

FTA TITLE VI PROGRAM

Connecticut
Department of Transportation
FFY 2024 - 2026



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Introduction

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving Federal financial assistance. Specifically, Title VI provides 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." (42 U.S.C. Section 2000d).

The Connecticut Department of Transportation (CTDOT) is committed to ensuring that no person is excluded from participation, denied benefits, or otherwise subjected to discrimination under any program or activity, on the basis of race, color or national origin.

The Connecticut Department of Transportation (CTDOT), a designated recipient of Federal Transit Administration (FTA) funding, is responsible for service and planning decisions for rail, fixed-route bus, and complementary paratransit service throughout the State of Connecticut. The Governor has designated CTDOT as the agency responsible for administering Section 5310, enhancing mobility of seniors and individuals with disabilities; Section 5311, supporting public transportation in rural areas; and 5307 supporting public transportation in urbanized areas. The CTDOT does not administer the Section 5307 program for the entire state as several transit districts are direct recipients of FTA funding and required to report directly to FTA.

The information contained in this report is CTDOT's Title VI Program for the period of October 1, 2023 – September 30, 2026. CTDOT is scheduled to submit its next program by October 1, 2026. The Title VI Program has been prepared in compliance with the requirements set forth in U.S. Department of Transportation Federal Transit Administration (FTA) Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients." The program was accepted on November 27th, 2023, with the approval of Commissioner Garrett Eucalitto, as evidenced in the Title VI Program Approval on page 3 of the CTDOT FTA Title VI Program Appendix.

CTDOT will effectuate and ensure full compliance with the provisions of Title VI of the Civil Rights Act of 1964, as amended (referred to as Title VI), 49 CFR Part 21, and 23 CFR Part 200, and related statutes and regulations in all Department programs and activities.

The program was developed by the CTDOT Title VI Workgroup. The group's membership consists of agency personnel from the Bureaus of Public Transportation, Finance and Administration, and Policy and Planning; and the CTDOT's Title VI Coordinator and Associate Title VI Coordinator.

Notifying Beneficiaries of their Rights under Title VI

The Connecticut Department of Transportation (CTDOT) operates its programs and activities without regard to race, color and national origin. The CTDOT has developed a Title VI Notice to the Public to provide notification to beneficiaries of their rights under Title VI and the procedures to follow when filing a Title VI complaint.

Notices are posted in areas such as:

- CTDOT Bulletin Boards

- Rail stations
- Bus stations
- Transit Vehicles
- Public Meetings/Hearings
- CTDOT Website

The CTDOT has translated the notice, in its entirety, into Spanish. To ensure that LEP populations are aware of their rights under Title VI, the statement below is included in Portuguese, Polish, Chinese, Italian, French, Haitian Creole, Russian, Vietnamese, Arabic, Korean, and Hindi on the English version of the Notice.

“The Connecticut Department of Transportation (CTDOT) operates its programs and activities without regard to race, color, or national origin. This is a notice informing the public of their rights under Title VI, including how to file a Title VI complaint, and how to request additional information regarding the Department’s Title VI Program. If this form is needed in another language, please contact CTDOT at (860) 594-2109.”

English and Spanish versions of the notice can be found on pages 4-10 of the CTDOT FTA Title VI Program Appendix.

CTDOT requires that all subrecipients develop a Title VI Notice to the Public and post the notice on their website and in areas accessible to the public, including any federally funded vehicles. On a rotating basis the Department audits its sub recipients to confirm they have a Title VI Notice to the Public and the notice is posted in areas accessible by the public, including but not limited to their websites.

The public can access Title VI information on CTDOT’s website by clicking on the link [Title VI Program](#), under “Most Popular”. In addition to resources for subrecipients, the Title VI webpage hosts the following documents:

Connecticut Department of Transportation Title VI Policy Statement – This policy affirms that CTDOT prohibits discrimination on the basis of race, color and national origin in its programs, benefits and activities. Information identifying who has been delegated the responsibility of implementing and monitoring the CTDOT’s Title VI program is also provided. The policy is signed by the Commissioner, emailed to all agency employees, and posted on CTDOT’s website. A copy of the Title VI Policy can be found on pages 11-12 of the CTDOT FTA Title VI Program Appendix.

Title VI Complaint Form – This form can be used by the public to file a Title VI complaint. While the public is not required to use this form to file a Title VI complaint, it is encouraged. Using the form ensures that the necessary information to initiate an investigation is captured. The public can access the Title VI complaint form by visiting the CTDOT website and clicking the link [Title VI Program](#) under “Most Popular”.

The CTDOT has translated the form, in its entirety, into Spanish. To ensure that LEP populations are aware of their rights to file a complaint under Title VI. The following statement is included in Portuguese, Polish, Chinese, Italian, French, Haitian Creole, Russian, Vietnamese, Arabic, Korean, and Hindi on the English version of the Notice.

“A Title VI Complaint may be filed by any individual or group that believes they have been subjected to discrimination based on their race, color, and national origin. The Title VI complaint form may be used for filing a

Title VI complaint with the Connecticut Department of Transportation (CTDOT). This form also explains the procedures the Department follows when investigating a Title VI complaint. If the form is needed in another language, please contact the CTDOT at (860) 594-2243.”

English and Spanish Title VI Complaint Forms can be found on pages 13-20 of the CTDOT FTA Title VI Program Appendix.

FTA Title VI Complaint Investigation Process and Procedure

What is an Investigation: An investigation is an official inquiry for the purpose of determining whether there has been a violation of the laws or statutes, and includes a determination of appropriate relief where a violation has been identified. An investigation requires an objective gathering and analysis of the evidence, which will ensure that the final decision is as accurate as possible.

Role of the Investigator: The investigator is a neutral party provided by the agency to investigate the issues raised in a complaint. The investigator’s behavior, demeanor, and attitude reflect the agency and may affect the degree of cooperation received from the parties. The investigator has an obligation to identify and obtain relevant evidence from all available sources in order to resolve all the issues under investigation. ***The investigator is not an advocate for the complainant or the respondent.*** The investigator is a neutral fact finder.

Responsibilities of the Investigator:

The Investigator MUST:

- Never express their opinions;
- Never tell the parties that the complaint represents a good case or that the complaint is frivolous;
- Always remain NEUTRAL DO NOT take sides;
- Write the FACTS. State what the facts are based upon the evidence or testimony;
- Stay in control at all levels of the process;
- Decide who is to be interviewed. If the complainant or the respondent is adamant about a witness interview, perform the interview;
- Decide when sufficient evidence has been gathered to begin writing the investigative report;
- Always remain professional and polite;
- Be patient; and
- Be a good listener.

Theories of Discrimination: A Theory of Discrimination refers to the type of discrimination:

- INTENTIONAL DISCRIMINATION/DISPARATE TREATMENT – The decision maker was aware of the complainant’s race, color, or national origin, and acted at least in part because of that information. The action was taken because of the complainant’s race, color, or national origin,
- DISPARATE/ADVERSE IMPACT – Discrimination which occurs when a neutral policy or procedure has a disproportionate impact on a protected class. The practice, even though applied equally to all, has the effect of excluding or otherwise adversely affecting a particular group; and

- RETALIATION – Discrimination against persons because of the filing of a complaint, participation in an investigation, or opposing a practice made unlawful pursuant to the laws.

Elements of Proof: How does the investigator prove discrimination?

- Establish a Prima Facie Case – The complainant has the responsibility of initially establishing a prima facie case of discrimination. A prima facie case means the complainant has provided information containing all the elements necessary for a complaint of discrimination. Establishing a prima facie case requires the following elements:
 1. Complainant is a member of a protected group;
 2. Complainant was harmed by some decision; and
 3. Similarly situated persons of a different group were not or would not have been harmed under similar circumstances.

These elements constitute an ideal complaint of discrimination and establish a prima facie case. However, in many situations, the investigator will not initially have all these elements. It is the investigator's responsibility to obtain from the complainant all missing information.

- During the investigation – One of the first items that must be determined by the investigator from the respondent, are the reasons for the respondent's actions against the complainant. In other words, establish the respondent's legitimate non-discriminatory reasons for the actions taken against the complainant. The investigator must also obtain evidence to determine whether the respondent's reasons are true based upon the evidence or whether the reasons are an excuse (pretext) to discriminate against the complainant.
- Obtaining the evidence -- During the investigation, the investigator should obtain the following types of evidence:
 - Respondent's policies and procedures;
 - Evidence establishing actions taken against the complainant;
 - Evidence establishing how others, not in the complainant's group, were treated in similar situations;
 - Evidence establishing the normal policies and procedures and how the respondent followed or did not follow the normal policies and procedures when making the decision or taking action involving the complainant;
 - Evidence establishing whether the respondent followed the normal policies and procedures for similarly situated persons; and
 - A position statement from the respondent outlining the reasons for the action taken against the complainant.

Examples of Elements of Proof:

Intentional Discrimination –

- Complainant is a member of a protected group;
- Complainant was excluded from participation in or denied the benefits of a program or activity receiving federal financial assistance;
- Complainant was rejected despite his/her eligibility;
- Respondent selected applicants whose race, color, or national origin were different from the complainant; or
- The Program remained open and the respondent continued to accept applications from applicants of a different race, color, or national origin than the complainant.

Disparate/Adverse Impact –

- Respondent has a facially neutral policy or practice that has affected the complainant;
- The policy or practice operates to disproportionately exclude members of the protected group;
- The policy or practice is a business necessity; or
- There is an effective business alternative with a less adverse impact.

Retaliation –

- Complainant opposed any policy or practice made unlawful or participated in any manner in an activity pursuant to the laws prohibiting discrimination;
- The individual who allegedly retaliated against complainant knew or should have known of the opposition or participation;
- An adverse action was taken against the complainant subsequent to the protected activity;
- There was a causal connection between the opposition or participation and the decision made involving the complainant;
- There was a legitimate non-discriminatory reason for the action taken; or
- The articulated reason is a pretext for retaliatory discrimination.

**Causal Connection:* To establish a causal connection, establish the following:

- Did the treatment of the complainant change after the protected activity;
- Timeline: How long after the initial protest did the adverse action occur; and
- Compare the complainant's treatment with others who were not engaged in the protected activity.

Tracking and Investigating Title VI Complaints - All Title VI complaints will be filed in accordance with the following Title VI Complaint Procedures:

Any person alleging to be aggrieved by a discriminatory practice may in person or through a legal representative, obtain a Title VI Complaint Form, and file the completed form with the Title VI Coordinator within 180 days following the date of the alleged discriminatory action or the date when the person(s) became aware of the alleged discriminatory action.

Complaints will be referred to the Department's Title VI Coordinator. The Title VI Coordinator will review the complaint and inform the appropriate program area designee. Complaints must be in writing, signed by the complainant or a representative, and include the complainant's name, address, and telephone number, or other means by which the complainant may be contacted. Complaints shall explain as fully as possible the facts and circumstances surrounding the alleged discriminatory action and identify the individual(s) and/or organization(s) responsible for the alleged discriminatory action. In cases where the complainant will be assisted in converting an oral complaint into a written complaint, the complainant is required to sign the written complaint. All discrimination complaints will be acknowledged in writing. Complaints received by telephone will be reduced to writing and provided to the complainant for confirmation, revision, and signature before processing.

The Title VI designee or the individual receiving the written complaint will review the complaint to ensure that the required information is provided, the complaint is timely, and is within the appropriate jurisdiction. The complaint will be accepted unless it is withdrawn, is not filed within the allowed time period, or the complainant fails to provide required information after a written request for omitted/additional information.

Internal Complaint Procedures: Written complaints filed with the Department will be analyzed and investigated by the Title VI Coordinator. The Department will notify a respondent named in a complaint by mail and the respondent will be contacted for an interview. The complaint investigation will be completed within forty (40) days of the date of receipt of the complaint. The Title VI Coordinator will prepare an investigative report (IR) after conducting the investigation. A complaint log will be maintained for all complaints filed with and investigated by the Department. The investigator will advise the complainant of his/her rights under Title VI, and related statutes.

Investigation Process: The Investigation Process includes the following:

- Investigative Plan
- Request for Information
- Conducting Interviews
- On-Site Visit
- Obtaining Evidence
- Analyzing Data
- Writing the Investigative Report

Investigative Plan: The Investigative Plan is an internal document for use by the investigator to define the issues of the complaint. The following elements are contained in an Investigative Plan:

- Complainant(s) Name and Address/Attorney for Complainant with Name and Address;

- Respondent(s) Name and Address/Attorney for Respondent with Name and Address;
- Applicable Law;
- Basis;
- Issue(s);
- Background;
- Name of Person(s) to be interviewed, including questions for the Complainant, Respondent and Witness(es); and
- Evidence to be obtained during the investigation.

Request for Information: Requests for Information are sent to the appropriate official(s) at the respondent's facility. Contact is made with the respondent to advise him/her of the complaint and to determine the appropriate official(s) to interview. The cover letter to transmit the Request for Information should explain the process and provide information regarding any meetings that have been scheduled. To facilitate the availability of evidence during the on-site visit, provide the Request for Information to the respondent prior to conducting the visit.

Conducting Interviews: Interviews are conducted of witnesses who can provide information that will either support or refute complaints. A list of major questions should be prepared that address the issues involved in the complaint. During the interview, the following steps are recommended:

- Introduce yourself and outline the interviewing process;
- Place the person being interviewed at ease;
- Listen effectively;
- Differentiate factual information from opinions;
- Ask questions best worded to provide factual responses;
- Take clear and precise notes; and
- Obtain a signed statement from the person being interviewed.

Complainant – The purpose of interviews is to gain a better understanding of the situation outlined in the complaint of discrimination. The investigator contacts the complainant to ensure that he/she understands the complainant's allegation(s). It is recommended that the investigator interview the complainant prior to preparing the Investigative Plan. If this is not possible, changes are made as appropriate to the Investigative Plan based upon any new information provided by the complainant.

Respondent – Respondents are interviewed to provide an opportunity to respond to the allegations raised by the complainant as well as to provide the investigator the opportunity to understand the respondent's operation or policies the complainant cites in the complaint. You will need to discuss the Request for Information with the respondent and be able to explain the need for requesting any document on the list. The respondent is informed of their right to submit a formal position statement addressing the complainant's allegations. The investigator may also question the respondent regarding possible settlement opportunities.

Witnesses – The complainant or respondent may request that additional persons be interviewed. Determine what relevant information, if any, a witness must provide prior to conducting an interview. Only interview persons who have information relevant to the allegations raised in the complaint of discrimination.

On-Site Visit - An On-Site visit will be conducted when:

- Personal contact with the complainant and the respondent may yield information and clarification that might not otherwise be discovered by only reviewing the written documents or by telephone contacts;
- It is necessary to review the physical environment;
- More effective communication can be established with representatives and witnesses of the complainant and respondent; and
- Documentation can only be examined on-site for reasons of convenience, cost, format, or volume.

Obtaining Evidence - Evidence requested should be related to issues cited in the complaint. An evidence request should contain some or all of the following:

- The policies and procedures regarding the practice that complainant has alleged;
- All documents relating to the Respondent's dealing with the complainant in the situation described in the complaint;
- Documents which exhibit how others, not in the complainant's group, were treated under similar circumstances;
- Respondent's reason(s) for the action taken; and
- A formal position statement from respondent addressing complainant's allegations.

Types of Evidence include the following:

- Circumstantial Evidence – Includes facts from which may be inferred intent or discriminatory motive and proves intent by using objectively observable data;
- Comparative Evidence – A comparison between similarly situated individuals;
- Direct Evidence – Related to the Respondent's motive, it is defined as any statement or action by an official of the Respondent that indicates a bias against members of a particular group;
- Documentary Evidence – Written material generated during the course of normal business activity;
- Statistical Evidence – Statistics, facts, or data of a numerical type, which are assembled, classified, and tabulated so as to present significant information about a given subject; and
- Testimonial Evidence – Evidence that is provided orally.

Analyzing Data - Data will be analyzed to determine whether a violation has occurred. When analyzing data, you must:

- Review what happened to the complainant;
- Compare the complainant's treatment with the appropriate policies and procedures;
- Compare the complainant's treatment with others in the same situation;
- Review the respondent's reason(s) for the treatment afforded the complainant; and
- Compare the respondent's treatment of the complainant with the treatment afforded others.

Writing the Investigative Report - The Investigative Report (IR) will contain the following sections:

- Complainant(s) Name and Address
- Respondent(s) Name and Address;
- Applicable Law;
- Basis;
- Issues;
- Findings and a corresponding conclusion for each issue;
- Recommended decision; and
- Recommendations (if applicable)

Transit Related Title VI Complaints, Investigations, and Lawsuits

The Connecticut Department of Transportation (CTDOT) and Metro-North Railroad have developed a system for determining which organization would investigate and report complaints relative to New Haven Line rail services. All complaints occurring on the New Haven Line are investigated by Metro-North Railroad.

All complaints where the complainant's trip origin was Connecticut will be reported to FTA by CTDOT; and all complaints where the complainant's trip origin was New York will be reported to FTA by Metro-North Railroad. Metro-North Railroad continues to provide notification to CTDOT on a quarterly basis of any Connecticut complaints filed and the status of active and pending complaints. CTDOT reports all complaints related to *CTtransit*, the Hartford Line, and Shore Line East Service.

Complaints filed during the reporting period, January 1, 2020 – December 31, 2022, are reported on the CTDOT Title VI Complaint Log, located on pages 21-22 of the CTDOT FTA Title VI Program Appendix.

Public Participation Plan

The Public Involvement Procedures are a proactive guide to public participation to ensure that the Department provides complete information, timely public notice, full public access to key decision-making points, and an opportunity for early and continued involvement. The PIP includes a process for identifying and addressing the needs of populations that have been traditionally underserved by transportation systems. The PIP also codifies a uniform public engagement process for CTDOT staff and consultants when planning and executing public engagement activities.

CTDOT updated its Public Involvement Procedures (PIP) in 2020. The PIP was further updated in January 2022. This update included a new Public Engagement Checklist that included virtual and hybrid meetings, updated information on translation contracts, and a new Voluntary Feedback Survey. The updated PIP, including its updated appendices, can be found on pages 23-148 of the CTDOT FTA Title VI Program Appendix.

The updated document includes a chapter that details the requirements for public engagement activities, including outreach methods to engage minority and low-income populations and Limited English Proficiency (LEP) individuals. The updated PIP also includes a chapter that offers best practices, tool and techniques for engaging Title VI populations. A roll out plan for the new PIP was initiated by the Bureau of Policy and Planning, in conjunction with the Office of Equity.

Summary of Outreach Efforts

The Connecticut Department of Transportation, through *CTrides* and *CTtransit*, conducted numerous outreach events targeting minority, LEP, and low-income populations. Below is a list of outreach events conducted during the reporting period. Outreach material examples are included on pages 149-209 of the CTDOT FTA Title VI Program Appendix.

3PL Worldwide: 3PL Worldwide is a provider of third-party logistics to direct response, E-Commerce and catalog marketers. *CTrides* continues to work with 3PL to develop a comprehensive commuter program for employees. Due to the high number of Spanish LEP employees, *CTrides* and 3PL are bringing Spanish language commuter education programs to its employees.

Albertus Magnus College: Albertus Magnus is a college in New Haven with a majority-minority student body. Repeated outreach was done to inform students of Road Scholar information and ridematching programs.

Alinabal: Alinabal is a manufacturing business located in Milford, CT with a diverse manufacturing workforce. *CTrides* set up a tabling event with *CTtransit* and spoke to Alinabal employees about their different commuting options.

Amazon Delivery Station - Stratford: Amazon has a diverse population and many of Amazon's employees, at this location, are low income and part-time without access to a personal vehicle. *CTrides* has been working to assist employees without a personal vehicle to identify a carpool partner or a transit option. The goal has been to ensure that all employees have a reliable way to get to work.

Amazon Sorting and Fulfillment Centers: *CTrides* began working with Amazon in November 2016 with a commuter survey to identify issues associated with the employees commute to work and employee concerns. Amazon has a diverse population and many of Amazon's employees, at these locations, are low income and part-time without access to a personal vehicle. *CTrides* has been working to assist employees without a personal vehicle to identify a carpool partner or a transit option. The goal has been to ensure that all employees have a reliable way to get to work.

American Job Center (New Haven): American Job Center helps transform job seekers into qualified candidates and connect them with employers of all sizes. *CTtransit* and *CTrides* conducted numerous outreach events, including disability awareness day, throughout the reporting period. American Job Center serves many minority and/or low income job seekers.

American Job Center (Waterbury): American Job Center helps transform job seekers into qualified candidates and connect them with employers of all sizes. *CTtransit* and *CTrides* conducted numerous outreach events, including disability awareness day, throughout the reporting period. American Job Center serves many minority and/or low income job seekers.

Avon Health: Avon Health is a healthcare organization with a racially and economically diverse workforce: An event was conducted to promote 60-66 line and work with employees for last mile options through carpooling and aligning New Britain employees arrival times for shift 1.

Bloomfield Library: The town of Bloomfield is a majority minority town directly northwest of Hartford. Information was presented about *CTrides* and how this program helps make Connecticut a better place to live and work. Will share commuter options to help participants save money while eliminating harmful auto emissions that cause climate change.

Branford Hall (Branford and Southington Campus): Branford Hall is a small for-profit school on a transit line in Branford CT. Branford Hall has a diverse student population with a significant population of low income and minority students. In January and February 2020, *CTtransit* participated in a tabling event to discuss transportation options with Branford Hall students. *CTrides* also conducts outreach events for Branford Hall students and brings Spanish speaking staff to events to reach Branford Hall students who have limited English proficiency.

Breakfast Lunch and Dinner: Breakfast Lunch and Dinner is a community venture in Hartford, which puts on a winter festival for the community, which is largely minority and low-income. Outreach was conducted twice in December 2021 to get feedback on transit as well as popularize programs and the *CTrides* app.

Bridgeport Regional Business Council: The Bridgeport Regional Business council is a business association serving business in Bridgeport and the surrounding area. Bridgeport is a largely minority and low-income city. During the reporting period, *CTrides* conducting five outreach events to inform business of how their employees, many of whom are minority and low-income, could use our services.

The Connecticut Association of Adult & Continuing Education: The Connecticut Association of Adult & Continuing Education is an association for education organizations that serve a largely low-income population. During the reporting period, *CTrides* conducted two events to collect feedback on transit and inform members of our programs, including transit and carpooling.

Capital Workforce Partners (CWP): Capital Workforce Partners is the North Central Region of Connecticut's primary workforce development organization, with a statewide reach in helping businesses find, retain, and grow qualified talent. During the reporting period, *CTtransit* partnered with CWP and attended the organization's annual disability fair in 2020, 2021, and 2022.

