examination of MPO Title VI Compliance

University of Connecticut

Title VI Workshop Opening Presentation (Day 1)
https://www.dropbox.com/s/ic41sgkyrfzi8ac/Opening%20Presentation.pdf

Pre-Workshop Survey Results Presentation (Day 1)
https://www.dropbox.com/s/bbbl6mxv94uqpz8/Pre-Workshop%20Survey%20Results.pdf

Service Monitoring and Equity Analysis Presentation (Day 1)
https://www.dropbox.com/s/01ngvh6m9zdsk2i/Breakout%20Session%20%20Big%20%20Data.pdf

t-HUB Database and GTFS Presentation (Day 1)
https://www.dropbox.com/s/01ngvh6m9zdsk2i/Breakout%20Session%20%20Big%20%20Data.pdf
TITLE VI GENERAL REQUIREMENTS GUIDANCE

Public Participation
TCRP Synthesis 89: Public Participation Strategies for Transit
http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_syn_89.pdf

NCHRP Synthesis 407: Effective Public Involvement Using Limited Resources

Limited English Proficiency
Communicating More for Less: Using Translation and Interpretation Technology to Serve LEP Individuals

Implementing the DOT LEP Guidance: A Handbook for Transit Agencies

How to Engage Low-Literacy and Limited-English-Proficiency Populations

MLA Language Map Data Center
http://www.mla.org/map_data&dcwindow=same

Languages Spoken in Connecticut Schools
http://www.ctserc.org/initiatives/ide/LanguagesOfCt.pdf

Migration Policy Institute: Connecticut Language and Education
http://www.migrationinformation.org/datahub/state2.cfm?ID=ct

WSDOT: English to Spanish Glossary of Transportation Terms
http://www.wsdot.wa.gov/NR/rdonlyres/B8B5F5EE-186F-4220-BAA7-59ECD69B1AC0/0/EnglishSpanishTranslation.pdf

Complaint Procedures
Bay Area Rapid Transit Title VI Brochure
http://www.bart.gov/docs/titlevi/brochure/Title_VI_Brochure_Rev_9-18-09_ENGLISH.pdf

OTHER

Ridership Data
TCRP Synthesis 63: On-Board and Intercept Transit Survey Techniques
Transit Planning

HiTrans Best Practice Guide: Public Transport – Planning the Networks