Center for Latino Progress: Between 2020 and 2022 *CTrides* has held four outreach events with The Center for Latino Progress. The program works with the Latino community in Hartford and provides educational opportunities and programs that promote financial sustainability. *CTrides* provided Latino and black youths with information on how to put their bikes on the bus safely and the various transit resources provided by *CTrides*.

Central Connecticut State University (CCSU): During the reporting period *CTtransit* discussed transportation options with students. CCSU has a high enrollment of minority and low-income students.

City of Bridgeport: *CTrides* held four outreach events with the City of Bridgeport from 2020-2022. Audiences range from city employees to specific minority groups, namely Hispanic business expos. Bridgeport has high populations of low-income and minority populations. *CTrides* provides English and Spanish literature for all outreach activities.

City of Hartford: *CTrides* conducted outreach at the DominGO street festival in Hartford, which has a high population of minority and low-income residents, to inform them of our temporary free fare program, as well as other services.

City of New Britain: Outreach was conducted at the Walk and Roll, which is a disability event in New Britain, which is a city with large minority and low-income populations. Residents were informed of free fare and other programs.

City of New Haven: During the reporting period *CTtransit* partnered with the City of New Haven on numerous outreach events. *CTtransit* participated in the city's annual Arts and Ideas festival. New Haven is home to a large minority and/or low-income population, many transit dependent.

Connecticut Department of Aging and Disability Services: *CTrides* held two outreach events at DADS between 2020 and 2022. Employees learned about services that could be provided to their service public, which has substantial minority, low income, vulnerable and disabled populations.

Connecticut Spring and Stamping: *CTrides* maintains an active partnership with Connecticut Spring and Stamping, a manufacturing firm located in Farmington. Conning has a significant number of minority employees and continues to work with *CTrides* to establish an efficient ridesharing program, as well as promoting Hartford Line and bus service.d

Conning: *CTrides* maintains an active partnership with Conning, a global investment management firm serving the insurance agency, and located in Hartford Connecticut along the Hartford Line and multiple bus lines. Conning has a significant number of minority employees and continues to work with *CTrides* to establish an efficient carpooling program.

CT State Community College – Asnuntuck: *CTrides* held eight events between 2020-2022. The two year college located in Enfield has a large population of low income students without ease of access to transportation. *CTrides* promoted the school's subsidy of bus passes and our own free commuter rewards program.

CT State Community College - Capital: Capital has a high minority population that uses public transit. During the reporting period, *CTtransit* and/or *CTrides* participated in five events, including tabling events, orientation, convocations, and resource fairs.

CT State Community College - Manchester (MCC): *CTtransit* and/or *CTrides* participated in four events, at Manchester Community College between 2020 and 2022. MCC has a high population of low income and minority students

CT State Community College - Tunxis (TCC): *CTtransit* and/or *CTrides* participated in three events, at Manchester Community College between 2020 and 2022. TCC has a high population of low income and minority students.

CT State Community College – Three Rivers: *CTtransit* and/or *CTrides* participated in one event between 2020 and 2022. Three Rivers has a high population of low income and minority students.

CT State Community College – Housatonic (HCC): *CTrides* has held three outreach events at Housatonic Community College between 2020-2022. HCC sees a large population of low-income and minority group students from the greater Bridgeport area. *CTrides* provides Spanish-language materials at any tabling event conducted at the college. Events are also held at multiple venues throughout the year in order to reach a wide range of students.

CT State Community College – Naugatuck Valley – Danbury: *CTtransit* and/or *CTrides* participated in one event, at Naugatuck Valley - Danbury between 2020 and 2022. Naugatuck Valley - Danbury has a high population of low income and minority students.

CT State Community College – Naugatuck Valley – Waterbury: *CTtransit* and/or *CTrides* participated in three events, at Naugatuck Valley - Waterbury between 2020 and 2022. Naugatuck Valley - Waterbury has a high population of low income and minority students.

CT State Community College – Northwestern: *CTtransit* and/or *CTrides* participated in two events, at Northwestern between 2020 and 2022. Northwestern has a high population of low income and minority students.

CT State Community College – Norwalk: *CTtransit* and/or *CTrides* participated in three events, at Norwalk between 2020 and 2022. Norwalk has a high population of low income and minority students.

CT State Community College – Quinebaug: *CTtransit* and/or *CTrides* participated in four events, at Quinebaug between 2020 and 2022. Quinebaug has a high population of low income and minority students.

Eastern Connecticut State University (ECSU): During the reporting period *CTtransit* discussed transportation options with students. ECSU has a high enrollment of minority and low-income students.

East Hartford Adult and Continuing Education: East Hartford Adult and Continuing Education conducts ESL, Citizenship, Family Literacy and high school completion classes, and has a largely minority and low income service public. *CTrides* conducted outreach at a resource fair.

Global Steering Systems: Global Steering Systems is a manufacturer of steering components for the automotive industry in Watertown with 312 employees, as well as on-site temps from Randstad, an employee staffing service that brings in an additional up to 135 temps for peak production times. During the reporting period, *CTrides* hosted outreach, targeted to first and second shift employees and provided customized outreach materials in multiple languages.

GoNHgo: *CTrides* has worked collaboratively with GoNHgo since its inception in 2013. GoNHgo encourages citizens and employees commuting into New Haven to avoid single occupancy vehicle use as often as possible. The City of New Haven is a diverse city with large populations of low income and minority populations. *CTrides* has supported GoNHgo by providing services at events and through promotional activities. These activities and events have targeted both employers and the community including those in New Haven's low-income areas.

Greater New Haven Transit District: Greater New Haven Transit District provides paratransit in the New Haven Area, with many minority and low-income riders. *CTrides* provided materials at a rider forum.

Hartford Adult Education: The Hartford Adult Education Center is the official GED testing center for the City of Hartford. *CTrides* conducted an event to promote UPASS qualifying institutions as well as agile mile platform/*ctrides* rewards offerings.

Hartford Public Library: The Hartford Public Library is located on the dash shuttle route that connects to the Hartford Line and other express and local bus stops. Hartford is home to a large population of both minority and low-income residents. *CTrides* developed customized marketing tools, in multiple languages.

Horizon Services Company: Horizon Industrial Services, a small commercial cleaning contractor operating out of a tiny warehouse located on North Main Street in Manchester, Connecticut, employs a significant number of low-income employees who are reliant on public transportation. *CTrides* partnered with Horizon Services Company to provide information to employees during new employee orientation on carpooling opportunities, specifically for shifts outside of regularly scheduled transit hours.

Integrated Refugee and Immigrant Services: Integrated Refugee and Immigrant Services is an organization in New Haven that aids refugees and immigrants, who are largely minority and low-income. *CTrides* took a group of 26 riders (some parents, babies/toddlers, and teachers) for a tour of the New Haven Union Station to familiarize them with transit. They traveled from Union Station to State Street Station and used the bus system for travel to and from their starting location at Wilbur Cross High School.

Lincoln Technical Institute: During the reporting period *CTrides* held outreach events with Lincoln Technical Institute. This technical school has a high population of Hispanic and African American students studying to work in trade industries. Outreach was targeted to students who are sometimes transit-captive, or may not have their own transportation, to encourage transit and carpool use.

Memry Corporation: MASC is a manufacturing company and has a significant number of minority and low-income employees. During the reporting period, *CTrides* partnered with Memry to provide transportation related materials to students. Materials were developed in multiple languages.

New Haven Job Corps: *CTrides* conducted three outreach events during the reporting period. There is a large population of low-income minority students aged 17-24 who have not completed high school. The school helps them get their GED, trains them in a variety of fields, and helps them get placed in good jobs upon program completion.

Northwest Connecticut Reentry Council: The Northwest Connecticut Reentry Council works to provide resources for individuals returning to the community after incarceration, including access to transportation. *CTrides* attended an event to conduct outreach about access to transit in the Northwest corner of Connecticut.

Pathway Lighting Products: Pathway Lighting Products is a lighting company located in Old Saybrook, with a large population of low-income, minority, and ESL employees. *CTrides* conducted events that were primarily attended by LEP Spanish-speaking employees and conducted outreach in Spanish to inform them of our transit and ridesharing services.

Porter and Chester – Enfield: During the reporting period *CTrides* held outreach events with Porter and Chester. This technical school has a high population of Hispanic and African American students studying to work in trade industries. Outreach was targeted to students who are sometimes transit-captive, or may not have their own transportation, to encourage transit and carpool use.

Randstad: Randstad is an employment placement service with many offices in Farmington, Plainville and Hartford. Randstad has a significant number of minority, low-income, and or LEP employees. *CTrides*

continues to maintain a partnership with Randstad and works with Randstad to develop a program to promote public transportation and carpooling for individuals in need of transit to find and maintain employments.

Sikorsky Aircraft Corporation: During the reporting period, *CTrides* partnered with Sikorsky to offer carpooling information and trial passes to employees, many of them low income and/or minority. Outreach materials were provided in multiple languages.

Southwest Community Health Center (SWCHC): *CTrides* has conducted outreach at Southwest Community Health Center. SWCHC is a walk-in clinic, with high use by lower-income and minority populations. SWCHC sees *CTrides* as a great resource not only to their employee colleagues, but to patrons of the clinics as well. Bridgeport in general has high low-income, Hispanic and African-American populations who use these facilities. *CTrides* provides Spanish-language materials at SWCHC's request, and staff at SWCHC has been trained in navigating *CTrides.com* in Spanish.

Stone Academy (Waterbury and West Haven branches): *CTrides* has held eight outreach events at Stone Academy between 2020-2022. Stone Academy sees a large population of low-income, Hispanic, and African-American students training for positions in health care. Handouts for *CTrides* are provided in both English and Spanish language.

Triumph: Triumph is a manufacturing business located in Windsor with a racially and economically diverse workforce. *CTrides* conducted two events during the reporting period to connect workers with transportation options, including last mile service and the Hartford Line.

United Bank: In January 2020, *CTtransit* participated at the new hire orientation for United Bank In downtown Hartford. The branch serves low-income, Hispanic, and African American populations, including members and employees of the branch. *CTrides* also conducts outreach to United Bank, and during the reporting period provided trial rail passes.

University of Bridgeport: During the reporting period *CTtransit* discussed transportation options with students on four separate occasions. University of Bridgeport has a high enrollment of minority and low-income students.

University of Connecticut (Storrs): During the reporting period *CTtransit* held outreach events with UCONN. UCONN employs many low-income and/or minority individuals from the Windham area.

Vernon Public Schools (VPS): *CTrides* connected with the Vernon public school system through adult based learning presentations. *CTrides* conducted UPASS and transit training for transitional programs quarterly. *CTrides'* outreach with VPS, extends to low-income, minority, and Limited English Proficient populations; and individuals with disabilities.

West Haven High School: West Haven is a municipality with a large population of low-income and minority residents. Outreach was conducted to inform students and their families of transit options, including free fare and UPASS.

Windham Regional Community Council (WRCC): Through a partnership with WRCC, *CTrides* frequently conducts presentations with Americorps and Foodcorps members from the community. The Windham community has a large low-income population and *CTrides*.

Four Factor Analysis

In order to ensure meaningful access to programs and activities, the CTDOT conducted a four-factor analysis to identify and determine the specific language services needed to communicate effectively with the LEP populations within our service areas.

The Four Factors include:

1. The number or proportion of LEP persons eligible to be served or likely to be encountered by a program, activity, or service of the recipient or grantee.
2. The frequency with which LEP individuals come in contact with the program.
3. The nature and importance of the program, activity, or service provided by the recipient to people's lives.
4. The resources available to the recipient and costs.

Factor 1: Number and Proportion of LEP Persons Eligible to be Served or Likely to be Encountered in the Service Area

The primary tool used for this analysis was the data from the 2017-2021 American Community Survey (ACS). The demographic analyses of the statewide, bus and rail service areas indicate that 8.42% of the total population in Connecticut identified as speaking English "less than very well". CTDOT identified the occurrence of LEP populations statewide meeting "Safe Harbor" thresholds (5% or 1,000 individuals, whichever is less). Safe Harbor determinations were determined on a statewide basis and by reviewing the bus and rail service areas that service Connecticut. The service area information allows CTDOT to do targeted outreach to LEP populations that reside in areas that may be affected by major service changes.

Service Areas are defined as the following:

New Haven Rail Line (Metro North): The "New Haven Rail Line Service Area" map includes the New Haven Main line, and the New Canaan, Danbury, and Waterbury Branch Lines.

Metro North Rail operates all lines seven days a week. The lines on the map extend from New Haven Union Station to the Connecticut/New York border near Greenwich, as well as the station stops for the branch lines that extend to New Canaan, Danbury, and Waterbury.

Shore Line East Rail: The "Shore Line East Rail Line Service" area map includes the Shore Line East commuter rail service between New London and New Haven.

Amtrak operates Shore Line East for CTDOT seven days a week. The map shows the Shore Line East line which runs from New Haven to New London; and includes the defined service areas based on a 2.5 mile radius buffer around the rail stations of New Haven – Union, New Haven – State Street, Branford, Guilford, Madison, Clinton, Westbrook, Old Saybrook, and New London.

CTtransit Hartford Division: The Hartford Division operates 48 local bus routes. Routes operate 7 days a week, serving 28 towns in the Greater Hartford and New Britain Regions. The Hartford Division makes connections with Middletown Area Transit, CTtransit Waterbury Division, and CTtransit New Britain Division. The map uses ¼ miles buffers around the routes.

CTtransit New Haven Division: The New Haven Division operates 26 local routes, connecting with bus services in Meriden, Wallingford, Milford, and the lower Naugatuck Valley areas, as well as with the New Haven Line and Shore Line East rail services. Service is provided 7 days a week. The map uses ¼ mile buffers around the routes.

CTtransit Stamford Division: The Stamford Division operates 19 local bus routes. Routes operate 7 days a week. CTtransit Stamford buses connect with other state-subsidized services in Norwalk and with the New Haven Line in several locations. The map uses ¼ mile buffers around the routes.

CTfastrak: The CTtransit Hartford Division operates 8 routes for the CTfastrak bus rapid transit system. Routes operate 7 days a week and provide connections to the CTtransit New Britain and Bristol Divisions and the CTtransit Hartford Division. The map uses ¼ mile buffer around each of the stops.

CTtransit Hartford Express: 24 express bus routes are operated in the Hartford Division. All routes operate Monday through Friday, with the exception of the Waterbury Express which operates 7 days a week and provides a connection to the CTtransit Waterbury Division. The map uses 2 ½ mile buffers around each of the stops.

CTtransit Stamford Express: The CTtransit Stamford Division operates one express bus route between downtown Stamford and White Plains, New York. The route operates Monday through Friday and provides connections to the Harlem Line on Metro-North Railroad, and with Bee-Line buses in Westchester County New York. The map uses 2 ½ mile buffers around each of the stops.

CTtransit Waterbury Division: The Waterbury Division operates 30 local bus routes in Waterbury, Watertown, Middlebury, Wolcott, Prospect and Naugatuck with connections to the Waterbury Branch of the New Haven Line. Fixed route bus service is provided 7 days a week. The map uses ¼ mile buffers around the routes.

CTtransit New Britain Division and Bristol Division: The New Britain and Bristol Divisions operate 12 local bus routes in Berlin, New Britain, Cromwell, Newington, Plainville, Bristol and Meriden. Fixed route service operates 7 days a week. Connections are available to CTfastrak, the CTtransit Meriden Division, and the CTtransit Hartford Division. The map uses ¼ mile buffers around the routes.

CTtransit Meriden Division: The Meriden Division has 5 local bus routes. Service in Meriden operates Monday through Saturday. Connections are available to the CTtransit New Haven Division. The map uses ¼ mile buffers around the routes.

CTtransit Wallingford Division: The Wallingford Division has 2 local bus routes. Service in Wallingford operates Monday through Friday. Connections are available to the CTtransit New Haven Division. The map uses ¼ mile buffers around the routes.

Estuary Transit District/River Valley Transit: The Estuary Transit District serves 16 towns throughout Middlesex and New London Counties. The district provides demand response and flexible fixed route services throughout the region with its River Valley Transit bus services. Connections are available to South East Area Transit and CTtransit Hartford Division. The map uses ¾ mile buffers around the routes.

Northeastern Connecticut Transit District: Northeastern Connecticut Transit District provides service in Brooklyn, Canterbury, Killingly, Putnam, Thompson, Eastford, Plainfield, Pomfret, Woodstock, and Union. Deviated fixed route service operates 7 days a week with various scheduled stops located throughout the service area. Bus service operates Monday through Friday, between approximately 7AM and 5PM and Saturday 7AM to 1PM. The map uses a $\frac{3}{4}$ mile buffer around flexible routes.

Northeastern Connecticut Transit District Dial-a-Ride: Northeastern Connecticut Transit District provides service in Brooklyn, Canterbury, Killingly, Putnam, Thompson, Eastford, Plainfield, Pomfret, Woodstock, and Union. The dial-a-ride service for seniors and people with disabilities is available 7 days a week by reservation with NECTD in Brooklyn, Killingly, Putnam, and Thompson. The map represents the towns included in the service area.

Northwestern Connecticut Transit District: Northwestern Connecticut Transit District provides flexible route service in Torrington Monday through Saturday and in Winsted and Litchfield Monday through Friday. The map represents a $\frac{3}{4}$ mile buffer around flexible routes.

Northwestern Connecticut Transit District Dial-a-Ride: Public dial-a-ride service is available in Barkhamsted, Canaan, Falls Village, Litchfield (for seniors and people with disabilities only), Sharon, Salisbury, Colebrook, Cornwall, Goshen, Harwinton, Kent, Warren, Morris, New Hartford, Norfolk, Torrington, Winchester, and Winsted. Days of service vary by town. The map represents the towns included in the service area.

Windham Region Transit District (WRTD): Windham Region Transit District operates 4 fixed routes and one flexible route. Service on some routes operates 7 days a week. The map represents a $\frac{3}{4}$ mile buffer around flexible routes and a $\frac{1}{4}$ mile buffer around fixed routes.

Windham Region Transit District Dial-a-Ride: Demand-response service is available Monday through Friday in Ashford, Chaplin, Columbia, Coventry, Hampton, Lebanon, Mansfield, Scotland, Willington, and Windham. The map represents the towns included in the service area.

CTDOT has developed updated service area LEP maps, using 2017-2021 ACS data to identify the LEP populations within each of the state's service areas. Use of that mapping will assist with outreach and identifying the language assistance services needed to communicate with LEP residents within the service area. The Department continues to work developing web-based maps that can provide up to date information on the language needs of a specific census tract or group of census tracts.

Based on each service area, CTDOT calculated the number and percentage of LEP populations by language. If the number of LEP persons exceeded 5% of the total population, it would be considered an LEP language. If the LEP population was 5% or 1,000 individuals, whichever was less, it would be considered a Safe Harbor language. Based on these calculations, it was determined that Spanish was the only language that exceeded 5% in any individual bus or rail service area. Spanish exceeded the 5% LEP threshold in the following nine (9) service areas: New Haven Rail Line (MNR), Hartford Local Bus Service Area, Hartford Express Bus Service Area, New Britain-Bristol Bus Service Area, New Haven Bus Service Area, Stamford Local Bus Service Area, Stamford Express Bus Service Area, Waterbury Bus Service Area, and Meriden Bus Service Area.

The following LEP and Safe Harbor Languages and the number of speakers for each language in each service area are as follows:

New Haven Line Total Population: 1,201,202		
Language	Count	Percentage
Spanish	97,145	8.09%
French Haitian or Creole	6,428	0.54%
Russian, Polish or other Slavic	6,924	0.58%
Other Indo European	23,245	1.94%
Chinese, Mandarin, or Cantonese	5,916	0.49%
Vietnamese	1,214	0.10%
Tagalog incl. Filipino	1,025	0.09%
Other Asian and Pacific Islander	3,204	0.27%
Arabic	2,473	0.21%
Other and Unspecified	2,356	0.20%

Shore Line East Total Population: 183,052		
Language	Count	Percentage
Spanish	5,432	2.97%
Other Indo European	1,064	0.58%

Hartford Local Bus Service Total Population: 683,952		
Language	Count	Percentage
Spanish	38,711	5.66%
French Haitian or Creole	1,453	0.21%
Russian, Polish or other Slavic	7,365	1.08%
Other Indo European	9,208	1.35%

Chinese, Mandarin, or Cantonese	2,225	0.33%
Vietnamese	1,581	0.23%
Other Asian and Pacific Islander	2,578	0.384%
Other and unspecified	2,047	0.30%

Hartford Express Bus Service Total Population: 1,659,521		
Language	Count	Percentage
Spanish	85,655	5.16%
French Haitian or Creole	3,775	0.23%
Russian, Polish or other Slavic	12,483	0.75%
Other Indo European	18,186	1.10%
Korean	1,634	0.10%
Chinese, Mandarin, or Cantonese	6,225	0.38%
Vietnamese	2,426	0.15%
Other Asian and Pacific Islander	4,347	0.26%
Arabic	2,675	0.16%
Other and unspecified	3,560	0.21%

New Britain Bus Service Total Population: 247,616		
Language	Count	Percentage
Spanish	19,870	8.02%
Russian, Polish or other Slavic	6,155	2.49%
Other Indo European	3,136	1.27%

New Haven Bus Service Total Population: 585,652		
Language	Count	Percentage

Spanish	34,727	5.93%
French Haitian or Creole	1,016	0.17%
Russian, Polish or other Slavic	2,253	0.38%
Other Indo European	5,976	1.02%
Chinese, Mandarin, or Cantonese	3,183	0.54%
Other Asian and Pacific Islander	1,436	0.25%
Arabic	1,919	0.33%
Other and Unspecified	1,344	0.23%

Stamford Local Bus Service Total Population: 240,490		
Language	Count	Percentage
Spanish	23,779	9.89%
French Haitian or Creole	1,790	0.74%
Russian, Polish or other Slavic	3,211	1.34%
Other Indo European	3,575	1.49%
Chinese, Mandarin, or Cantonese	1,836	0.76%
Other Asian and Pacific Islander	1,044	0.43%

Stamford Express Bus Service Total Population: 227,799		
Language	Count	Percentage
Spanish	26,339	11.56%
French Haitian or Creole	2,436	1.07%
Russian, Polish or other Slavic	3,883	1.70%
Other Indo European	3,297	1.45%

Chinese, Mandarin, or Cantonese	2,070	0.91%
Other Asian and Pacific Islander	1,265	0.56%

Waterbury Bus Service		
Total Population: 272,108		
Language	Count	Percentage
Spanish	13,766	5.06%
Other Indo European	4,991	1.83%

Windham Bus Service		
Total Population: 166,272		
Language	Count	Percentage
Spanish	5,613	3.38%
Chinese, Mandarin, or Cantonese	1,790	1.08%

Windham Dial-A-Ride		
Total Population: 88,423		
Language	Count	Percentage
Spanish	4,218	4.77%

Meriden Bus Service		
Total Population: 67,916		
Language	Count	Percentage
Spanish	7,572	11.15%

Estuary/River Valley Transit Bus Service		
Total Population: 319,718		
Language	Count	Percentage
Spanish	12,335	3.86%
Russian, Polish or other Slavic	1,157	0.36%
Other Indo European	2,674	0.84%

Northwest Rural Transit District Total Population: 64,246		
Language	Count	Percentage
Spanish	1,109	1.73%

Northwest Dial-a-Ride Total Population: 91,085		
Language	Count	Percentage
Spanish	1,679	1.84%

LEP and Safe Harbor Languages Statewide

While no languages reached the 5% LEP threshold statewide, all language groups under the 2017-2021 ACS data set reached the safe harbor threshold. The following LEP languages and the number of speakers for each language state-wide are as follows:

Statewide		
Total Population for Which Language is Determined (5 years and older)	Count	Percentage of Population
Spanish	170,657	4.99%
French Haitian or Creole	11,391	0.33%
German or other West Germanic	1,063	0.03%
Russian, Polish, or other Slavic	19,936	0.58%
Other Indo European	43,751	1.28%
Korean	2,758	0.08%
Chinese, Mandarin, or Cantonese	13,875	0.41%
Vietnamese	4,163	0.12%
Tagalog Filipino	2,721	0.08%
Other Asian and Pacific Islander	8,393	0.25%
Arabic	4,283	0.13%
Other and Unspecified	5,167	0.15%
Total	288,158	8.42%

Factor 2: Frequency of Contact by LEP Persons with Transit Services

CTDOT examines the frequency with which LEP individuals come into contact with its services by conducting surveys and reviewing the use of language assistance tools.

Customer and Front-line Employee Surveys

2023 CTtransit Customer Satisfaction Survey

CTtransit and CTDOT conducted a statewide Customer Satisfaction Survey. One of the goals of the survey was to collect rider demographic data, including but not limited to English proficiency, and primary language spoken at home. Systemwide, a majority (79%) of survey respondents indicated they spoke English “Very Well.” LEP individuals accounted for 21% of all respondents. The Stamford service area had the largest proportion of LEP riders (45%), followed by New Britain (23%). In the rest of the service areas, fewer than 20% of riders were LEP persons.

Statewide, 79% of respondents reported English as the primary language spoken at home. 16% of respondents spoke Spanish at home, while all other languages accounted for less than a percent of respondents.

2023 CTDOT Employee LEP Interaction Survey

In an effort to ensure that we are providing adequate language assistance to the LEP riders, CTDOT conducted a survey of employees to monitor the number of LEP customer contacts for all languages. A summary of responses by staff from CTDOT is provided below:

- 81% of CTDOT staff interact with the public occasionally or often.
- 60% of CTDOT staff interact with individuals with Limited English proficiency occasionally or often.
- CTDOT staff comes into contact with LEP populations from the following language group in order of frequency (highest to lowest):
 - Spanish (63%)
 - Polish (22%)
 - Portuguese (17%)
 - Chinese (15%)
 - Italian (14%)
 - Arabic (11%)
 - Hindi (11%)
 - French (9%)
 - Korean (7%)
 - Russian (7%)
 - Vietnamese (7%)
 - French Creole (5%)

Metro-North Railroad Customer Satisfaction Survey

In 2022, Metro-North Railroad conducted a survey in which 14,074 answered language-related questions. Their responses are summarized below:

- What is the primary language spoken in your home?
 - 90.09% English
 - 2.27% Spanish

- 7.66% another language
- How well do you speak English?
 - 6.24% answered less than “very well”

CTtransit Front-line Staff Survey

As a tool to gauge CTtransit front-line employee interactions with LEP populations, in 2019 CTtransit administered an LEP interaction survey. It was the first LEP survey since 2011, and included operators, supervisors, customer service personnel, and fare inspectors. The frequency of interaction with twenty-six (26) languages are detailed in the table below.

Frequency	Never	Rarely	Sometimes	Very often
Spanish or Spanish Creole	1	9	25	138
French Creole	70	45	29	27
Laotian	123	24	8	10
Polish	56	65	40	9
Portuguese	65	62	35	7
Albanian	58	65	36	5
Chinese	66	75	26	4
Italian	77	62	28	3
Unknown	86	21	14	3
Vietnamese	103	50	12	3
India	0	0	0	2
Russian	91	52	24	1
Hindi	0	0	0	1
Punjabi	0	0	0	1
Guajarati	0	0	0	1
Indi	0	0	0	1
Serbo-Croatian	124	32	8	0
Arabic	0	2	3	0
Sign Language	0	2	3	0
African	0	3	1	0
Japanese	1	0	1	0
Ukrainian	0	0	1	0
French	0	0	1	0
Egyptian	0	1	0	0
Punjabi	1	0	0	0
Iraqi	1	0	0	0

Factor 3: Nature and Importance of Transit

Public transit is a key means of achieving mobility for many LEP persons on both a daily basis and in the event of emergency or urgent situations. Providing translation or interpretation services to ensure

access to LEP persons helps to increase and retain ridership among *CTtransit*'s LEP communities. CTDOT has determined its most critical services are fares and tickets; routes and schedules; and safety and security. Barriers in these areas could: (1) limit a person's ability to gain full benefit from services, or (2) pose safety and security issues and could place a person in physical danger.

The table below, generated from 2017-2021 American Community Survey Table S0802 data, demonstrates why transit is important to LEP populations. Though the LEP community comprises a little over 8% of the overall population in Connecticut, the LEP community comprises close to 11.5% of public transit users, indicating great importance in ensuring that they have the ability to access and use the system.

Public Transit Users for Workers 16 years old and over	68,957
Speak a Language other than English	29.9%
Speak English Very Well	18.5%
Speak English Less than Very Well	11.4%

Additionally, in certain situations, the delivery of clear instructions regardless of language is required. For example, emergency evacuation instructions in stations and vehicles should be either non-written/non-verbal or provided in languages that meet the thresholds for LEP or safe harbor. CTDOT continues to implement a program that uses pictograms whenever possible to illustrate emergency procedures, travel directions, etc. on *CTtransit* buses.

Factor 4: Available Resources and Costs of Providing Language Assistance Services

This last step of the Four Factor Analysis allows CTDOT to weigh the demand for language assistance against current and projected financial and personnel resources.

As described in Factors one and two, CTDOT employs a number of strategies to identify LEP populations and interactions with LEP riders. These strategies include gathering data from the American Community Survey, GIS mapping, monitoring website use, administering surveys, and maintaining partnerships with community and faith-based organizations. CTDOT intends to continue administering surveys to riders and front-line staff to keep a pulse on increased or decreased interactions with LEP populations. If revisions to vital documents occur, CTDOT will translate the document into Spanish and provide a description of the document with contact information to receive language assistance in safe harbor languages.

CTDOT continues to contract with Voiance, an over the phone interpretation provider that provides for translation services into almost any language. The Office of Equity maintains a line item in its overhead budget to cover the cost of department wide usage. A report detailing the languages and numbers of the calls translated is on page 303 in the appendix.

Under *CTtransit* the three major costs associated with translating materials include:

- The SAAS module (Lingotek) that is built into the website and facilitates the automated sending and posting of content.
- Charges incurred by Lingotek for the actual word count on the content translated, billed through the web contractor, Cloudsmart.
- CTtransit also utilizes Language Link, a local vendor for non-web translations or anything that requires translation into a language other than Spanish. Spanish translations are performed by in-house CTtransit staff.

Provided below are the costs expended for each vendor during the reporting period.

FY21

- Cloudsmart - \$4,954.650
- LingoTek - \$25,299.96 (billed through Cloudsmart)
- Language Link - \$860.00

FY22

- Cloudsmart - \$6,468.68
- LingoTek - \$25,300.00 (billed through Cloudsmart)
- Language Link - \$1,848.00

FY 23

- Cloudsmart - \$4,609.65
- LingoTek - \$25,700.00 (billed through Cloudsmart)
- Language Link - \$1,010.00

CTDOT will continue to expend a reasonable portion of the budget to meet compliance goals and fulfill the provisions of the language assistance plan. CTDOT recognizes that in order to continue to expand the program, new sources of internal and/or external funding may be needed, depending upon the cost and scope of new strategies and actions.

Language Assistance Plan (LAP)

As a direct recipient of Federal Transit Authority (FTA) funds, the Connecticut Department of Transportation (CTDOT) is required to develop a Language Assistance Plan (LAP) that ensures meaningful access and addresses the needs of Limited English Proficient (LEP) populations. The CTDOT LAP includes the following elements:

- Current language assistance measures;
- Language initiatives planned for the next three years;
- Limited English proficiency training;
- Providing notice of the availability of language assistance to LEP individuals; and

- Procedures for monitoring and updating the Plan.

Successful Language Assistance Measures to Continue

Partnerships: CTDOT continues to develop partnerships with community and faith-based organizations that serve LEP populations and can assist with targeted outreach, translation of notices and postings on multi-lingual websites, social media, or in multi-lingual publications.

Oral Translation: CTDOT contracts for translation and interpretation services using a Department of Administrative Services (DAS) master contract which includes vendors that provide services in locations all around the State. This contract has a list of preapproved firms that can provide translation and interpretation services by geographic location.

Through the DAS master contract, CTDOT continues to contract with Voiance to provide over the phone interpretation services. Voiance allows for someone who is not fluent in English to call into CTDOT with questions or requests for services or general information. CTDOT is then able to call into Voiance, where an interpreter translates both ends of the call and provides the individual with the needed assistance. This service can also be utilized for in-person contacts with LEP persons by utilizing the speaker function on the phone. CTDOT has developed an internal reporting system for the use of Voiance that asks both the language translated and the purpose of the phone call. Tracking the usage of the translation system will help to clarify the needs of LEP communities. CTDOT also uses available and authorized staff to translate upon immediate need.

CTDOT has assigned Voiance access codes to ninety (90) CTDOT employees. Access code holders are required to attend a Voiance training session prior to receiving their access code. See Voiance Access Procedures and Guidelines, Connecticut Department of Transportation Employee User Guide on pages 210-218 of the CTDOT FTA Title VI Program Appendix.

CTtransit provides language assistance through a telephone Customer Service Center. LEP customers who call the Telephone Center have direct access to bilingual customer service representatives and can be connected to an over-the-phone interpretation service with linguists who speak other languages. The Department is charged a per minute rate for services provided. Similarly, *Metro-North* and *CTrail* customers have multi-language translation available through outside language line telephone service providers.

Document Translation: CTDOT continues to identify documents that are vital for our services and chooses formats that most effectively communicate the messages contained in those documents. The Department uses the DAS master contract for written translation and interpretation services.

Vital documents include:

- Service change notices – as they occur;
- Fare change notices – as they occur;
- Title VI notice to beneficiaries;
- Title VI complaint form and procedure;
- Notices of public meetings and hearings; and
- Applications or instructions on how to participate in a recipient’s program or activity or to receive recipient benefits or services (e.g., ADA Paratransit applications)

The following documents are defined as vital documents by Metro-North (MNR):

- Statement of rights under Title VI;
- Title VI complaint procedure and complaint form;
- Notice of public hearings; and
- Notice of service schedule changes and fare changes.

CTDOT has translated its Title VI Notice to Beneficiaries and Title VI Complaint Form in their entirety, into Spanish, and has translated tag lines summarizing the documents and providing contact information for language assistance, into eleven languages, including all statewide safe harbor languages identified in Factor 1 of the Four Factor Analysis. CTDOT continues to determine which documents are necessary to translate; the appropriate format to most effectively communicate the message; and the efforts necessary to provide timely relevant information about CTDOT programs and services to LEP communities. When translating documents CTDOT will also consider the literacy needs of the LEP populations to insure effective communication.

Written informational notices on buses are posted in English and Spanish and include contact information for language assistance in alternative languages. Materials critical for accessing *CTtransit* and *CTrail* services have been translated into Spanish. Non-vital documents will be translated into alternative languages upon request.

Electronic Media Translations: Metro-North Railroad (MNR) and *CTrail* websites offer machine translations into Spanish and a number of other languages using Google Translate. MNR utilizes print and electronic media sources and language translations to communicate with the public and riders, including offering multiple language formats on ticket vending machines.

CTtransit provides a custom-translated Spanish version of its website; and though less desirable than the custom translations, Google Translate is available on *CTtransit's* main website and all websites of CTDOT's rural transit districts.

Outreach Materials: CTDOT provides notice of the right to free language assistance at to the public on outreach documents; project fact sheets, meeting notifications and other materials in the primary language of those with limited English proficiency.

Through the use of Service Area Maps (and further dividing these according to individual census tracts), CTDOT is able to specifically target the areas affected by service/fare changes or other changes to transit operations that could affect these communities. This analysis ensures that the outreach material is accessible to impacted LEP communities. The decisions regarding which documents to be translated may be impacted by feedback from the LEP community. This improved outreach is supplemented by using printed documents, which are placed in locations where customers or potential customers go for transit information, services, or questions.

Whenever CTDOT holds a public hearing/meeting the legal notice regarding the hearing/meeting will indicate that LEP persons requiring language assistance may make requests to CTDOT within the time-period provided. CTDOT staff in need of translation services may consult the Department of Administrative Services list of contracted service providers for translation and interpreting services.

CTDOT will continue to conduct culturally competent outreach to LEP communities to increase awareness and the use of CTDOT services and programs. CTDOT regularly communicates with Community Based Organizations (CBOs) and Faith Based Organizations (FBOs) that serve LEP communities to ensure that LEP communities are well informed and well-served.

MNR and *CTrail* news releases are distributed to media outlets that include Spanish print. MNR advertises in *LaVoz*, a Spanish language newspaper. CTDOT and *CTtransit* work directly with media outlets serving minority and LEP populations to provide service information to their readers, listeners, and viewers. *CTtransit* also places Spanish language signage on vehicles which includes basic fare information and rights under Title VI, and to announce service changes and other important customer information. CTDOT continues to undertake the efforts necessary to address other languages identified under Safe-Harbor.

Training: CTDOT and *CTtransit* will continue to provide training to front-line and other staff on how to effectively engage and respond to LEP customers.

Customer Surveys: CTDOT will continue to collect demographic information and travel patterns through the use of customer surveys. Upon completion of the surveys, CTDOT analyzes the results to determine any changes related to the locations and concentrations of LEP populations, and to assist in evaluating the effectiveness of current outreach to LEP individuals. The Office of Equity (OOE) will continue to monitor the surveys to ensure that demographic questions are included.

Identifying Language Barriers: CTDOT is continuously enhancing its outreach to CBOs and other groups. This effort assists in assessing current gaps in the dissemination of transit information to current users due to language barriers. It also helps to identify new potential customers who may not be accessing the system, due to language barriers.

The types of approaches to determine language barriers include, but are not limited to:

- CTDOT will continue to keep up to date contact information for CBOs in the various service areas and administer surveys and initiate conversations to determine any language gaps. CTDOT regularly updates its Resource for Community Outreach and Referrals Directory to ensure contact information is accurate, and that newly formed or identified organizations are included;
- CTDOT will continue to collect attendee feedback from public hearings and meetings regarding language usage with voluntary demographic surveys;
- CTDOT will continue to monitor usage of it's over the phone interpretation service for requested languages; and
- CTDOT will continue to conduct staff surveys to identify frequently encountered language groups.

Enhanced Data Collection Tools: During the reporting period CTDOT enhanced its data collection tools, including data collection related to experiences and encounters with LEP persons. CTDOT will continue to employ the following data collection strategies:

- Continue to work with *CTtransit* and *CTrail* to gain information from front line employees and collect data from drivers, telephone call center employees, ticket agents, and security personnel

regarding interactions with LEP populations, languages spoken, and the nature of information request.

- Continue to collect information from Community Based Organizations (CBO) and Faith Based Organizations (FBO) relative to language gaps and information needs for LEP persons they serve for the purpose of having more direct outreach to LEP populations. The Office of Equity has compiled a database of CBOs and FBOs and will utilize the CBOs to help with outreach to the LEP populations. In October of 2023, the OOE administered a Limited English Proficiency Survey to all CTDOT employees. The survey included questions designed to collect data related to the most common languages encountered, the employees' awareness of the language assistance measures available, and to solicit comments or suggestions on ways to enhance our language assistance program. The OOE will continue to solicit this feedback on a regular basis from Departmental employees. The results of the survey are located on pages 219-244 of the CTDOT FTA Title VI Program Appendix.

Language Initiatives for the Next Three Years

Over the next three years specific actions will be taken to implement a strong program of enhanced language assistance services. Efforts will be made to provide language assistance training to subrecipients, in an effort to ensure that language services are provided in a timely manner to those requesting services.

Public Involvement Procedures (PIP) Update: In 2020, the Department updated its Public Involvement Procedures (PIP). The OOE has worked with the Bureau of Policy and Planning to roll-out the updated PIP to ensure that all the Department's public engagement activities are compliant under Title VI, including providing meaningful access to LEP populations. The Department will continue to ensure compliance with the PIP. The PIP was further updated in January 2022. This further update included a new Public Engagement Checklist that included virtual and hybrid meetings, updated information on translation contracts, and a new Voluntary Feedback Survey. The Office of Equity will continue to assist the Department in implementing appropriate in-person, hybrid, and virtual outreach. The updated PIP can be found on pages 23-148 of the CTDOT FTA Title VI Program Appendix.

CTDOT Staff Language Assistance Training: The OOE will offer training specifically on the language assistance measures available to CTDOT staff, and guidance on how to effectively communicate with LEP populations. To encourage participation by all staff, the OOE will offer live virtual training, as well as training in the form of an E-Learning module.

Language Assistance Resource Guides: The OOE will develop and disseminate a Language Assistance Resource Guide to all CTDOT staff. The resource guide will detail the language assistance tools available to CTDOT staff including cost.

LEP Experience Reporting: The OOE will implement a program to require reporting on LEP experiences, whether communication was successful or not. Reminders will be sent to CTDOT staff on an annual basis to collect this data.

Enhanced Outreach: CTDOT will enhance its outreach to assess the current language gaps in the dissemination of vital information to current users. To identify new potential customers who may not be accessing the system due to language barriers, CTDOT will reach out to a broad base of community

organizations in order to assure enhanced public involvement in the transportation and transit service planning processes. A natural by-product of this initial outreach effort will be to learn first-hand what types of special language assistance services would best meet the needs of the agencies and their LEP clients. The information provided by CBOs and FBOs will allow CTDOT to develop strategies to enhance targeted efforts to address the needs of LEP individuals.

Limited English Proficiency Training

The OOE offers Title VI training to subrecipients annually, or upon request. All Title VI training sessions include a component that advises subrecipients of the requirement to provide meaningful access to Limited English Proficient (LEP) populations. OOE has developed a training curriculum and a Title VI Training Booklet. The training booklet provides an overview of Title VI with a brief history of the regulations and authorities. The training booklet also covers Limited English Proficiency (LEP) requirements, the Four Factor Analysis, and Safe Harbor requirements. A copy of the Training Booklet can be found on pages 245-282 of the CTDOT FTA Title VI Program Appendix.

In response to feedback received from subrecipients in November 2019, the OOE transitioned its training from in-person to an online format in the form of E-Learning Modules. With limited staff and resources, and high employee turnover at subrecipient organizations, the need for online training was frequently expressed. It is important to note that this does not preclude the OOE from offering additional in person training sessions in the future or upon request from subrecipients who prefer in person sessions to online training.

During the reporting period, the OOE conducted training sessions and participated in outreach events covering Title VI and LEP requirements.

Date	Training/Outreach Event	Target Audience
January 2022	Public Involvement Training Module Launched	CTDOT Staff and Subrecipients
January 7, 2022	Public Involvement Plan Training	CTDOT Staff
February 1, 2022	Title VI/LEP Training	CTDOT Subrecipients
February 3, 2022	Title VI/LEP Training	CTDOT Subrecipients
July 7, 2022	Public Involvement Plan Training	CTDOT Staff
January 13, 2023	Title VI/LEP Training	CTDOT Subrecipients (WRTD)

Additionally, *CTtransit* conducted training sessions for all new operators and customer service representatives hired during the reporting period, and each session included an LEP component.

CTtransit will continue to train their front-line employees (including drivers, customer service representatives, operation supervisors, and other employees who have direct access to the public), on how to provide service to LEP customers (whether in person, by phone, or written communication).

Training will also provide instruction on how to use phone translation service, and how to monitor encounters with LEP individuals. Individuals attending the training are also provided with a copy of the Title VI policy in the employee handbook.

Metro-North customer call center staff are trained in procedures to help LEP individuals access the language line services if language assistance is needed. Metro-North reviews the services and identifies the most effective strategies for equipping key front-line employees to connect customers to those services. Those strategies may include reference materials, informational meetings and/or formal training, as appropriate.

CTDOT recognizes the importance of training not only subrecipients on their LEP requirements, but also CTDOT staff, particularly those who have contact with the general public. In addition to LEP training offered to subrecipients, in January 2022 OOE launched an E-Learning Module specifically for CTDOT employees to train them on proper public involvement procedures. The module outlines the Department's LEP requirements and the language assistance measures available, including in person, over the phone, and document translation.

Providing Notice to LEP Persons

CTDOT has translated its Title VI Notice to Beneficiaries and Title VI Complaint Form into Spanish. Additionally, the Department has translated a description of the documents, along with contact information for language assistance into eleven alternative languages, including all languages that reach the safe harbor threshold statewide.

CTDOT has added "For additional information, or free language assistance, please call (XXX) XXX-XXXX" on its website in eleven alternative languages. If language assistance is needed CTDOT will access its over the phone interpretation provider to interpret the phone call and provide the LEP caller with the information they are requesting.

CTDOT will continue to consult with the CBOs and FBOs regarding public meetings and hearings, service and fare changes, available language assistance to the LEP community (such as over the phone translation), and other programs, activities, and benefits available to the LEP community. CTDOT encourages their participation to ensure their needs and interests are known and addressed. When communicating with the CBOs and FBOs, CTDOT provides instructions on how to notify the Department if interpretation services are needed.

CTDOT provides notice of "right to free language assistance" and will continue to determine which documents are vital for translation and choose the appropriate format(s) to most effectively communicate the messages contained in the vital documents to provide timely and relevant information about CTDOT programs and services to LEP communities. CTDOT will assess and monitor the effectiveness of its language assistance plan on an ongoing basis.

Monitoring and Updating the Language Assistance Plan

CTDOT will monitor its Language Assistance Plan (LAP) on an ongoing basis to ensure new LEP populations are identified and their needs are addressed. The LAP will be reviewed annually, unless it is determined that more frequent evaluations are needed, and changes will be incorporated. On an annual basis CTDOT will solicit feedback from the CBOs that serve LEP populations.

CTDOT will also monitor the LEP plan to ensure that it is effective. Close attention will be paid to requests for language assistance, census data changes and updates, complaints, feedback from community based organizations, faith based organizations, feedback from customers, changing technology or new resources available to provide language assistance, and any other information that would enhance and help evaluate the effectiveness of the plan. Furthermore, CTDOT will continue to include language specific demographic questions as part of its ridership surveys in order to evaluate which LEP communities are accessing transit services, and whether there are any barriers prohibiting additional LEP riders from accessing CTDOT's programs or benefits. Should any of these monitoring methods reveal issues with CTDOT's current LAP plan, CTDOT will make the necessary revisions to ensure no one is denied access to programs or benefits due to language barriers or their national origin.

The Title VI Workgroup meets quarterly, or more frequently as needed to discuss the goals and the implementation efforts necessary to comply with the language assistance plan. The workgroup will continue to discuss any trends or patterns requiring attention. All members of the workgroup provide research, ideas and solutions, strategies and concepts that assist in the developments of a meaningful language assistance plan.

In addition to quarterly meetings with *CTtransit* and Metro North Rail, to discuss updates and/or monitoring activities related to Title VI and LEP, CTDOT has implemented a quarterly Title VI Activity Report to provide a written summary of Title VI activities, outreach events, and other related activities. This report allows CTDOT to continuously monitor transit related activities for Title VI and LEP Compliance.

Committee Membership

CTDOT does not have any transit-related, non-elected boards, advisory councils or committees, or similar committees whose members are selected by CTDOT for transit related decision-making purposes. In the event CTDOT establishes any transit related, non-elected boards, advisory councils or committees, the Department will maintain a table showing the demographic breakdown of the membership, and a description of the efforts made to encourage minority participation.

Providing Assistance to Subrecipients

FTA C 4702.1B requires primary recipients to assist their subrecipients in complying with DOT's Title VI regulations, including the general reporting requirements. The OOE provides assistance to subrecipients through training and the development of guidance documents.

Training

The OOE offers training in three formats: E-learning modules; one-on-one training; and group training sessions. Due to the limited time and personnel resources, and frequent employee turnover of many of the Department's subrecipients, the OOE considers the electronic training modules to be the most effective training delivery method. During the reporting period the OOE developed an electronic training module specifically designed to educate FTA subrecipients on their requirements under Title VI as recipients of federal funding. The module can be accessed by visiting CTDOT's Title VI webpage, at <https://portal.ct.gov/DOT/Business/Office-of-Equity/Title-VI-Page>

The module also provides contact information in the event the participant has questions; needs additional information on a topic within the module; or wishes to request additional training.

The topics covered in the module include:

- What is Title VI and what are your responsibilities as a subrecipient?
- What is Limited English Proficiency and your responsibilities as a subrecipient?
- How does Title VI impact what you do?
- Your Roles and Responsibilities Under Title VI
 - Notification to Beneficiaries
 - Title VI Assurances and Posters
 - What is a Title VI Complaint? How to Process a Title VI Complaint
 - Public Involvement and Participation

Additionally, the Office of Equity hosted four virtual training sessions during the reporting period. The table below provides details of the in-person training sessions conducted during the reporting period.

Date of Training	Number of Attendees	Audience
January 7, 2022	67	CTDOT staff
February 1, 2022	40	5310 grantees, Transit District staff
February 3, 2022	30	5310 grantees, Transit District staff
July 7, 2022	60	CTDOT staff

Guidance Documents/Templates

In addition to training, the OOE develops guidance documents and templates to aid subrecipients in the process of developing the Title VI documents required under FTA C 4702.1B. While conducting subrecipient reviews, several subrecipients expressed a desire for a guidance document specific to the requirements of traditional 5310 grantees. The OOE developed the requested guidance document and provides a link to the document in multiple locations throughout its website.

The guide includes the following:

- Description of all Requirements under ‘General Requirements’ Chapter III of FTA C 4702.1B;
- Frequently Asked Questions for each Requirement;
- Internet Resources;
- CTDOT Contact Information;
- Title VI Notice to the Public Template;
- Title VI Complaint Process and Procedure Template;
- Title VI Complaint Form Template; and
- Title VI Complaint Log Template.

The 5310 Guide to Title VI Compliance will be reviewed annually at a minimum; and updated as appropriate based on user feedback and program enhancements. Additionally, the OOE provides Title VI document templates on its Title VI webpage, or directly to subrecipients upon request.

Subrecipient Monitoring

To ensure subrecipients are complying with the requirements under Title VI, the Department of Transportation (CTDOT) conducts a Title VI compliance review on subrecipients at least once every three years. The Department utilizes the reviews for Title VI training, as a tool to remind subrecipients of their obligations and responsibilities under Title VI and to monitor their Title VI program implementation. Subrecipients include traditional and nontraditional 5310 grantees, councils of governments, and transit districts.

The assessments are also used to determine subrecipient training and technical assistance needs. The OOE offers Title VI training to all subrecipients receiving federal funding, individualized training is also available upon request. During the reporting period the OOE developed an electronic training module, designed specifically for subrecipients of FTA funds. The training module can be accessed from the CTDOT Title VI webpage at <https://portal.ct.gov/DOT/Business/Office-of-Equity/Title-VI-Page>.

Traditional 5310 Subrecipients:

OOE partners with the Bureau of Public Transportation (hereinafter referred to as ‘the Bureau’) to combine Title VI reviews with the Bureau’s traditional 5310 subrecipient audits. Together, the OOE and the Bureau conduct 30 (thirty) audits each year for traditional Section 5310 grantees. They are conducted year-round (from July-June). Approximately 10 (ten) audits are conducted on-site at the subrecipients’ location, and no more than 20 (twenty) are conducted virtually via a desk audit site visit.

The Bureau initiates the audit and notifies the OOE once the subrecipient has successfully completed the first phase. Upon notification, the OOE initiates Phase II with a Title VI Assessment Survey and a request for the Title VI documents listed below. A copy of the assessment survey can be found on pages 283-286 of the CTDOT FTA Title VI Program Appendix.

- Title VI Notice to the Public
- Title VI Complaint Form
- Title VI Complaint Process
- Title VI Complaint Log
- Public Participation Plan
- Four-Factor Analysis
- Limited English Proficiency Plan
- Organizational Chart identifying the Title VI Coordinator

Upon receipt of the requested documents and completed survey, the OOE reviews the submission to determine whether subrecipient has implemented the necessary processes and procedures to comply with the Title VI and Limited English Proficiency (LEP) requirements. The Office of Equity recognizes that some of its’ grantees have limited staff and resources. To reduce the administrative burden of creating all documents from scratch the OOE provides each subrecipient with templates for the following documents:

- Title VI Notice to the Public
- Title VI Complaint Form
- Title VI Complaint Process and Procedures

- Title VI Complaint Log

These templates are posted on the Department's Title VI webpage. Subrecipients have the option of using the templates to aid in the development of their plan or to develop their own documents. Whether utilizing the templates or their own formats, their Title VI programs must meet the requirements of the FTA Circular 4702.1B.

After review of the submission, the OOE provides the subrecipient with a review report outlining the following:

- Accepted Documents.
- Identified Deficiencies. In addition to providing a detailed description of the deficiency, the OOE includes guidance for addressing and corrected the noted deficiency.
- Outstanding Documents.

Generally, subrecipients are provided thirty-days from the receipt date of the review report to correct any deficiencies and submit any outstanding documents.

In 2019 the OOE developed and released a 5310 Grantee Guide to Title VI Compliance, which was updated in 2023. The guide was developed in response to requests from 5310 grantees for a simplified guidance document, specific to the Title VI requirements of 5310 funding recipients. A copy of the guide can be found on pages 287-299 of the CTDOT FTA Title VI Appendix.

Nontraditional 5310 Subrecipients:

Many recipients of nontraditional 5310 funding, overlap and are reviewed in other subrecipient categories (i.e. Council of Government, 5311, and traditional 5310). Over the next three years, 2024-2026, the OOE will audit all non-traditional 5310 subrecipients, that were not reviewed under another subrecipient category. The audits will be performed as desk audits, where subrecipients will be emailed an electronic assessment packet, similar to the assessment provided to the traditional 5310 subrecipients. The assessment will instruct the subrecipient to submit copies of the documents required under Title VI; this will include all documents required under General Requirements (Chapter III) of FTA Circular, FTA C 4702.1B.

5311 Subrecipients

Similar to the traditional 5310 program reviews, the OOE partners with the Bureau of Public Transportation every three years to conduct a thorough Transit System Audit, which includes a civil rights component, of all 5311 subrecipients. The last round of audits was completed in 2019. During this time, the OOE conducted a Title VI audit consisting of a site-visit and a review of all Title VI required documents. A corrective action plan for each subrecipients was prepared detailing any findings, at which point each subrecipient was provided 45 days to address any identified deficiencies. The next round of audits will be conducted in 2025. The review approach has been successful in identifying the subrecipient's compliance with Title VI and other civil rights requirements, and the OOE does not anticipate any major changes to the review process.

Metropolitan Planning Organizations & Councils of Governments:

On a triennial basis, the Department conducts Title VI process reviews on Metropolitan Planning Organizations (MPOs) and Council of Governments (COGs). The Department follows a similar process when reviewing MPOs as it does with 5311 subrecipients. The survey assessment tool and requested Title VI documents were modified slightly from the instrument issued to 5310 subrecipients to address the MPO requirements outlined in FTA Circular 4702.1B. Like with 5311 subrecipients, a site visit to each COG is scheduled to review the survey assessment and submitted Title VI documents. In 2019, the OOE completed a review of all COGs statewide. The next round of reviews is scheduled for 2026, unless there is cause to conduct a review ahead of the triennial schedule.

Listing of Subrecipients and Review Schedule

All subrecipients will be reviewed for Title VI compliance at least once every three years. Situations may occur where a subrecipient may be audited more than once in a three-year period, particularly those that are subrecipients under multiple programs. A list of subrecipients and tentative review schedule can be found on pages 300-302 of the CTDOT FTA Title VI Program Appendix. It is important to note that the schedule is subject to modification. This is especially true of 5310 traditional and nontraditional grantees as the list of subrecipients changes annually with each award period. The schedule is also subject to change based on complaints, changes in protocol, patterns indicating noncompliance, direction from FTA, and/or any additional factors.

Metro-North Railroad

The Department meets quarterly with Metro North Railroad (MNR) to review their ongoing compliance with Title VI and discuss the status of any Title VI complaints filed with MNR relative to Connecticut based activities. The Department reviews the contents of MNR's portion of the Title VI program that reports on the NHL service in Connecticut and monitors their Title VI activities in Connecticut.

Title VI Equity Analysis

During the reporting period, CTDOT did not construct any facilities requiring a Title VI Equity Analysis.

Rail Service Standards and Policies

MTA Metro-North Railroad (MNR) has developed System-wide service standards that apply to MNR operations. CTDOT has system-wide service standards to apply to the Shore Line East (SLE) rail service in Connecticut.

Service Availability

Service Availability is a general measure of the distribution of routes within the service areas. These service territories are each defined as all census tracts that are within (and touching) 2.5 miles of the commuter rail stations. The service territory in Connecticut includes all MNR stations in Fairfield and New Haven Counties and the Shore Line East stations from New Haven east to New London. The Rail Service Availability Standard is that the Connecticut Department of Transportation (CTDOT) will distribute rail service so that a majority of residents in the service area are within 2 ½ miles of rail service. Service availability will be analyzed by adding up the entire rail service population and the entire population of all people within a 2.5 mile intersect of the rail lines. CTDOT will then compare the ratio of the general population with the minority population to determine if there are any impacts.

Segment and Branch Line Treatment

The New Haven Line is composed of the New Haven Main Line, part of the Northeast Corridor (NEC) and the New Canaan Line, Danbury Line, and Waterbury Line which are branch lines feeding into the NEC mainline. Shore Line East is composed of two segments, New Haven east to Old Saybrook, and Old Saybrook east to New London. Stations along each branch line and segment will be analyzed against stations of that same segment or branch. This is due to the different infrastructure capabilities of each segment or branch.

Please note the New Haven Line Outer segment and the New Haven Line Inner segment analyses will include Stamford Transportation Center as it delineates the segment but serves nearly all trains on both segments which is unique for a Connecticut New Haven Line station. Also note both the State Street Station and New Haven Union Station are included in both the separate Shore Line East and Outer New Haven Line analyses.

The New Canaan branch is a single track but is electrified and can run the more reliable M8 EMU units, the New Haven Main Line has four tracks but is the busiest single rail line in the country, if not all of North America. The Danbury and Waterbury branch lines are not electrified and must run the P-32 diesel locomotives.

Shore Line East runs to Old Saybrook on mostly two tracks, and between Old Saybrook and New London the service operates on two tracks. There are limited switches that can create long sections of single-track territory when extensive maintenance projects are undertaken. No service can be added without the permission of Amtrak who also operates on and owns this territory. The Connecticut Department of Energy and Environmental Protection (DEEP) monitors the closing and opening of moveable bridges to reduce-marine traffic congestion. It is important to note that this is part of the Amtrak Northeast Corridor and is a vital piece of the Boston to New York to Washington Intercity Passenger Rail service. CTDOT operated Diesel push pull sets of P40 and GP 42 engines and Mafersa coach cars until June 2022 when CTDOT transitioned to the more reliable M8 Electric multiple units.

Service Periods

New Haven Line Peak Travel

Peak travel is considered to be when inbound trains are scheduled to arrive at Grand Central Terminal (GCT) between 5:30 AM - 10 AM, Monday through Friday, while afternoon peak service is all trains departing GCT between 4:00 PM – 8 PM, all other travel is considered either reverse peak, off peak, or weekend travel.

Service Periods

<i>Time Period</i>	Peak	Rev. Peak	Off-Peak	Weekend
<i>New Haven (NHV-GCT)</i>	Arrive AM 5:30 to 10 at GCT /depart GCT 4 PM to 8 PM	Reverse direction in defined peak	Weekday outside peak	Saturday and Sunday
<i>Shore Line East in 2022 analyses</i>	Above	Above	Above	Above
<i>Shore Line East 2023 and beyond</i>	Arrive AM 5:30 to 10 at NHUS /depart NHUS 4 PM to 8 PM	Reverse direction in defined peak	Weekday outside peak	Saturday and Sunday

Shore Line East Peak Travel

Peak travel will be considered to be when inbound trains are scheduled to arrive at New Haven Union Station between 5:30 AM - 10 AM, Monday through Friday, while afternoon peak service is all trains departing New Haven Union Station between 4:00 PM – 8 PM, all other travel is considered off peak travel, all other travel is considered either reverse peak, off peak, or weekend travel. During the 2020 to 2022 time period covered in this service monitoring analysis Shore Line East adhered to the New Haven Line Standard with Peak travel dependent upon the New Haven Line peak period connection arrival and departure times at GCT.

On Time Performance (OTP)

On-time performance is a measure of runs completed within 5 minutes 59 seconds of scheduled arrival. OTP is a key measure for service reliability to its customers and is the standard the industry uses to compare existing services with other services. All trains operated should complete their assigned trips. Unless noted on the timetable, trains will not depart early from passenger stations where they are scheduled to receive passengers. The On Time Performance goal is 94% for the New Haven Line and 93% Shore Line East.

Vehicle Headway

Vehicle Headway is a measure of how often a train is scheduled to stop at a station. Maximum vehicle headway is based upon the station's level of service (determined by ridership by station or average ridership within specific operating line segments). Factors considered when determining service frequency also include availability of equipment, track scheduling, and operating resources. Maximum vehicle headway differs for peak, reverse peak, weekday off-peak, and weekends.

Maximum Vehicle Headway Guideline

Table 1 presents the maximum vehicle headway by operating line segment and time of day for MNR NHL stations and Table 2 presents the headway standards for Shore Line East. Headway is determined by arrival time at Grand Central Terminal in New York City for the entire New Haven Line. It is the average time between trains stopping at the station scheduled within the time period (peak or off peak) and the last train to arrive at GCT within the designated time period. Metro North Railroad (MNR) has defined their peak operating period to be Monday through Friday between 5:30 AM and 10:00 AM and departing GCT between 4:00 PM and 8:00 PM. Please note that MNR operated the same schedule daily during this period due to the pandemic and did not enforce peak fare pricing.

Table 1: New Haven Line Headway Standards

Line	Peak	Rev. Peak	Off-Peak	Weekend
<i>Inner New Haven (STC-GCT)</i>	20 minutes	30 minutes	60 minutes	60 minutes

<i>Outer New Haven (NHV-STC)</i>	25 minutes	30 minutes	60 minutes	60 minutes
<i>New Canaan Line</i>	30 minutes	60 minutes	60 minutes	60 minutes
<i>Danbury Line</i>	45 minutes	60 minutes	120 minutes	120 minutes
<i>Waterbury Line</i>	45 minutes	60 minutes	120 minutes	120 minutes

Table 2: Shore Line East Headway Standards

Line Segment	Peak	Rev. Peak	Off-Peak	Weekend
<i>OSB - NLC</i>	143 minutes	180+ minutes	180+ minutes	143 minutes
<i>NHV - OSB</i>	100 minutes	120 minutes	100 minutes	143 minutes

Loading Standards

Loading standards are used to determine seating capacity, to assign equipment (e.g., number/type of railcars), and to make subsequent adjustments by lengthening or shortening trains. Because a primary method of controlling costs is to minimize surplus car-miles while providing a seat for every customer, the assignment of cars and length of trains will be adjusted in accordance with the occupancy policies below.

Train lengths are adjusted to conform to the loading standard using train-by- train ridership data, monitored throughout the year. Train lengths are modified to ensure that adequate seating is provided while controlling the total car-miles operated. There is a minimum of 2-3cars required to operate a train for technical reasons.

Table 3: Maximum Recommended Occupancy Policy

	Lengthening Trains If Occupancy Exceeds...	Shortening Trains If Occupancy (after reduction) Would Not Exceed...
<i>AM Peak, PM Peak, Reverse Peak</i>	95%	95%
<i>Off-Peak Weekday</i>	85%	85%
<i>Weekend</i>	75%	75%

Holiday/Special Event Adjustments: Adjustments to the regular equipment assignments are made to account for changes in travel patterns and demand on holidays and holiday weekends and other special

events throughout the year. Load is determined by the maximum number of passengers on board the train at any one time divided by the total number of seats on the train.

Average Age of Fleet

Vehicles are assigned to trains based on required propulsion power (diesel or electric) for the route, individual train ridership and seating capacity, and maintenance and storage yard requirements.

Tables 4 and 5: 2022 Average Fleet Age

Table 4

<i>Equipment Type</i>	Count	Age	Unit Size	Unit Seating
<i>Shared M-8 EMU (NHL & SLE)</i>	471	8.7	PAIR	A&B UNIT – 110/101
Total Electric Coaches	471			
<i>Bombardier Push/Pull Coach (NHL)</i>	20	34	COACH	Cab 113, Tr. 131
<i>Bombardier Push/Pull Coach (NHL)</i>	20	29	COACH	Cab 113, Tr. 131
<i>Bombardier Push/Pull Center Door Coach (NHL)</i>	8	20	COACH	Cab 99, Trailer 115 Trailer w/ toilet 103
<i>Mafersa Push/Pull Coach (SLE)</i>	33	28.5	COACH	Cab 100, Tr. 109
Total Push-Pull Coaches	81			
Total Passenger Vehicles	552			

Table 5

<i>Equipment Type</i>	Count	Average Age	Year Rebuilt
<i>GP-40-2H Locomotive (SLE)</i>	6	55	2018 top deck
<i>P-32AC-DM Locomotive (NHL)</i>	4	18	2017 overhaul
<i>P-40 Locomotive (SLE)</i>	8	29	In process
<i>P-40 Locomotive (SLE – ex-NJT)</i>	4	29	In process
<i>BL20-GH Locomotive (NHL/Branch)</i>	6	15	In process
Total Passenger Diesels	28		

Rail Amenities

Transit amenities are items of comfort and convenience made available to railroad customers. Amenities available at train stations can include benches, waiting rooms, platform shelters, restrooms, vending machines, information kiosks, recycling/trash bins, public address (PA) speakers, visual information displays, escalators, elevators, and ramps.

The station amenities provided are based on a station’s daily ridership, length of platform, and size of station, but may be limited or constrained by physical layout, available space, and utility infrastructure

constraints (e.g., local commercial electric power availability). Stations are categorized into levels and stations in the highest ridership category receive the full range of amenities if available space allows. All trains regardless of car type (coaches or electric multiple-units) and method of propulsion (diesel or electric) are equipped with similar amenities.

Bus Service Standards and Policies

Service Availability

Coverage guidelines are only for the bus and bus rapid transit system service area (the urban-fixed route system) where customers are most likely to walk to transit.

An important aspect of providing the region with adequate access to transit services is the geographic coverage of the system. Coverage is expressed as a guideline rather than a standard, because uniform geographic coverage cannot always be achieved due to constraints such as topographical and street network restrictions. In addition, coverage in some areas may not be possible due to the infeasibility of modifying existing routes without negatively affecting their performance.

The Connecticut Department of Transportation (CTDOT) Service Availability Standard requires the distribution of transit service so that a majority of all residents in the service area are within 1/4 mile of local weekday transit service, 1/2 mile of local weekend transit service, and 2 ^{1/2} miles of park and ride stops.

Frequency of Service (Headways)

Ridership should determine the frequency of service on each route, although financial or equipment limitations may sometimes limit the level of service that can be provided.

Headway is the interval of time between two buses running in the same direction on the same route or along the same route corridor (e.g. Routes 60, 62, 64 & 66 along Farmington Avenue in Hartford and West Hartford). Headways for routes with multiple branches are measured along the trunk of the route, with headways along the individual branches standardized to the extent that is practical. Headways are generally based on load factors (i.e. the ratio of customers to seating capacity).

Headways should conform as much as possible to regular intervals to make it easier for customers to understand. Intervals of 5, 10, 15, 20, 30, 40 or 60 minutes are considered ideal, although other headways may be used when better suited to a particular situation.

Loading standards, which are discussed in detail in subsequent sections, are generally used to determine minimum headways. However, for certain service periods and on certain routes, minimum headways should be set by policy. For example, during off- peak periods, ridership may be so light that using the loading standards would result in excessively wide headways. Therefore, in order to provide service in a manner that meets the community's needs, it is necessary to establish policy headways.

CTDOT will provide 60-minute headways during off-peak periods. An exception to this policy would in rural areas, at night, or on weekends, where financial considerations must be balanced against demand (e.g. Route 96 serving the US 5 corridor in South Windsor). These guidelines do not apply to headways

for commuter express routes; express routes normally only operate during peak periods to accommodate work trips.

Table 6: Frequency of Service (Headways)

Service Type	Service Period	Minimum Headway
Local	Weekday - Peak	30 minutes
	All Other	60 minutes
Flyer	All	60 minutes
Express & Commuter Shuttles	Weekday – Peak	3 trips in peak direction

On-Time Performance

CTtransit defines “on-time” as a bus departing a timepoint zero to five minutes later than scheduled. Under no circumstances should buses depart any timepoint ahead of schedule, unless the timepoint for the particular trip has been flagged as “drop off only” and the bus operator is given explicit permission to continue on if early. Late operation is defined as any trip leaving a time point in excess of five minutes beyond the scheduled time. To maintain efficient operation, schedules should be constructed in such a manner so that no bus arrives at the downtown hub more than two minutes early or at any other timepoint more than one minute early.

On-Time Performance

CTtransit defines “on-time” as a bus departing a timepoint thirty seconds before to five and a half minutes later than scheduled. Under no circumstances should buses depart any timepoint ahead of schedule, unless the timepoint for the particular trip has been flagged as “drop off only” and the bus operator is given explicit permission to continue on if early. Late operation is defined as any trip leaving a time point in excess of five and a half minutes beyond the scheduled time. To maintain efficient operation, schedules should be constructed in such a manner so that no bus arrives at the downtown hub more than two minutes early or at any other timepoint more than one minute early.

Table 7: On-Time Performance Measures

Performance Indicator	Downtown Hub	All Other Locations
Early Arrival	>2 minutes	>1 minute
Late Arrival	>5.5 minutes	>5.5 minutes
Early Departure	>0.5 minutes	>0.5 minutes
Late Departure	>5.5 minutes	>5.5 minutes

CTtransit has a target goal of 80% on-time performance. This target balances on-time performance with safety, system reliability, customer experience, and efficiency. The system operates a “pulse service” on nights and weekends where all buses meet and depart at the same time. When a route is running late and passengers need to make connections, the pulse is “held” until the late bus arrives and transfers can be made. Buses may be held up to 15 minutes.

CTDOT uses an Automated Vehicle Location (AVL) System to collect on-time performance information. AVL systems collect data on a continuous basis and are used by CTtransit to better refine schedules to reflect on-street conditions by the time of day.

Load Factor

The vehicle load standard applies to the maximum number of passengers allowed on a service vehicle in order to ensure the safety and comfort of customers. The load standard is expressed as the ratio of passengers to the number of seats on the vehicle, and it varies by mode and by time of day. The average of all loads during the peak period should not exceed vehicles' achievable capacities.

Table 8: Vehicle Capacity

Vehicle Size	Seats	Standees	Total
30'	28	10	38
40'	39	10	49
45'	55	0	55
60'	55	19	74

Table 9: Load Factor Standards

Service Period	Maximum Load Factor	Minimum Load Factor
Weekday Peak	1.33	0.33
Weekday Midday	1.00	0.25
Evening	1.00	0.15
Nights (after 10PM)	1.00	0.15
Weekends	1.00	0.20

System Wide Service Policies

FTA guidance requires that the Connecticut Department of Transportation (CTDOT) adopt system-wide service policies for the distribution of transit amenities and vehicle assignment for each mode to ensure service design and operations practices do not result in discrimination on the basis of race, color, or national origin. Service policies differ from service standards in that they are not necessarily based on a quantitative threshold.

Transit Amenities Policy

FTA guidance requires CTDOT to set a policy to ensure equitable distribution of transit amenities across the system. Transit amenities are described as follows in FTA Circular 4702.1B:

Transit amenities refer to items of comfort, convenience, and safety that are available to the general riding public. Transit amenities include shelters, benches, trash receptacles, and other bus stop, rail and rapid transit station amenities such as electronic message signs. Fixed-route transit providers must set a policy to ensure equitable distribution of transit amenities across the system. Transit providers may have different policies for the different modes of service that they provide. The policy for transit amenities addresses how amenities are distributed within a transit system, and the manner of their distribution

determines whether transit users have equal access to these amenities.

Generally, the installation of transit amenities along bus routes and in rail services is based upon several factors, i.e. the number of passenger boardings at stops or stations along the routes, transfer activity at designated stops, staff recommendations, individual requests, proximity to major activity centers, and local control in the case of local bus stop shelters, which to date, are placed by municipalities and not the transit system. CTDOT strives to provide adequate amenities to meet the various needs of its customers and will review a need for changes as expressed by ridership figures and feedback from riders.

Bus Stop Shelters: With the exception of a few bus shelters in the Hartford Division, CTDOT and CTtransit do not own or maintain any of the on-street bus shelters along bus routes. CTDOT does install and maintain shelters at park and ride lots and maintains bus stop signage on state roads and U.S.-numbered highways throughout the state. The decision to install a shelter at a local bus stop is at the discretion of local municipalities. CTtransit works with regional agencies and individual towns to encourage shelter installations that meet policy guidelines and to encourage that shelters are cleaned and maintained, including snow removal, on a regular basis, however, it is ultimately the responsibility of the host municipality to maintain the shelters.

CTDOT policy states that shelters are considered for installation based on the criteria detailed in the CTtransit Service Standards guide:

Table 10: Bus Shelter Priority Guide

Daily Customer Boardings	Headway		
	<10 minutes	10-29 minutes	30 minutes or more
300 or more	2	1	1
200-299	3	2	1
100-199	4	3	2
50-99	4	3	2
25-49	4	4	3

The priority guide generally supports the following:

- Stops served by routes with longer headways have priority over stops with shorter headways in order to provide protection for those customers with potentially longer wait times
- Stops with more activity have priority over stops with less activity, with all other factors being equal, in order to provide protection to a larger number of customers.

Benches and Trash Receptacles: CTDOT does not place trash receptacles or benches at bus stops but does have such amenities at all fixed-guideway stops including CTfastrak stations and rail stations.

Electronic Signage: Electronic signage informing passengers of the predicted arrival of the next bus or train, or for relaying service status information can significantly improve the experience for customers. The current policy is to install electronic signage only at CTfastrak rapid transit stations, rail stations and multimodal terminals. If and when CTDOT is in a position to introduce a comprehensive, system-wide electronic signage program, new policies will be developed to ensure equitable siting.

Automated Announcements and Vehicle Location Equipment: All buses have automated bus stop announcements on board, and automated bus route identification announcements off-board. All buses have automatic vehicle location equipment which allow bus location to be tracked and provide real-time information to customers on next bus arrivals.

USB Charging Ports and Wi-Fi: There is only one situation where amenities vary by bus type and service type. Commuter coaches on longer-distance multi-zone routes have cushioned seats and USB charging ports and Wi-Fi. CTDOT installed these amenities due to the trip lengths and the premium fares charged. In 2019, CTDOT began including USB charging ports on all new vehicles, regardless of service type. CTDOT has also begun to make Wi-Fi available on local buses. Wi-Fi has been added to local buses serving Hartford, New Haven and Stamford and is in process for other *CTtransit* divisions.

Parking: At this point CTDOT provides parking only at commuter Park and Ride lots, and rail and rapid transit stations. These are locations where the customary method of access to the bus and rail system is by car. Parking is available at most rail and rapid transit stations. The stations where parking is not available are those where no land is available, or in areas where the customary means of access is by walking or by using other transit connections.

Rail Amenities: Amenities available at train stations can include benches, waiting rooms, platform shelters, restrooms, vending machines, information kiosks, recycling/trash bins, public address (PA) speakers, visual information displays, escalators, elevators, and ramps. The station amenities provided are based on a station's annual ridership, length of platform, and size of station; but may be limited or constrained by the physical layout, space available, and/or utility infrastructure constraints (e.g., local commercial electric power availability). Station amenities on rail are line specific. Stations are categorized into levels. Stations in the highest ridership (over 1,000,000 annually) category receive the full range of amenities if available and space allows. Those between 100,000 and 999,999 riders annually receive most of the amenities, those below 100,000 riders annually may receive the least amenities. Amenities onboard trains include heating and air conditioning, interior lighting, bathrooms, baggage racks, and public address systems. All trains regardless of car type (coaches or multiple-units) and method of propulsion (diesel or electric) are equipped with similar amenities.

Vehicle Assignment Policy

As specified by FTA Circular 4702.1B, vehicle assignment refers to the process by which transit vehicles are placed into service in depots and on routes throughout the transit provider's system. The *CTtransit* Service Standards Guide notes that buses will be assigned to service without regard to race, color or national origin of riders or the communities they serve.

Bus Assignment

Through several practical operational considerations, *CTtransit* assigns buses to service so that the average age of the buses serving each route does not exceed the average age of the fleet.

Vehicles are parked in line, front to back upon pull-in, and are assigned by pull-out time, according to the vehicle characteristic. This practice provides for a random bus assignment. Bus assignments do however consider the operating characteristics of buses of various lengths and heights which are matched to the operating characteristics of the route (ridership volumes, turn restrictions, type of service and platform levels). Some of these considerations include:

- Hybrid vehicles are not permitted on routes with clearance restrictions.
- CTfastrak buses are specifically designed and branded for the busway and used exclusively in that service.
- Downtown circulator branded bus service.
- Express coach buses are specifically designed for express service.
- Articulated buses are deployed exclusively on routes with supportive ridership volumes.

Based upon the needs of the service (vehicle capacity needs, local roadway conditions, etc.) specific sub-fleets of buses are dedicated to commuter express, bus rapid transit, commuter connection or shuttle service (e.g. the Star Shuttle or railroad Commuter Connection shuttles) which require specific types, brands or sizes of vehicles. Otherwise, within similar service styles, individual vehicles are not assigned to specific routes and circulate among the various routes in the system based upon operating constraints and equipment features. The exception being that within the same type of service, such as local fixed-route in urban areas, buses with higher seating capacities are assigned to routes or individual bus trips with the highest historic customer demand.

CTtransit currently has five general types of buses in the fleet:

- 30-foot low-floor transit coaches
- 35-foot low-floor transit coaches
- 40-foot low-floor transit coaches
- 45-foot high-floor commuter coaches
- 60-foot low-floor articulated coaches

When *CTtransit* began operating articulated buses, these high-capacity vehicles were assigned to high-ridership routes or portions of routes where additional seating would alleviate overcrowding conditions.

As replacement buses are purchased and placed into service, they are distributed among all routes where the older bus being replaced had previously operated. On weekends and holidays, when bus requirements are lower, newer buses are used first before older equipment is dispatched.

Vehicle assignment data is analyzed as part of Title VI monitoring. The average vehicle age by route on routes that serve minority areas is compared to the average vehicle age on routes that serve non-minority areas. If the data demonstrates a disparity based on vehicle age for vehicle assignments on routes serving minority areas, CTDOT will review the distribution of vehicles and the way vehicles are assigned within each facility to evaluate the source of the problem. Appropriate actions would then be taken to modify either the distribution of vehicles to facilities or the route assignments of vehicles within each facility. Follow-up monitoring would be conducted six months later to determine whether the disparity has been rectified.

Rail Vehicle Assignment

CTDOT operates two passenger rail services – the New Haven Line which is operated under contract by MTA Metro-North and Shore Line East which is operated under contract by Amtrak.

The New Haven Line operates mainline service with electric multiple-unit (EMU) cars operating under catenary. The New Haven Line also has three branch lines – the New Canaan Line which is also an electric fleet and the Danbury and Waterbury branch lines which operate diesel locomotive and push- pull passenger coaches.

The primary criterion in assigning transit vehicles is the type of propulsion power required for a particular branch or line segment. Diesel locomotive-hauled coaches are used on non-electrified territory including the Danbury Branch and Waterbury Branch on MNR and on Shore Line East. The EMU vehicles are used on electrified territory (all remaining lines/branches). Where a train operates over electrified and non-electrified territory, diesel locomotive hauled coaches must be assigned.

Vehicles are assigned as required, with seating capacity and maintenance cycles driving the assignments. Cars are not assigned to specific routes or branches within electric or diesel territory but are cycled from line/branch to line/branch to achieve optimum car utilization efficiency. Short-term rolling stock assignment plans are developed for deployment of railcars.

Vehicles are assigned to trains based on the required propulsion power (diesel or electric) for the route, individual train ridership and seating capacity, and maintenance and storage yard requirements, not age. However, the majority of the electric fleet on the New Haven Line is new within the past five years. Mainline trains all serve the same service area, there is no difference in the quality of the railcar that is dispatched for any given train consist.

Shore Line East operates a diesel fleet and push-pull passenger coaches of similarly aged equipment on a single line. Since all trains serve largely the same service area, there is no opportunity for dispatching substantially differently aged equipment to serve any population segment.

Given the different operating environments of the two different rail services, the equipment is generally not interchangeable.

In Connecticut, diesel and electric powered trains are operated on the NHL and SLE rail services. The primary criterion in assigning transit vehicles is the type of propulsion power required for a particular branch or line segment. Diesel locomotive-hauled coaches are used on non-electrified territory including the Danbury Branch and Waterbury Branch on MNR and on Shore Line East. Electric Multiple-Unit (EMU) vehicles are used on electrified territory (all remaining lines/branches). Where a train operates over a combination of electrified and non-electrified territory, diesel locomotive hauled coaches must be assigned.

The following vehicles are assigned by service as follows:

- M-8 EMU/M-2 EMU operate on the New Haven Main Line and the New Canaan Branch Line.
- All Bombardier Push/Pull Coaches operate on the Danbury Branch and Waterbury Branch with limited Main Line use.
- P-32AC-DM Diesel Locomotives operate on the Danbury Branch and Waterbury Branch Lines with limited Main Line use.
- BL20-GH Diesel Locomotives operate on the Danbury Branch and Waterbury Branch Lines with limited Main Line use.
- The Mafersa Push/Pull coaches operate on the Shore Line East and have limited operation on the New Haven Main Line.
- GP-40-2H Diesel Locomotives operate on the Shore Line East and have limited operation on the New Haven Main Line.
- All P-40 Diesel Locomotives operate on the Shore Line East and have limited operation on the New Haven Main Line.

Bus Service Monitoring Report

Transit service in Hartford is provided by CTtransit Hartford and in New Haven by CT transit New Haven, both divisions of Connecticut Transit. The transit service for each route and time period were compared against service standards for frequency/headway, schedule adherence and load factor. Routes were categorized into minority-serving or non-minority-serving routes to identify if there was a disparate impact in service between the two categories.

Service measures were derived from General Transit Feed Specification (GTFS) and CT Transit data. GTFS was used to calculate frequency/headway of routes, while CTtransit provided average on-time percentages, load factors, vehicle ages and the survey data.

Methodology for Classifying Routes as Minority and Non-Minority

Minority-serving routes are identified as those that have more than 33-⅓% of route miles traversing minority census tracts. Minority tracts are identified in the service availability analysis and their designation is used in the service monitoring analysis as well.

For some routes, the service may change depending on time of day or day of week (See Table 14). Minority-serving status is identified by route and service time period, meaning that a route's designation could change based on time of day or day of week. Most routes had a consistent minority-serving status regardless of the time of day or day of week. Routes that did have varying minority-serving status are shown in Table 11. Frequently this variation was due to lifeline services, where a portion of weekly trips follow an extended route intended to reach underserved areas.

For routes with varying Minority status, the ratio of miles in the minority tract to the total number of miles (inclusive of all route variants) of the route is used to address this issue. For example: Routes 140 and 140F (Total miles = 6.95 miles) operate and are scheduled as a single service while being identified as separate services in some datasets. However, 140F does not operate during all time periods. Both variants were used to identify the number of miles in the minority tract (0.94 miles) and then compared to the threshold of 2.33 miles (33-⅓ % of 6.95 miles). Because it falls below this threshold, it is therefore considered a Nonminority route. When this methodology was applied to all routes with varying status all routes were then able to be assigned a single minority or income designation for all time periods and days of week.

The percentage of minority-serving and non-minority-serving routes are given in Table 12. A similar procedure was applied for Low-income (LI) and Non-LI routes. The percentages of LI and Non-LI serving routes are given in Table 13. Both the service standards and disparate impact analyses examine routes by time period.

Table 11: Routes with Varying Minority-serving Status

System	Number of Routes
Hartford	10
New Haven	7

Table 12: Percentage of Routes with Minority-serving and non-minority serving Status

System	Number of Routes	Minority Serving Routes (%)	Non-Minority Serving Routes (%)
Hartford	88	75	25
New Haven	27	92.5	7.5

Table 13: Percentage of Routes with LI-serving and Non-LI serving Status

System	Number of Routes	LI Serving Routes (%)	Non-LI Serving Routes (%)
Hartford	88	56	44
New Haven	27	92.5	7.5

Table 14: Time Period Definitions

Day	Time Period	Start	End
Weekday	Early AM	12:00 AM	6:30 AM
	AM Peak	6:30 AM	8:59 AM
	Midday	9:00 AM	2:59 PM
	PM Peak	3:00 PM	5:59 PM
	Late Night	6:00 PM	11:59 AM
Saturday	Early AM	12:00 AM	6:30 AM
	AM Peak	6:30 AM	8:59 AM
	Midday	9:00 AM	2:59 PM
	PM Peak	3:00 PM	5:59 PM
	Late Night	6:00 PM	11:59 AM

Sunday	Early AM	12:00 AM	6:30 AM
	AM Peak	6:30 AM	8:59 AM
	Midday	9:00 AM	2:59 PM
	PM Peak	3:00 PM	5:59 PM
	Late Night	6:00 PM	11:59 AM

Bus Service Standards and Monitoring Results

Frequency of Service/Headway

The frequency of service/headway standard is based on service type and service period, as shown in Table 15.

Table 15 Frequency of Service Standard

Service Type	Service Period	Minimum Headway
Local	Weekday – Peak	30 minutes
	All Other	60 minutes
Flyer	All	60 minutes
Express & Commuter Shuttles	Weekday – Peak	3 trips in peak direction

The percentages of all minority-serving and non-minority-serving routes that meet the frequency service standard are shown in Table 16, with Table 17 indicating the LI and non-LI routes meeting the standard. More minority-serving routes meet the frequency standard than non-minority-serving routes in Hartford, therefore no disparate impact is identified. In New Haven, slightly fewer minority-serving routes meet the frequency standard than non-minority routes, however, the difference does not meet the threshold to indicate a disparate impact.

Frequency Analysis Procedure

For local routes, the minimum headway in one direction is calculated during each time period and compared with the published service standard. For example: Route 101 has a minimum headway of 5 minutes during the weekday peak hour and 6 minutes in other hours. Route 101 therefore meets the Frequency of service standard.

For express routes, the frequency of each route at each stop in one direction is calculated. The average frequency (across all stops on the route) for each route is calculated and compared with the standard.

For example: Route 902 has 1 trip per stop on average during the peak hour, meaning that the frequency service standard is not met.

Table 16 Percent of Minority Routes Meeting Frequency Standard

System	All (%)	Minority-serving (%)	Non-minority-serving (%)
Hartford	85.1	92.3	63.7
New Haven	96.3	96.0	100

Table 17 Percent of Low-Income Routes Meeting Frequency Standard

System	All (%)	LI-serving (%)	Non-LI-serving (%)
Hartford	85.1	93.8	73.6
New Haven	96.3	96.0	100

Schedule Adherence/On-time Percentage

The schedule adherence, or on-time performance (OTP) service standard is based on the on-time percentage of a route within the time period indicated in the service standard and route headway, as shown in Table 18. On-time data was provided by CTtransit for the analysis period.

Table 18 Schedule Adherence (On-time Percentage) Service Standard

Service Period	Headway (%)		
	<10 minutes	10-29 minutes	30 minutes or more
Weekday Peak	90	90	95
Weekday Off-Peak	90	95	95
Weekend	90	95	95

OTP Analysis Procedure

For each route, average headway for the three service periods is calculated. This is used to assign the appropriate service standard. The average on-time percentage for the three service periods is calculated and compared with the standard.

For example: Route 101 has an average headway of approximately 5 minutes during peak hours, 6 minutes during off peak hours, and 17 minutes during the weekend. The average on-time percentages are 82.3%,

83.2%, and 82.4% respectively. The service standard for these three time periods would be 90, 90 and 95% respectively – none of which are met.

The percentages of all, minority-serving and non-minority-serving routes that meet this service standard are shown in Table 19. The percentages of all, LI-serving and non-LI-serving routes that meet this service standard are shown in Table 20. No routes met this standard.

Table 19: Percent of Routes Meeting Schedule Adherence Standard

System	All (%)	Minority-serving (%)	Non-minority-serving (%)
Hartford	0	0	0
New Haven	0	0	0

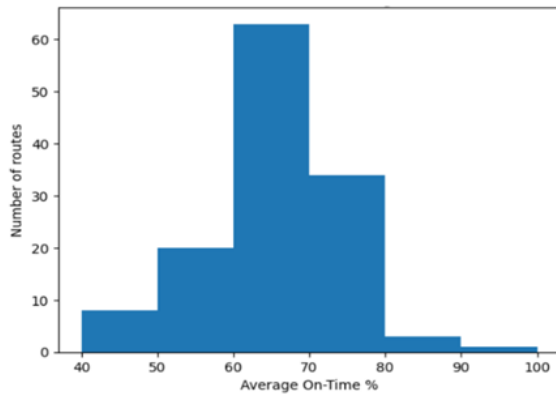
Table 20: Percent of Routes Meeting Schedule Adherence Standard

System	All (%)	LI-serving (%)	Non-LI-serving (%)
Hartford	0	0	0
New Haven	0	0	0

OTP distribution:

Beyond performance relative to the service standard, Figures 9 and 10 depict the distribution of average on-time percentages of the minority and non-minority serving routes of Hartford and New Haven. The figures suggest that minority route OTP has a heavier tail on the right side as compared to non-minority routes, indicating that minority routes tend to have better OTP than non-minority routes. This is further supported by the mean minority OTP performance of 65% exceeding the non-minority performance of 61% on average. Results of a chi-square test support the conclusion that minority OTP is higher than non-minority and therefore no disparate impact or disproportionate burden is indicated. The same results hold for the New Haven system as well.

Hartford – minority routes (all days)



Hartford – non-minority routes (all days)

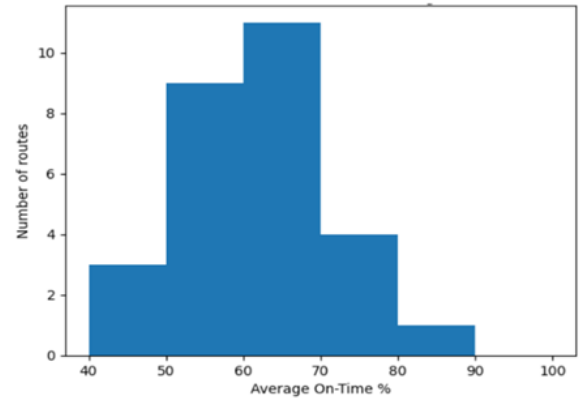
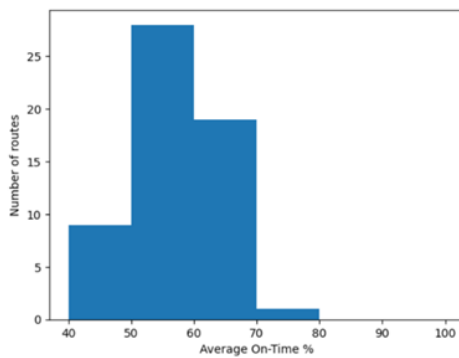


Figure 9: Distribution of OTP for Hartford

New Haven – minority routes (all days)



New Haven – non-minority routes (all days)

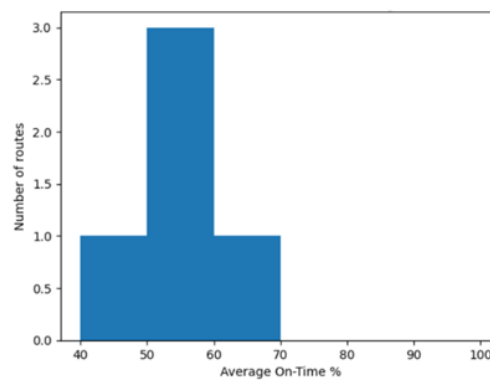


Figure 10: Distribution of OTP for New Haven

Vehicle Age

The vehicle age standard is based on the average age of the fleet as described in the CTtransit service standards:

Through several practical operational considerations, CTtransit assigns buses to service so that the average age of the buses serving each route does not exceed the average age of the fleet.

The percentages of all minority-serving and non-minority routes that meet this service standard are shown in Table 21. The percentages of all LI-serving and non-LI serving routes that meet this service standard are shown in Table 22. Figure 11 shows the distribution of average age for all the routes in Hartford (average age = 6.09 years) and New Haven (8.52 years).

It is important to note that New Haven has only two routes designated as non-minority-serving (See Figure A.3). Therefore, any interpretations should be in the context of a small sample of non-minority routes. However, in New Haven, both minority and LI-serving routes tend to have older vehicles than non-minority and non-low income, respectively – potentially representing both a disparate impact and disproportionate burden.

Table 21: Percent of Routes Meeting Age Standard

System	All (%)	Minority-serving (%)	Non-minority-serving (%)
Hartford	61.1	68.4	33.3
New Haven	46.1	41.7	100

Table 22: Percent of Routes Meeting Age Standard

System	All (%)	LI-serving (%)	Non-LI-serving (%)
Hartford	61.1	70.7	48.3
New Haven	46.1	41.7	100

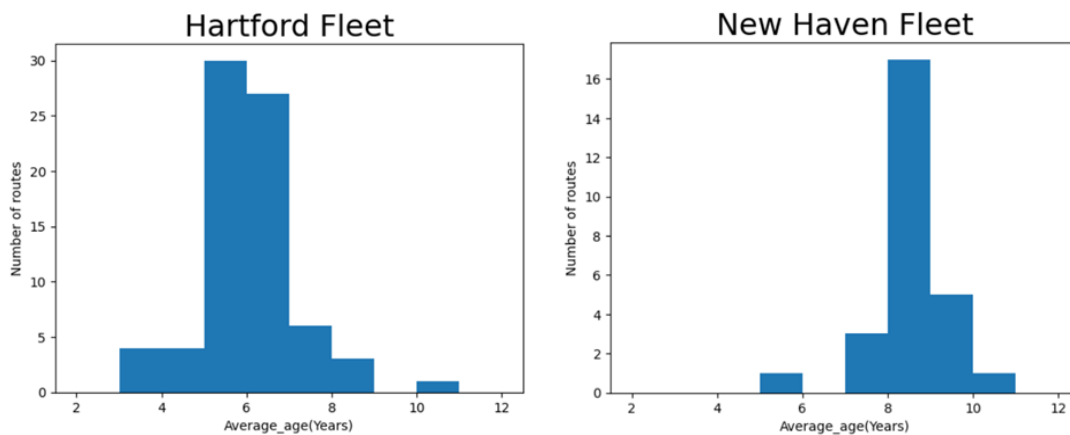


Figure 11: Distribution of age of the fleet for Hartford and Newhaven Region

Load Factor

Load Factor (LF) is the proportion of vehicle capacity occupied by passengers at a given time. CTtransit provided LF data, which incorporated the actual vehicle capacity of those buses assigned to routes. LF

service standards are presented in Table 23, providing maximum and minimum LF for five unique time periods.

Table 23: Load Factor Service Standard

Service Period	Maximum Load Factor	Minimum Load Factor
Weekday Peak	1.33	0.33
Weekday Midday	1.00	0.25
Evening	1.00	0.15
Nights (after 10 PM)	1.00	0.15
Weekends	1.00	0.20

Procedure

For each route, the average load factor for each service period is calculated for the analysis period. Results are sorted into their minority and LI route groupings and performance against the published standards evaluated. If the average LF falls within the range in the service standard for the given time period, the route meets the service standard for that time period.

For example: Route 101 has an average load factor during the weekday peak of 0.22, which is less than minimum load factor – meaning that route 101 does not meet the LF standard for the weekday peak. However, the average load factor for Route 101 during the weekend is 0.25 which falls between 0.20 and 1, meeting the LF standard during weekends.

The percentages of all minority-serving and non-minority routes that meet service standard for each service period are shown in Table 24. The percentages of all LI-serving and non-LI routes that meet this service standard are shown in Table 25.

In Hartford, minority-serving and LI-serving routes outperform non-minority and non-LI routes with respect to LF, indicating no disparate impact or disproportionate burden. In New Haven, the two non-minority and non-LI routes perform better than minority and LI routes with respect to LF in some time periods. However, the differences are not large enough to indicate a disparate impact or disproportionate burden. Figure A.4 presents two routes that may require attention as they experienced LF > 2.0 during the analysis period.

Table 24: Percent of Routes Meeting Load Factor Standard (minority/non-minority)

System	All (%)	Minority-serving (%)	Non-minority-serving (%)	Service Period
Hartford	16.0	17.2	11.8	Weekday Peak
New Haven	61.5	66.7	0	

Hartford	57.8	66.7	23.1	Weekday MIDDAY
New Haven	92.0	91.3	100	
Hartford	72.6	78.4	45.4	Evening
New Haven	96.0	95.6	100	
Hartford	61.2	69.2	33.3	Nights
New Haven	92.0	91.3	100	
Hartford	64.7	68.9	33.3	Weekends
New Haven	91.7	90.9	100	

Table 25: Percent of Routes Meeting Load Factor (LI/non-LI)

System	All (%)	LI-serving (%)	Non-LI-serving (%)	Service Period
Hartford	16.0	21.4	9	Weekday Peak
New Haven	61.5	66.7	0	
Hartford	57.8	74.3	32.0	Weekday MIDDAY
New Haven	92.0	91.3	100	
Hartford	72.6	81.6	58.3	Evening
New Haven	96.0	95.6	100	
Hartford	61.2	68.4	51.7	Nights
New Haven	92.0	91.3	100	
Hartford	64.7	74.3	43.8	Weekends
New Haven	91.7	90.9	100	

Bus Disparate Impact Analysis

Disparate impact between minority and non-minority-serving routes was analyzed for schedule adherence (OTP) and load factor (Mean LF) service standards. If the service measure for minority-serving routes is 15% worse than the service measure for non-minority-serving routes, that would signify a disparate impact.

The percentage difference for OTP is calculated as the percentage of on-time trips for minority-serving routes subtracted from that of the non-minority-serving routes. If this difference is greater than 15%, it indicates that non-minority routes are experiencing OTP performance >15% better than minority routes and a disparate impact is evidenced.

The difference in Mean LF is calculated by subtracting the non-minority Mean LF from the minority Mean LF and multiplying by 100. If this difference is greater than 15%, it indicates that minority routes are experiencing Load Factors >15% higher than non-minority routes and a disparate impact is evidenced.

For vehicle age, the percentage difference was calculated slightly differently, as below. The average age for non-minority-serving routes was subtracted from that of the minority-serving route and then divided by the mean age of the fleet for the service area. If this difference is greater than 15%, it indicates that vehicles serving minority routes are older than non-minority servings by 15% and a disparate impact is evidenced.

$$\frac{M-N}{A} \times 100 = \text{Vehicle Age Disparate Impact Percent Difference}$$

where M is the average age for minority-serving routes, N is the average age for non-minority-serving routes and A is the average age for the fleet of the service area.

The results of the disparate impact and disproportionate burden analyses for the Hartford transit division are shown in Tables 26 and 28, respectively. Time periods in which there is a disparate impact/disproportionate burden are highlighted in red. Mean LF exceeds the disparate impact/disproportionate burden threshold for three time periods, all of which occur on Sunday. This could indicate that routes serving commuters with non-traditional working hours may be experiencing high ridership and warrant additional capacity.

The results of the disparate impact and disproportionate burden analyses for the New Haven transit division are shown in Tables 27 and 29, respectively. Time periods in which there is a disparate impact/disproportionate burden are highlighted in red. Mean LF exhibits a disparate impact and disproportionate burden in New Haven during many time periods. It is important to again note that there are only two non-minority routes on weekdays and Saturday and just a single non-minority route on Sunday. The routes that are considered non-minority are shown in Figure A.3 in the Appendix.

Regardless, some routes have a load factor of greater than 2 (200% of listed capacity) during weekday AM Peak, Midday, and PM Peak. The routes with load factors greater than 2 are shown in Figure A.4 in the Appendix.

Table 26: Disparate Impact Service Monitoring Analysis, Hartford Transit Division

Day	Time	Total minority routes	Total non-minority Routes	Minority OTP	Non-minority OTP	Difference ^[1]	Minority Mean LF	Non-Minority Mean LF	Difference ^[2]	Minority Average Age	Non-Minority Average Age	% Difference ^[3]
Weekday	Early AM	49	14	80.3	72.8	-8	0.18	0.19	-1.0	6.0	6.6	-10
Weekday	AM Peak	57	16	75.3	70.5	-5	0.22	0.17	4	6.0	6.4	-7
Weekday	Midda y	49	12	68.9	60	-9	0.33	0.25	8	6.1	6.8	-11
Weekday	PM Peak	57	16	70	59	-11	0.31	0.21	10	6.0	6.5	-8
Weekday	Late Night	50	11	66.8	57.5	-9	0.28	0.23	5	6.1	6.6	-8
Saturday	Early AM	17	2	79.6	73.4	-6	0.14	0.06	9	6.2	8.1	-31
Saturday	AM Peak	39	5	76.9	73.2	-4	0.20	0.19	0	6.1	6.9	-13
Saturday	Midda y	40	5	68.7	67.8	-1	0.29	0.23	6	6.1	6.9	-13
Saturday	PM Peak	40	5	62.3	64.5	2	0.33	0.24	9	6.1	6.9	-13
Saturday	Late Night	38	6	65.5	67.2	2	0.32	0.19	12	6.1	6.6	-8
Sunday	Early AM	8	0	80.4	0	-	0.14	-	-	6.4	-	-
Sunday	AM Peak	25	4	76.7	75.1	-2	0.18	0.07	11	6.3	7.0	-11
Sunday	Midda y	25	3	69.6	73.1	4	0.29	0.12	17	6.2	7.0	-13
Sunday	PM Peak	25	4	61.3	66.3	5	0.35	0.14	21	6.3	7.0	-11
Sunday	Late Night	26	4	63	68.2	5	0.29	0.11	19	6.3	7.0	-11

Table 27: Disparate Impact Service Monitoring Analysis, New Haven Transit Division

Day	Time	Total minority routes	Total non-minority Routes	Minority OTP	Non-minority OTP	Difference ^[4]	Minority Mean LF	Non-Minority Mean LF	Difference ^[5]	Minority Average Age	Non-Minority Average Age	% Difference ^[6]
Weekday	Early AM	22	2	80.3	93.1	13	0.28	0.25	3	8.6	8.2	5
Weekday	AM Peak	24	2	73.7	78.7	5	0.29	0.21	8	8.7	8.2	6
Weekday	Midday	23	2	58.2	52	-6	0.46	0.35	11	8.6	8.2	5
Weekday	PM Peak	24	2	73.7	78.7	5	0.48	0.38	10	8.7	8.2	6
Weekday	Late Night	23	2	50.7	58.3	8	0.47	0.31	16	8.7	8.2	6
Saturday	Early AM	21	2	78.9	93.1	14	0.25	0.17	8	8.5	8.2	4
Saturday	AM Peak	22	2	74.1	78.7	5	0.29	0.25	4	8.6	8.2	5
Saturday	Midday	21	2	57.5	52	-6	0.43	0.28	15	8.5	8.2	4
Saturday	PM Peak	21	2	73.9	78.7	5	0.48	0.27	22	8.5	8.2	5
Saturday	Late Night	16	1	48.4	62.2	14	0.41	0.30	11	8.6	8.2	1
Sunday	Early AM	15	1	79.1	88.5	9	0.28	0.12	16	8.4	8.3	1
Sunday	AM Peak	15	1	74.3	81.5	7	0.37	0.22	14	8.4	8.3	1
Sunday	Midday	16	1	58.7	56.4	-2	0.46	0.29	17	8.5	8.3	2
Sunday	PM Peak	16	1	74.3	81.5	7	0.54	0.32	22	8.5	8.3	2

Sunday	Late Night	16	1	48.4	62.2	-14	0.41	0.13	28	8.5	8.3	2
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Table 28: Disproportionate Burden Service Monitoring Analysis, Hartford Transit Division

Day	Time	Total LI routes	Total non-LI Routes	LI OTP	Non-LI OTP	Difference ⁽¹⁾	LI Mean LF	Non-LI Mean LF	Difference ⁽²⁾	LI Average Age	Non-LI Average Age	% Difference ⁽³⁾
Weekday	Early AM	36	27	82.0	74.2	-8	0.17	0.20	-3	6.1	6.3	-3
Weekday	AM Peak	41	32	76.3	71.5	-5	0.22	0.20	1	6.0	6.2	-3
Weekday	Midda y	37	24	69.0	64.3	-5	0.35	0.25	10	6.0	6.7	-11
Weekday	PM Peak	41	32	63.5	58.6	-5	0.32	0.24	8	5.9	6.2	-5
Weekday	Late Night	36	25	67.5	61.6	-6	0.29	0.22	7	6.0	6.5	-8
Saturday	Early AM	12	7	82.2	73.4	-9	0.14	0.14	1	6.2	6.6	-7
Saturday	AM Peak	30	14	77.7	73.9	-4	0.20	0.17	3	6.1	6.5	-7
Saturday	Midda y	31	14	69.4	67.0	-2	0.31	0.22	9	6.1	6.5	-7
Saturday	PM Peak	31	14	63.1	61.4	-2	0.35	0.24	11	6.1	6.5	-7
Saturday	Late Night	29	15	65.7	65.8	0	0.35	0.19	16	6.1	6.4	-5
Sunday	Early AM	5	3	76.8	74.9	-2	0.13	0.14	-1	6.3	6.5	-3
Sunday	AM Peak	18	11	77.5	74.9	-3	0.18	0.13	5	6.2	6.6	-7
Sunday	Midda y	19	9	70.3	69.2	-1	0.30	0.18	12	6.2	6.6	-7
Sunday	PM Peak	18	11	62.8	60.7	-2	0.37	0.22	15	6.2	6.6	-7

Sunday	Late Night	19	11	63.0	65.1	2	0.31	0.19	1	6.2	6.6	-7
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Table 29: Disproportionate Burden Service Monitoring Analysis, New Haven Transit Division

Day	Time	Total LI routes	Total non-LI Routes	LI OTP	Non-LI OTP	Difference ^[10]	LI Mean LF	Non-LI Mean LF	Difference ^[11]	LI Average Age	Non-LI Average Age	% Difference ^[12]
Weekday	Early AM	22	2	80.3	93.1	13	0.28	0.25	3	8.6	8.2	5
Weekday	AM Peak	24	2	73.7	78.7	5	0.29	0.21	8	8.7	8.2	6
Weekday	Midday	23	2	58.2	52	-6	0.46	0.35	11	8.6	8.2	5
Weekday	PM Peak	24	2	73.7	78.7	5	0.48	0.38	10	8.7	8.2	6
Weekday	Late Night	23	2	50.7	58.3	8	0.47	0.31	16	8.7	8.2	6
Saturday	Early AM	21	2	78.9	93.1	14	0.25	0.17	8	8.5	8.2	4
Saturday	AM Peak	22	2	74.1	78.7	5	0.29	0.25	4	8.6	8.2	5
Saturday	Midday	21	2	57.5	52	-6	0.43	0.28	15	8.5	8.2	4
Saturday	PM Peak	21	2	73.9	78.7	5	0.48	0.27	22	8.5	8.2	5
Saturday	Late Night	16	1	48.4	62.2	14	0.41	0.30	11	8.6	8.2	1
Sunday	Early AM	15	1	79.1	88.5	9	0.28	0.12	16	8.4	8.3	1
Sunday	AM Peak	15	1	74.3	81.5	7	0.37	0.22	14	8.4	8.3	1
Sunday	Midday	16	1	58.7	56.4	-2	0.46	0.29	17	8.5	8.3	2
Sunday	PM Peak	16	1	74.3	81.5	7	0.54	0.32	22	8.5	8.3	2

Sunday	Late Night	16	1	48.4	62.2	-14	0.41	0.13	28	8.5	8.3	2
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- [\[1\]](#) Simple Difference: non-minority % - minority %
- [\[2\]](#) Simple Difference: (non-minority % - minority %) x 100
- [\[3\]](#) % Difference: (minority age – non-minority age)/average system age x 100
- [\[4\]](#) Simple Difference: non-minority % - minority %
- [\[5\]](#) Simple Difference: (non-minority % - minority %) x 100
- [\[6\]](#) % Difference: (minority age – non-minority age)/average system age x 100
- [\[7\]](#) Simple Difference: non-minority % - minority %
- [\[8\]](#) Simple Difference: (non-minority % - minority %) x 100
- [\[9\]](#) % Difference: (minority age – non-minority age)/average system age x 100
- [\[10\]](#) Simple Difference: non-minority % - minority %
- [\[11\]](#) Simple Difference: (non-minority % - minority %) x 100
- [\[12\]](#) % Difference: (minority age – non-minority age)/average system age x 100

Rail Service Monitoring

This document provides the monitoring results for rail service. Rail service was compared to service standards for frequency/headway, schedule adherence/on time performance, and load factor. Stations were categorized by minority-serving or non-minority-serving stations to identify if there was a disparate impact in service between the two categories.

Service measures were derived from end point train time arrivals, manual passenger count data, and public times tables to calculate frequency/headway of routes, average on-time percentages, load factors, and vehicle age. The results are summarized below.

Methodology for Classifying Stations as Minority and Non-Minority

Minority serving stations were identified as those with more than 33.3% of minority census tracts within the 2 ½ mile service area. Census tracts were classified as minority census tracts if the total minority percentage within the tract exceeded the overall state average from the 2022 US census data. Rail stations are structures located on fixed guideways. Many of these stations are historic and have been in the same location for decades.

Table 30: Rail Line Stations Demographics

<i>Rail Line</i>	Minority Serving Stations
<i>Shore Line East</i>	33.3% of all stations
<i>Outer New Haven Line</i>	68.8% of all stations
<i>Inner New Haven Line</i>	60.0% of all stations
<i>New Canaan Branch</i>	50.0% of all stations
<i>Danbury Branch</i>	42.9% of all stations
<i>Waterbury Branch</i>	16.7% of all stations

The New Haven Line is divided into the Inner New Haven Line segment from Stamford to Grand Central Terminal (GCT) in New York City and the Outer New Haven Line from New Haven to Stamford. These segments have different headway standards that were developed by Metro North Railroad. The majority of the Inner New Haven Line rail service serves stations within the state of New York. The other measures do not have separate standards for these two sections of the mainline. The peak service time periods for both the New Haven Line and Shore Line East are defined by that train or a connection from that train arriving at Grand Central Terminal (GCT) in New York City between the hours of 6:00 AM and 10:00 AM or departing from GCT between the hours of 4:00 PM and 8 PM.

Disparate Impact

Disparate impact between minority serving stations and non-minority-serving stations was analyzed for the headway, on time performance, and load factor service measures. If the service measure for minority serving stations was more than 15% worse than the measure for non-minority serving stations, that would signify a disparate impact. For example, if the Shore Line East peak period headways at minority serving stations were 35 minutes and the headways were 25 minutes at non-minority serving stations, the headway difference would be 10 minutes which is 28.6% worse for the minority serving stations. This would be deemed a disparate impact since it is higher than the 15% threshold.

$$(M - N) / M \times 100 = \text{OTP, Veh Age \& LF Disparate Impact Percent Difference}$$

Please note that New London station on Shore Line East is the only station on that Shore Line East Old Saybrook to New London branch service with less service than the rest of the Line prior to July 2021. Additionally, it is important to note that the Inner New Haven Line service is only partially in the state of Connecticut. The majority of the Inner New Haven Line service is within the state of New York and is included in the Metropolitan Transit Authority (MTA) Title VI plan.

On Time Performance is based on end point arrival times. This assigns the same values from a train to every station the train stops at. Nearly all New Haven Line trains begin or end at Grand Central Terminal (GCT) in New York City or New Haven CT. Shore Line East trains end at either New Haven Union, Old Saybrook (before July 2021) or New London.

Vehicle Assignment is solely based on the equipment type required by the infrastructure and service (Shore Line East and New Haven Line).

Monitoring Results: Frequency of Service/Headway

New Haven Line

The frequency of service/headway standard for each line is based on the service type and the service period, as shown in Tables 31 and 32.

Table 31: New Haven Line Headway Standards

<i>New Haven Line</i>	Peak	Rev. Peak	Off-Peak	Weekend
<i>Inner New Haven (STC-GCT)</i>	20 minutes	30 minutes	60 minutes	60 minutes
<i>Outer New Haven (NHV-STC)</i>	25 minutes	30 minutes	60 minutes	60 minutes
<i>New Canaan Branch</i>	30 minutes	60 minutes	60 minutes	60 minutes
<i>Danbury Branch</i>	45 minutes	60 minutes	120 minutes	120 minutes
<i>Waterbury Branch</i>	45 minutes	60 minutes	120 minutes	120 minutes

Table 32: Outer New Haven Line Headway Comparison

<i>Stations in minutes</i>	Peak	Reverse	Off peak	Weekend
<i>Minority serving</i>	20.6	45.0	33.4	34.3
<i>Non-minority serving</i>	22.2	43.9	33.6	33.7
<i>Difference</i>	-7.7%	2.6%	-0.4%	1.5%

On the Outer New Haven Line minority serving stations average better headways than non-minority serving stations in Peak and Off-peak service and are slightly worse in reverse peak and weekends. There is no finding of disparate impact for headway along the outer New Haven line as no difference exceeds the 15% threshold. Due to the Covid 19 Pandemic and the public health emergency, rail service was reduced during the 2020 to 2022 time frame, therefore the headway service standards were not always met.

Table 33: Inner New Haven Line Headway Comparison

<i>Stations in minutes</i>	Peak	Reverse	Off peak	Weekend
<i>Minority serving</i>	21.8	43.5	30.6	32.9
<i>Non-minority serving</i>	21.8	43.5	30.5	32.8
<i>Difference</i>	-0.1%	0.0%	0.3%	0.1%

The Inner New Haven Line stations did not have any findings.

Table 34: New Haven Line Headways (Minutes)

<i>Stations</i>	Peak	Reverse	Off Peak	Weekend
<i>New Haven-State St.</i>		274.0	34.5	58.4
<i>New Haven</i>	23.8	48.4	32.3	35.3
<i>West Haven</i>	23.9	48.3	32.4	35.3

Milford	23.9	48.3	32.4	35.3
Stratford	24.0	48.3	32.4	35.2
Bridgeport	21.1	46.6	32.3	32.6
Fairfield Metro	21.3	47.4	32.5	33.6
Fairfield	21.4	47.2	32.5	33.5
Southport	28.1	56.9	51.1	45.4
Green's Farms	27.5	56.6	45.8	44.0
Westport	24.6	48.0	33.0	35.8
East Norwalk	25.3	57.0	51.1	44.0
South Norwalk	19.9	42.8	32.9	31.0
Rowayton	32.4	57.2	52.0	47.3
Darien	27.1	47.3	33.4	36.6
Noroton Heights	30.5	57.2	52.0	45.9
Stamford	11.7	22.3	14.3	16.4
Old Greenwich	24.1	45.1	30.3	34.6
Riverside	24.2	45.1	30.4	34.7
Cos Cob	24.2	45.1	30.4	34.6
Greenwich	18.6	42.8	20.5	27.5

Table 35: New Canaan Branch Comparison

New Canaan Stations	Peak	Rev. Peak	Off-Peak	Weekend
<i>Minority serving</i>	48.6	58.7	61.1	56.4
<i>Non-minority serving</i>	48.5	58.8	61.0	56.4
<i>Difference</i>	0.1%	-0.1%	0.2%	0.0%
<i>New Canaan</i>	48.5	58.9	60.9	56.4
<i>Talmadge Hill</i>	48.6	58.8	61.1	56.4
<i>Springdale</i>	48.6	58.7	61.1	56.4
<i>Glenbrook</i>	48.5	58.7	61.2	56.4

The New Canaan branch did not have any findings.

Table 36: Danbury Branch Comparison

Danbury Stations	Peak	Rev. Peak	Off-Peak	Weekend
<i>Minority serving</i>	65.3	118.2	126.0	98.6

<i>Non-minority serving</i>	65.3	117.5	125.9	98.4
<i>Difference</i>	-0.1%	0.6%	0.0%	0.2%
<i>Danbury</i>	65.2	118.3	125.9	98.6
<i>Bethel</i>	65.3	115.2	125.9	97.5
<i>Redding</i>	65.3	118.1	126.0	98.6
<i>Branchville</i>	65.3	118.1	126.0	98.6
<i>Cannondale</i>	65.3	118.1	125.9	98.6
<i>Wilton</i>	65.3	118.0	125.9	98.6
<i>Merritt 7</i>	65.3	118.0	126.1	98.6
<i>Danbury</i>	65.2	118.3	125.9	98.6

The Danbury branch did not have any findings.

Table 37: Waterbury Branch Comparison

<i>Waterbury Stations</i>	Peak	Rev. Peak	Off-Peak	Weekend
<i>Minority serving</i>	65.3	118.2	126.0	98.6
<i>Non-minority serving</i>	65.3	117.5	125.9	98.4
<i>Difference</i>	-0.1%	0.6%	0.0%	0.2%
<i>Waterbury</i>	133.1	152.0	149.8	146.4
<i>Naugatuck</i>	132.9	152.3	149.8	146.4
<i>Beacon Falls</i>	132.9	152.3	149.8	146.4
<i>Seymour</i>	132.9	152.3	149.8	146.4
<i>Ansonia</i>	132.9	152.3	149.8	146.4
<i>Derby</i>	132.9	152.3	149.8	146.4

The Waterbury branch did not have any findings.

Shore Line East Headway

Shore Line East station headways on the New Haven to Old Saybrook section are shown in Table 41. The non-minority serving stations receive less timely in all time periods. The reverse peak difference is 12 minutes, which is 9.7% less favorable for minority serving stations but is below the 15% threshold to be considered a disparate impact. Please note that the Covid -19 pandemic impacted service starting in March 2020 and the headway standards were not met on the service due to service reductions. This impacted both minority serving stations and non-minority serving stations equally.

Table 39: Shore Line East Headway Standards

<i>Line Segment</i>	Peak	Rev. Peak	Off-Peak	Weekend
<i>NHV - OSB</i>	145	157	194	179

Table 40. Shore Line East NHV – OSB Segment Headway Comparison

<i>SLE stations</i>	Peak	Rev. Peak	Off-Peak	Weekend
<i>Minority serving</i>	150	136	124	147
<i>Non-minority serving</i>	149	124	116	142
<i>Difference</i>	0.7%	9.7%	6.9%	3.5%

Table 41: Shore Line East Headways by Station

<i>Station</i>	Peak	Reverse	Off-peak	Weekend
<i>New London</i>	145	157	194	179
<i>Old Saybrook</i>	148	110	130	144
<i>Westbrook</i>	149	110	129	144
<i>Clinton</i>	148	82	95	135
<i>Madison</i>	148	NA	90	128
<i>Guilford</i>	148	110	129	143
<i>Branford</i>	149	164	122	156
<i>New Haven State</i>	150	162	120	152
<i>New Haven Union</i>	150	109	128	142

The New London Station is the only station served on the Old Saybrook to New London segment by Shore Line East. There was limited weekday service to New London station prior to July 2021. It cannot be compared to any other station as it has a unique headway standard significantly different from the rest of the Shore Line East rail service. Adding frequencies to this station has significant obstacles including infrastructure limitations involving moveable bridges, single platforms and limited switches.

Additionally, there were some Amtrak regional trains that cross honored Shore Line East multi-ride fare types that cannot be considered in this study during this period.

Rail Service Monitoring Results: Schedule Adherence/On-time Performance

The On-Time Performance (OTP) service standard for the New Haven Line (including branch lines), is 94% and the Shore Line East service standard is 93%. A train is considered on time if it arrives at its final destination within 5 minutes and 59 seconds of the scheduled arrival time. There are certain data limitations for monitoring when OTP is based off end point arrival times.

CTDOT policy is for every train to make every station stop on Shore Line East where possible and to stop at all the Branch Line stations. There are some infrastructure limitations on Shore Line East stations that limit stops at Madison and limited stops at Clinton until June 2022. This policy ensures that all stations receive equal treatment. This policy is not practical to apply on both the New Haven Line mainline due to passenger volume, train traffic, and travel time, among other factors. Nearly all mainline trains have GCT as one end point.

New Haven Line OTP

The New Haven Line is divided into both the Inner New Haven Line from Stamford to GCT and the Outer New Haven Line from New Haven Union Station to Stamford. There are different headway standards for these two segments of the New Haven mainline service. It is important to note that New Haven State Street station is included in the Shore Line East analysis and most of the service at that station is Shore Line East. The OTP analysis is done by station by service period. Each train endpoint OTP value for the period was assigned to every station the train stopped at. The OTP values of all trains stopping at the station were then averaged based upon the service period. These OTP values at the stations are then averaged by minority serving and non-minority serving designation.

Table 42: Inner New Haven Line OTP Comparison

<i>Station serving</i>	Peak	Reverse	Off Peak	Weekend
<i>Minority</i>	97.5%	98.1%	97.0%	97.7%
<i>Non-Minority</i>	97.6%	98.2%	96.9%	97.7%
<i>Difference</i>	-0.1%	-0.1%	0.1%	0.0%

The Inner New Haven Line has minority serving stations averaging better on time percentage than non-minority serving stations during peak, reverse peak, and off-peak, while non-minority serving stations had better weekend OTP. The difference between the station on time percentages is below the 15% threshold percent during peak service periods.

Table 43: Outer New Haven Line OTP Comparison

<i>Station Serving</i>	Peak	Reverse	Off Peak	Weekend
<i>Minority</i>	97.4%	97.8%	95.7%	97.1%
<i>Non-Minority</i>	97.6%	98.0%	95.8%	97.4%
<i>Difference</i>	-0.2%	-0.1%	-0.2%	-0.3%

The Outer New Haven Line has minority serving stations average better OTP on weekends, while non-minority serving stations average better OTP on Peak, reverse peak, and off-peak service. The difference between the station on time percentages is below the 15% threshold.

Table 44: New Haven Line OTP by Station

Average OTP by Trains Stopping at:

Station	Peak	Reverse	Off Peak	Weekend
<i>New Haven State Street</i>	NA	98.8%	95.2%	95.8%
<i>New Haven Union Station</i>	97.7%	98.0%	95.8%	97.4%
<i>West Haven</i>	97.7%	98.0%	95.8%	97.4%
<i>Milford</i>	97.7%	98.0%	95.8%	97.4%
<i>Stratford</i>	97.4%	97.7%	95.8%	97.2%
<i>Bridgeport</i>	97.1%	97.4%	95.5%	96.9%
<i>Fairfield Metro</i>	97.6%	98.0%	95.8%	97.4%
<i>Fairfield</i>	97.7%	98.0%	95.8%	97.4%
<i>Southport</i>	97.7%	98.0%	96.0%	97.5%
<i>Green's Farms</i>	97.8%	98.0%	95.9%	97.5%
<i>Westport</i>	97.7%	98.0%	95.8%	97.4%
<i>East Norwalk</i>	97.7%	98.0%	96.0%	97.5%
<i>South Norwalk</i>	97.4%	97.7%	95.8%	97.2%
<i>Rowayton</i>	97.1%	97.1%	95.5%	96.8%
<i>Darien</i>	97.2%	97.6%	95.3%	97.0%
<i>Noroton Heights</i>	97.2%	97.7%	95.8%	97.1%
<i>Stamford</i>	97.3%	97.9%	96.5%	97.4%
<i>Old Greenwich</i>	97.7%	98.3%	97.3%	97.9%
<i>Riverside</i>	97.7%	98.3%	97.3%	97.9%
<i>Cos Cob</i>	97.7%	98.3%	97.2%	97.8%
<i>Greenwich</i>	97.6%	98.2%	96.6%	97.6%

Table 45: New Canaan Branch Comparison

New Canaan Branch Line OTP Analysis

Station serving	Peak	Reverse	Off Peak	Weekend
<i>Minority</i>	96.4%	97.4%	95.4%	96.8%
<i>Non Minority</i>	96.4%	97.4%	95.4%	96.8%
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%

New Canaan Branch Line OTP

Station	Peak	Reverse	Off Peak	Weekend
<i>New Canaan</i>	96.4%	97.4%	95.4%	96.8%
<i>Talmadge Hill</i>	96.4%	97.4%	95.4%	96.8%

<i>Springdale</i>	96.4%	97.4%	95.4%	96.8%
<i>Glenbrook</i>	96.4%	97.4%	95.4%	96.8%

New Canaan Branch Line trains stop at every station. This keeps the on-time OTP the same for every station on the line. All OTP percentages are the same regardless of classification, therefore there is no finding of disparate impacts for OTP on the New Canaan branch line.

Table 46: Danbury Branch Comparison

Danbury Branch Line OTP Analysis				
Station serving	Peak	Reverse	Off Peak	Weekend
<i>Minority</i>	94.0%	91.6%	88.3%	92.1%
<i>Non Minority</i>	94.0%	91.6%	88.3%	92.1%
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%
Danbury Branch Line OTP				
Station	Peak	Reverse	Off Peak	Weekend
<i>Danbury</i>	94.0%	91.6%	88.3%	92.1%
<i>Bethel</i>	94.0%	91.6%	88.3%	92.1%
<i>Redding</i>	94.0%	91.6%	88.3%	92.1%
<i>Branchville</i>	94.0%	91.6%	88.3%	92.1%
<i>Cannondale</i>	94.0%	91.6%	88.3%	92.1%
<i>Wilton</i>	94.0%	91.6%	88.3%	92.1%
<i>Merritt 7</i>	94.0%	91.6%	88.3%	92.1%

Danbury Branch Line trains stop at every station. This keeps the OTP the same for every station on the line. All OTP percentages are the same regardless of classification, therefore there is no finding of disparate impacts for OTP on the Danbury branch line.

Table 47: Waterbury Branch Comparison

Waterbury Branch Line OTP Analysis				
Station	Peak	Reverse	Off Peak	Weekend
<i>Minority</i>	91.3%	92.3%	93.1%	92.2%
<i>Non Minority</i>	91.3%	92.3%	93.1%	92.2%
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%
Waterbury Branch Line OTP				
Station	Peak	Reverse	Off Peak	Weekend
<i>Waterbury</i>	91.3%	92.3%	93.1%	92.2%
<i>Naugatuck</i>	91.3%	92.3%	93.1%	92.2%
<i>Beacon Falls</i>	91.3%	92.3%	93.1%	92.2%
<i>Branchville</i>	91.3%	92.3%	93.1%	92.2%
<i>Seymour</i>	91.3%	92.3%	93.1%	92.2%
<i>Ansonia</i>	91.3%	92.3%	93.1%	92.2%
<i>Derby-Shelton</i>	91.3%	92.3%	93.1%	92.2%

Waterbury Branch Line trains stop at every station. This keeps the OTP the same for every station on the line. All OTP percentages are the same regardless of classification, therefore there is no finding of disparate impacts for OTP on the Danbury branch line.

Shore Line East OTP

Shore Line East operates service between New London and New Haven. This line is divided into two segments, New London to Old Saybrook and Old Saybrook to New Haven. New Haven State Street is included in the Shore Line East Analysis. New London is the only station on the New London to Old Saybrook segment.

Table 48: Shore Line East OTP Analysis and OTP by Station

<i>Shore Line East OTP Analysis</i>				
<i>Station</i>	Peak	Off-peak	Reverse	Weekend
<i>Minority serving stations</i>	98.8%	98.5%	98.8%	98.7%
<i>Non-minority serving stations</i>	98.8%	98.3%	98.5%	98.6%
<i>Difference</i>	0.0%	0.3%	0.3%	0.1%
<i>Shore Line East OTP by Station</i>				
<i>Station</i>	Peak	Reverse	Off-peak	Weekend
<i>New London</i>	98.8%	98.7%	98.8%	98.7%
<i>Old Saybrook</i>	98.8%	98.4%	98.8%	98.6%
<i>Westbrook</i>	98.8%	98.4%	98.8%	98.6%
<i>Clinton</i>	98.8%	98.1%	97.5%	98.6%
<i>Madison</i>	98.8%	98.1%		98.5%
<i>Guilford</i>	98.8%	98.4%	98.8%	98.6%
<i>Branford</i>	98.8%	98.4%	98.8%	98.6%
<i>New Haven State Street</i>	98.8%	98.5%	98.8%	98.7%
<i>New Haven Union Station</i>	98.8%	98.4%	98.8%	98.6%

The New London extension of Shore Line East gets limited service but every train that travels through to and from New London stops at every station possible. New London is a minority serving station and this does impact the OTP for minority serving stations. OTP for minority serving stations are lower for every service period than non-minority serving stations, but the differences are below the 15% disparate impact threshold.

Rail Service Monitoring Results: Load Factor

The load factor standard is based on the percentage of passengers-to-vehicle seat capacity given the time period, as shown in Table 49. This load factor policy is the same for the entire passenger rail system, but is equipment constrained. Please note that the same train equipment consist operates several different trains over the course of a single day. It is not practical to break up a consist between train runs. Most passengers experience the same load during their trip as more passengers board the train at successive stops coming into the endpoint or all experience the same load leaving the origin during peak travel times. CTDOT assigned the maximum train load on each train to each station stop to analyze the load factor at the stations.

Table 49: Load Factor Service Standard

<i>Time Period</i>	Lengthening Trains If Occupancy Exceeds...	Shortening Trains If Occupancy (after reduction) Would Not Exceed...
<i>AM Peak, PM Peak, Reverse Peak</i>	95%	95%
<i>Off-Peak Weekday</i>	85%	85%
<i>Weekend</i>	75%	75%

New Haven Line Load Factor

Most New Haven Line trains have the maximum occupancy as the train arrives or departs from Grand Central Terminal in New York.

Table 50: Inner New Haven Line Load Factor Comparison

<i>Inner NHL Stations serving</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>Minority</i>	47.0%	23.7%	25.1%	31.8%
<i>Non-Minority</i>	47.4%	25.7%	25.0%	31.9%
<i>Difference</i>	-1.0%	-8.5%	0.4%	-0.3%

The Inner New Haven Line has minority serving stations averaging lower load factors than non-minority serving stations during peak and weekend service. The Inner New Haven Line has non-minority serving stations averaging lower load factors during reverse peak service and off-peak service. The difference between the minority serving stations and non-minority serving stations is less than 3%. This is below the 15% disparate impact threshold. The only Metro-North train that exceeded the standard was the 1360 which had a capacity of 111.9% in Winter 2021. A car was added to the set and the load was 91.0% in Spring 2022.

Table 51: Outer New Haven Line Load Factor Comparison

<i>Outer NHL Stations serving</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>Minority</i>	43.5%	24.5%	24.5%	31.4%
<i>Non-Minority</i>	42.1%	23.3%	23.2%	30.7%

<i>Difference</i>	3.2%	5.1%	5.5%	2.3%
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The Outer New Haven Line has minority serving stations averaging lower load factors than non-minority serving stations during peak service and weekend service. The Outer New Haven Line has non-minority serving stations averaging lower load factors during reverse peak service and off-peak service. The greatest difference between the minority serving stations and non-minority serving stations is about 5.5%. This is below the 15% disparate impact threshold. Table 52 reports the average load factor for trains stopping at the New Haven Line stations.

Table 52: Average Load Factor of trains serving New Haven Line stations.

<i>Station</i>	Peak	Reverse	Off Peak	Weekend
<i>Outer NHL</i>				
<i>New Haven State Street</i>	NA	35.3%	28.6%	31.4%
<i>New Haven Union Station</i>	46.5%	23.3%	25.4%	31.8%
<i>West Haven</i>	46.5%	23.3%	23.9%	31.5%
<i>Milford</i>	46.5%	23.3%	23.9%	31.5%
<i>Stratford</i>	45.7%	23.0%	22.8%	31.3%
<i>Bridgeport</i>	45.5%	23.1%	24.4%	31.9%
<i>Fairfield Metro</i>	45.9%	23.2%	22.8%	31.6%
<i>Fairfield</i>	46.1%	23.3%	22.8%	32.0%
<i>Southport</i>	46.9%	NA	NA	NA
<i>Green's Farms</i>	43.7%	NA	NA	30.7%
<i>Westport</i>	44.3%	NA	NA	30.9%
<i>East Norwalk</i>	43.4%	NA	NA	30.6%
<i>South Norwalk</i>	44.9%	23.6%	22.8%	31.6%
<i>Rowayton</i>	43.7%	23.1%	22.7%	30.0%
<i>Darien</i>	45.0%	23.3%	22.8%	30.5%
<i>Noroton Heights</i>	43.1%	23.5%	23.5%	30.0%
<i>Stamford</i>	47.2%	23.8%	23.3%	32.4%
<i>Inner NHL</i>				
<i>Stamford</i>	47.2%	23.8%	23.3%	32.4%
<i>Old Greenwich</i>	46.9%	23.6%	26.0%	31.5%
<i>Riverside</i>	46.8%	23.6%	26.0%	31.5%
<i>Cos Cob</i>	46.9%	23.6%	26.0%	31.5%
<i>Greenwich</i>	48.0%	27.7%	24.0%	32.2%

Table 53: New Canaan Branch Line Load Factor Comparison

<i>New Canaan Stations serving</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>Minority</i>	49.2%	NA	35.7%	42.9%

<i>Non Minority</i>	49.2%	NA	35.7%	42.9%
<i>Difference</i>	0.0%	NA	0.0%	0.0%

New Canaan Branch Line trains stop at every station. This keeps the maximum load factor passengers experience on board the same for every station on the line. There is no finding of disparate impact for load factor on the New Canaan branch line.

Table 54: Average Load Factor of trains serving New Canaan Branch Line stations.

<i>New Canaan Branch Line</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>New Canaan</i>	49.2%	NA	35.7%	42.9%
<i>Talmadge Hill</i>	49.2%	NA	35.7%	42.9%
<i>Springdale</i>	49.2%	NA	35.7%	42.9%
<i>Glenbrook</i>	49.2%	NA	35.7%	42.9%

Table 55: Danbury Branch Line Load Factor Comparison

<i>Danbury Branch Stations</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>Minority</i>	25.4%	NA	NA	22.7%
<i>Non-Minority</i>	25.4%	NA	NA	22.7%
<i>Difference</i>	0.0%	NA	NA	0.0%

Danbury Branch Line trains stop at every station. This keeps the maximum load factor passengers experience on board a train the same for every station on the line. There is no finding of disparate impact for load factor on the Danbury branch line.

Table 56: Average Load Factor of trains serving Danbury Branch Line stations.

<i>Danbury Branch Line</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>Danbury</i>	25.4%	NA	NA	22.7%
<i>Bethel</i>	25.4%	NA	NA	22.7%
<i>Redding</i>	25.4%	NA	NA	22.7%
<i>Branchville</i>	25.4%	NA	NA	22.7%
<i>Cannondale</i>	25.4%	NA	NA	22.7%
<i>Wilton</i>	25.4%	NA	NA	22.7%
<i>Merritt 7</i>	25.4%	NA	NA	22.7%

Table 57: Waterbury Branch Line Load Factor Comparison

<i>Waterbury Branch Stations serving</i>	Peak	Rev Peak	Off-Peak	Weekend
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<i>Minority</i>	38.1%	25.4%	NA	34.9%
<i>Non Minority</i>	38.1%	25.4%	NA	34.9%
<i>Difference</i>	0.0%	0.0%	NA	0.0%

Waterbury Branch Line trains stop at every station. This keeps the maximum load factor passengers experience on board a train the same for every station on the Line. MNR was not able to get passenger counts out on Waterbury trains due to complications from the pandemic, lengthy bussing substitutions and had insufficient historical data to extrapolate from to assign ridership by train.

Table 58: Average Load Factor of trains serving Waterbury Branch Line Stations.

<i>Waterbury Branch Line</i>	Peak	Rev Peak	Off-Peak	Weekend
<i>Waterbury</i>	38.1%	25.4%	NA	34.9%
<i>Naugatuck</i>	38.1%	25.4%	NA	34.9%
<i>Beacon Falls</i>	38.1%	25.4%	NA	34.9%
<i>Seymour</i>	38.1%	25.4%	NA	34.9%
<i>Ansonia</i>	38.1%	25.4%	NA	34.9%
<i>Derby</i>	38.1%	25.4%	NA	34.9%

Table 59: Shore Line East Load Factor Comparison

<i>Shore Line East Load Factor Analysis</i>				
<i>Station Serving</i>	Peak	Reverse	Off-Peak	Weekend
<i>Minority serving stations</i>	NN	NN	NN	NN
<i>Non-minority serving stations</i>	NN	NN	NN	NN
<i>Shore Line East Load factor by Station</i>				
<i>Highest Average Load in period</i>	Peak	Reverse	Off-Peak	Weekend
<i>SLE Station</i>	Jan 20 on 1637	Jan 20 on 1681	Jan 20 on 1636	Jan 20 on 3618
<i>New London</i>	31.8%	8.5%	44.4%	18.8%
<i>Old Saybrook</i>	31.8%	8.5%	44.4%	18.8%
<i>Westbrook</i>	31.8%	8.5%	44.4%	18.8%
<i>Clinton</i>	31.8%	8.5%	44.4%	18.8%
<i>Madison</i>	31.8%	8.5%	44.4%	18.8%
<i>Guilford</i>	31.8%	8.5%	44.4%	18.8%
<i>Branford</i>	31.8%	8.5%	44.4%	18.8%
<i>New Haven State Street</i>	31.8%	8.5%	44.4%	18.8%
<i>New Haven Union Station</i>	31.8%	8.5%	44.4%	18.8%

Load Factor was calculated using 2 months each year, January 2020, October 2020, July 2021, October 2021, July 2022, October 2022 as representative months. January 2020 was chosen to show what the

service had before the covid 19 pandemic impacted the service. No train reached 50% load and that was before the pandemic impacted ridership. There was no train that was close to being overcrowded and the busiest trains stopped at every station.

Rail Vehicle Assignment Policy

Vehicles are assigned to trains based on required propulsion power (diesel or electric) for the line, individual train ridership and seating capacity, and maintenance and storage yard requirements.

Table 60: Average Vehicle Age

<i>Equipment Type</i>	<i>Count</i>	<i>Age</i>	<i>Unit Size</i>	<i>Unit Seating</i>
<i>Shared M-8 EMU (NHL)</i>	471	8.7	PAIR	A&B UNIT – 110/101
<i>ELECTRIC COACHES</i>	471			
<i>Bombardier Push/Pull Coach (NHL)</i>	20	33	COACH	Cab 113, Tr. 131
<i>Bombardier Push/Pull Coach (NHL)</i>	20	29	COACH	Cab 113, Tr. 131
<i>Bombardier Push/Pull Center Door Coach (NHL)</i>	8	17	COACH	Cab 99, Trailer 115 Trailer w/ toilet 103
<i>Mafersa Push/Pull Coach (SLE)</i>	33	22.5	COACH	Cab 100, Tr. 109
<i>PUSH-PULL COACHES</i>	81			
<i>TOTAL PASSENGER VEHICLES</i>	552			
<i>Equipment Type</i>	<i>Book Count</i>	<i>Average Age</i>	<i>Year Rebuilt</i>	
<i>GP-40-2H Locomotive (SLE)</i>	6	48	2018 top deck	
<i>P-32AC-DM Locomotive (NHL/Branch)</i>	4	18	N/A	
<i>BL -20 locomotive</i>	6	15		
<i>P-40 Locomotive (SLE)</i>	8	27	<i>In process</i>	
<i>P-40 Locomotive (SLE – ex-NJT)</i>	4	27	<i>In process</i>	
<i>Total</i>	28			

Rail Monitoring Results: Vehicle Age and Assignment

The New Haven Line operates mainline service with electric multiple-unit (EMU) cars operating under catenary. The New Haven Line also has three branch lines – the New Canaan Branch Line which is also an electric fleet and the Danbury and Waterbury branch lines which operate diesel locomotive and push/pull passenger coaches. The primary criterion in assigning transit vehicles is the type of propulsion power required for a particular branch or line segment. Diesel locomotive-hauled coaches are used on non-electrified territory including the Danbury Branch and Waterbury Branch on MNR and on Shore Line East.

The EMU vehicles are used on electrified territory (all remaining lines/branches). Where a train operates over electrified and non- electrified territory, diesel locomotive hauled coaches must be assigned.

Cars are not assigned to specific routes or branches within electric or diesel territory but are cycled from line/branch to line/branch to achieve optimum car utilization efficiency. Short-term rolling stock assignment plans are developed for deployment of railcars. Vehicles are assigned to trains based on the required propulsion power (diesel or electric) for the route, individual train ridership and seating capacity, and maintenance and storage yard requirements, not age. CTDOT has awarded a contract for sixty new rail cars at a cost of \$317,916,025. Mainline trains all serve the same service area, there is no difference in the quality of the railcar that is dispatched for any given train consist.

Shore Line East operated a diesel fleet and push-pull passenger coaches of similarly aged equipment on a single line until June 2022 when the M8 fleet was deployed on the Shore Line East service. Since all trains serve largely the same service area, there is no opportunity for dispatching substantially differently aged equipment to serve any population segment. Given the different operating environments of the two different rail services, the equipment is generally not interchangeable.

The following vehicles are assigned by service as follows:

- M-8 EMU: operate on the New Haven Main Line and the New Canaan Branch Line. Since June 2022 M8 EMU also operate on Shore Line East.
- Bombardier Push/Pull Coaches: Operate on the Danbury Branch and Waterbury Branch line with limited Main Line use.
- P-32AC-DM Diesel Locomotives: Operate on the Danbury Branch and Waterbury Branch Lines with limited Main Line use.
- BL20-GH Diesel Locomotives: Operate on the Danbury Branch and Waterbury Branch Lines with limited Main Line use.
- Mafersa Push/Pull coaches: Operate on the Shore Line East until July 2021, they now operate solely as protect sets for the M8 fleet
- GP-40-2H Diesel Locomotives: Operate on the Shore Line East and have limited operation on the New Haven Main Line.
- P-40 Diesel Locomotives: Operate on the Shore Line East and have limited operation on the New Haven Main Line, routes or branches within electric or diesel territory but are cycled from line/branch to line/branch to achieve optimum car utilization efficiency.

A copy of the monitoring report resolution signed by Commissioner Garrett Eucalitto can be found on page 875 of the CTDOT FTA Title VI Program Appendix.

Vehicle Age Analysis:

Table 61: New Haven Line Equipment Age serving NHL stations

Average Vehicle Age of Trains Stopping at:				
<i>Station</i>	Peak	Reverse	Off Peak	Weekend
<i>New Haven State Street</i>	NA	8.7	8.7	8.7
<i>New Haven Union Station</i>	8.7	10.0	9.9	9.5

West Haven	8.7	10.0	9.9	9.5
Milford	8.7	10.0	9.9	9.5
Stratford	9.8	11.2	9.5	10.3
Bridgeport	11.8	14.2	13.2	13.1
Fairfield Metro	9.0	10.8	8.7	9.7
Fairfield	8.7	10.8	8.7	9.6
Southport	9.1	10.8	8.7	9.9
Green's Farms	9.1	10.8	8.7	9.9
Westport	8.7	10.8	8.7	9.6
East Norwalk	9.1	10.8	8.7	9.9
South Norwalk	12.0	13.5	10.3	12.3
Rowayton	12.0	11.2	8.7	11.0
Darien	11.3	11.0	8.7	10.5
Noroton Heights	11.8	11.2	8.7	10.9
Stamford	10.2	11.4	8.9	10.4
Old Greenwich	8.9	10.8	8.7	9.6
Riverside	8.9	10.8	8.7	9.6
Cos Cob	8.9	10.8	8.7	9.6
Greenwich	8.7	11.1	8.7	9.6

Table 62: Average Vehicle Age of Equipment serving Outer NHL stations.

<i>Outer NHL stations serving</i>	PEAK	Off Peak	Rev Peak	Weekend
<i>Minority</i>	10.3	11.2	9.6	10.5
<i>Non-Minority</i>	9.3	10.7	8.9	9.8
<i>Difference</i>	11.1%	4.5%	7.3%	6.7%

While the Outer NHL is 11.1% older for minority serving stations this is below the 15% threshold for a disparate impact. It is also noteworthy that this was largely due to operating older diesel sets in 2021 at night to accelerate catenary work while ridership was depressed due to the Covid 19 pandemic.

Table 63: Average Vehicle Age of Equipment serving Inner NHL stations.

<i>Inner NHL stations serving</i>	PEAK	Off Peak	Rev Peak	Weekend
<i>Minority</i>	9.4	11.0	8.8	9.9
<i>Non-Minority</i>	8.8	11.0	8.7	9.6
<i>Difference</i>	5.6%	0.5%	0.6%	2.8%

The Inner New Haven Line did not have any findings.

Table 64: Average Vehicle Age of Equipment serving New Canaan Branch stations.

<i>New Canaan Branch stations serving</i>	PEAK	Off Peak	Rev Peak	Weekend
<i>Minority</i>	8.7	8.7	8.7	8.7
<i>Non-Minority</i>	8.7	8.7	8.7	8.7
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%

The New Canaan branch had no findings.

Table 65: Average Age of Equipment serving Danbury Branch Stations.

<i>Danbury Branch stations serving</i>	PEAK	Off Peak	Rev Peak	Weekend
<i>Minority</i>	27.1	29.5	30.0	28.7
<i>Non-Minority</i>	27.1	29.5	30.0	28.7
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%

The Danbury Branch had no findings.

Table 66: Average Age of Equipment serving Waterbury Branch stations.

<i>Waterbury Branch stations serving</i>	PEAK	Off Peak	Rev Peak	Weekend
<i>Minority</i>	30.0	30.0	30.0	30.0
<i>Non-Minority</i>	30.0	30.0	30.0	30.0
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%

The Waterbury Branch had no findings. Please note the Waterbury Branch was bussed to accommodate accelerated capital work in summer 2020 which allowed added frequencies in July 2022.

Shore Line East analysis

Table 67: Average Age of Equipment serving Shore Line East stations.

<i>Shore Line East stations serving</i>	PEAK	Off Peak	Rev Peak	Weekend
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<i>Minority</i>	20.2	20.2	20.2	20.2
<i>Non-Minority</i>	20.2	20.2	20.2	20.2
<i>Difference</i>	0.0%	0.0%	0.0%	0.0%

Shore Line East used the same equipment consistently to stop at each station. The Diesel push pull fleet had an average age of 31,2 years. In late May 2022 CTDOT deployed the M8 EMU with an average age of 9.2 years on SLE. There is no finding.

Bus Amenities Analysis

Transit amenities are described in FTA Circular 4702.1B as items of comfort, convenience, and safety that are available to the general riding public. Transit amenities may include shelters, benches, trash receptacles, and other bus stop or rapid transit station amenities such as electronic message signs.

With the exception of a few bus shelters in the Hartford Division, CTDOT and CTtransit do not own or maintain any of the on-street bus shelters along bus routes. CTDOT does install and maintain shelters at park and ride lots and maintains bus stop signage on state roads and U.S.-numbered highways throughout the state. The decision to install a shelter at a local bus stop is at the discretion of local municipalities. CTtransit works with regional agencies and individual towns to encourage shelter installations that meet policy guidelines and to encourage that shelters are cleaned and maintained, including snow removal, on a regular basis, however, it is ultimately the responsibility of the host municipality to maintain the shelters.

CTDOT policy states that shelters are considered for installation based on the criteria detailed in the CTtransit Service Standards guide:

Bus Shelter Priority Guide

The Bus Shelter Priority Guide standard is based on daily customer boardings and the average headway of service at each stop, as shown in Table 68. In effect, this strategy seeks to prioritize heavily used stops with infrequent service and deprioritize stops that are not heavily used with frequent service.

Table 68: Bus Shelter Priority Guide

Daily Customer Boardings at Location	Headway		
	30 Minutes	10 to 29 minutes	Less than 10
300 or More	1	1	2
200 to 299	1	2	3
100 to 199	2	3	4
50 to 99	2	3	4

25 to 49	3	4	4
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Tables 69 and 70 summarize the provision of amenities to stops falling in each of the four priority categories in Hartford and New Haven, respectively. The locations of the stops with their priority and provision of amenities are given in Figures A.1 (Hartford) and A.2 (New Haven).

Table 69: Bus Shelter Amenities with Priority – Hartford System

	Bench	Shelter	Bench and Shelter
Priority 1	59.3%	61.0%	54.2%
Priority 2	24.2%	32.3%	24.2%
Priority 3	27.8%	29.3%	26.4%
Priority 4	12.5%	12.5%	12.5%

Table 70: Bus Shelter Amenities with Priority - New Haven System

	Bench	Shelter	Bench and Shelter
Priority 1	48.0%	72.0%	48.0%
Priority 2	37.9%	62.1%	34.5%
Priority 3	13.8%	31.3%	13.8%
Priority 4	6.3%	12.5%	6.3%

Tables 71 and 72 summarize the disparate impact and disproportionate burden analyses of bus shelter amenities in Hartford and New Haven. Results indicate that there is no disparate impact or disproportionate burden on minority stops. However, results indicate that there is a disproportionate burden associated with stop amenity placement relative to LI tracts in Hartford. It should be noted that the disproportionate burden is based on the percentage of amenities distributed to LI and non-LI tracts. When comparing the proportion of all LI stops that have amenities (6.7% of all LI stops have a shelter, 5.6% have seating) to the proportion of non-LI stops that have amenities (7.8% of all non-LI stops have a shelter, 7.1% have seating), the disproportionate burden is not evident.

Table 71: Bus Shelter Amenities Analysis (minority/non-minority)

	Hartford	New Haven
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	Shelter	Seating (i.e. benches, seats at stops/station)	Shelter	Seating
Total stops with Amenity	345	302	143	56
Percent stops in Minority tract	68.4%	69.5%	75.5%	62.5%
Percent stops in Non-Minority tract	31.6%	30.5%	24.5%	32.5%
Disparate Impact (Y/N)	N	N	N	N

Table 72: Bus Shelter Amenities Analysis (LI/non-LI)

	Hartford		New Haven	
	Shelter	Seating	Shelter	Seating
Total stops with Amenity	345	302	143	56
Percent stops in LI tract	37.7%	35.4%	62.2%	50%
Percent stops in Non-LI tract	62.3%	64.6%	37.8%	50%
Disproportionate burden? (Y/N)	Y	Y	N	N

Rail Amenities Analysis

Transit amenities are items of comfort and convenience made available to railroad customers. Amenities available at train stations can include benches, waiting rooms, platform shelters, restrooms, vending machines, information kiosks, recycling/trash bins, public address (PA) speakers, visual information displays, escalators, elevators, and ramps.

The station amenities provided are based on a station’s daily ridership, length of platform, and size of station, but may be limited or constrained by physical layout, available space, and utility infrastructure constraints (e.g., local commercial electric power availability). Stations are categorized into levels and stations in the highest ridership category receive the full range of amenities if available space allows. All trains regardless of car type (coaches or electric multiple-units) and method of propulsion (diesel or electric) are equipped with similar amenities.

The Disparate Impact analysis is measured by subtracting the percentage of minority serving stations with the amenity analyzed with the percentage of the non-minority stations with the amenity analyzed. If the difference is unfavorable to minority servicing stations by more than 15% there is a finding in that amenity at the stations on that line.

(M%-N%) = difference (<-15% equals finding in the amenity type)

Outer New Haven Line:

Table 73: Amenities at Outer NHL stations

Outer NHL	Escalator	Elevator	WASTE	Printed Signs	System Maps	Route Maps	Schedules	Electronic signage	Canopies	Rail Shelters	Seating
Minority	15.4%	53.8%	100.0%	100.0%	15.4%	15.4%	100.0%	100.0%	100.0%	61.5%	100.0%
Non	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100.0%	66.7%	100.0%
Difference	15.4%	20.5%	0.0%	0.0%	15.4%	15.4%	0.0%	0.0%	0.0%	-5.1%	0.0%

Minority serving stations had an equal or higher percentage than non-minority serving stations in every amenity category.

Inner New Haven Line

Table 74: Amenities at Inner NHL Stations

Inner NHL	Escalator	Elevator	WASTE	Printed Signs	System Maps	Route Maps	Schedules	Electronic signage	Canopies	Rail Shelters	Seating
Minority	33.3%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	33.3%	100.0%	100.0%	100.0%
Non	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	50.0%	100.0%
Difference	33.3%	-16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	50.0%	0.0%

Minority serving stations had an equal or higher percentage than non-minority serving stations in every amenity category with the exception of the elevator at Greenwich which is required for ADA access to the pedestrian bridge.

New Canaan Line:

Table 75: Amenities at New Canaan Branch stations

New Canaan	Escalator	Elevator	WASTE	Printed Signs	System Maps	Route Maps	Schedules	Electronic signage	Canopies	Rail Shelters	Seating
Minority	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	100.0%

Non	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	50.0%	50.0%	50.0%	100.0%
Difference	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-50.0%	50.0%	50.0%	0.0%

Minority serving stations had an equal or higher percentage than non-minority serving stations in every amenity category except electronic signage which is only at New Canaan. New Canaan is an endpoint on the Branch Line and all endpoints on the branch lines (Danbury and Waterbury, also have electronic signs). This policy does not have a disparate impact finding as both Danbury and Waterbury are minority servicing stations and this policy would favor minority station endpoints. Please note that New London also has the Amtrak electronic TAMS system as do all SLE stations on the Amtrak owned Right of Way.

Danbury Line:

Table 76: Amenities at Danbury Branch stations

New Canaan	Escalator	Elevator	WASTE	Printed Signs	System Maps	Route Maps	Schedules	Electronic signage	Canopies	Rail Shelters	Seating
Minority	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	33.3%	66.7%	33.3%	100.0%
Non	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%	25.0%	100.0%
Difference	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	-33.3%	8.3%	0.0%

Minority serving stations had an equal or higher percentage than non-minority serving stations in every amenity category except Platform Canopies which are not at Merritt 7. Merritt 7 is being redesigned by CTDOT and will include a new high level heated platform with a canopy.

Waterbury Line:

Table 77: Amenities at Waterbury Branch stations.

New Canaan	Escalator	Elevator	WASTE	Printed Signs	System Maps	Route Maps	Schedules	Electronic signage	Canopies	Rail Shelters	Seating
Minority	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Non	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	0.0%	40.0%	100.0%	100.0%
Difference	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	60.0%	0.0%	0.0%

Minority serving stations had an equal or higher percentage than non-minority serving stations in every amenity category.

Shore Line East:

Table 78: Amenities at Shore Line East stations.

New Canaan	Escalator	Elevator	WASTE	Printed Signs	System Maps	Route Maps	Schedules	Electronic signage	Canopies	Rail Shelters	Seating
Minority	33.3%	66.7%	83.3%	100.0%	66.7%	66.7%	100.0%	100.0%	100.0%	0.0%	100.0%
Non	0.0%	66.7%	50.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Difference	33.3%	0.0%	33.3%	0.0%	66.7%	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%

Minority serving stations had an equal or higher percentage than non-minority serving stations in every amenity category.

Bus and Rail Service Availability

Bus Service Availability Standard

The Service Availability Standard is that the Connecticut Department of Transportation (CTDOT) will distribute transit service so that the majority of residents in the service area are within 1/4 mile of local weekday transit service, 1/2 mile of local weekend transit service, and 2 ^{1/2} miles of park and ride stops.

Rail Service Availability Standard

The Rail Service Availability Standard is that the Connecticut Department of Transportation (CTDOT) will distribute rail service so that a majority of residents in the service area are within 2 ^{1/2} miles of rail service.

Bus Service Availability Disparate Impact Analysis

Disparate impact will be determined based on the percentage of minority residents in the total service area versus the percentage of minority residents in the express and local service area on weekdays and weekends. The total service area comprises all the tracts that contain any portion of the transit buffer, express and local, as indicated in the standard and described below.

A similar analysis is conducted for low-income households, identifying the availability of transit service by day of week to low-income households. Low-income households do not fall under disparate impact – should a negative availability outcome be identified, it will be referred to as a *disproportionate burden*.

The CTDOT 2020 Title VI Program (page 58) identifies a 15% threshold for identifying either a disparate impact or disproportionate burden on minority or low-income members of the service area. That is, if minority or low-income residents have 15% or less service available to their populations during a particular day of the week, a disparate impact or disproportionate burden would be identified, accordingly.

Methodology

General Transit Feed Specification (GTFS) was used to identify days of the week and times of day in which stops had transit service in the Hartford and New Haven systems. Buffers were created around stops depending on the day of the week stops were visited. For weekdays, buffer distances of 2.5 miles for park and ride express stops, 0.25 mile for non-park and ride express stops and 0.25 miles for local only stops were applied. For weekend service, buffer distances were modified to 2.5 miles for park and ride express stops, 0.5 miles for non-park and ride express stops and 0.5 miles for local only stops. Any tracts that intersected these buffers were included in the service area.

Minority population data and Low-income household data for the census tracts were collected from 2021 5-year ACS data (Table 79). The definition of minority population from FTA Circular 4201.B §1.5.q includes persons with American Indian, Alaskan Native, Asian, Black or African American, Hispanic or Latino and Native Hawaiian or Other Pacific Islander origins.

Households with median household income at or below 150 percent of the poverty line (defined in Section 673(2) of the Community Services Block Grant Act (42 U.S.C 9902(2)) are considered low-income households (FTA Circular 4201.B §1.3.m). The average size of the household and the ranges for the median household income data for the census tracts were collected from 2021 5-year ACS data (Table 79 and 80). Figure 4 demonstrates the process of applying ACS data to identify the percentage of low-income residents in a census tract

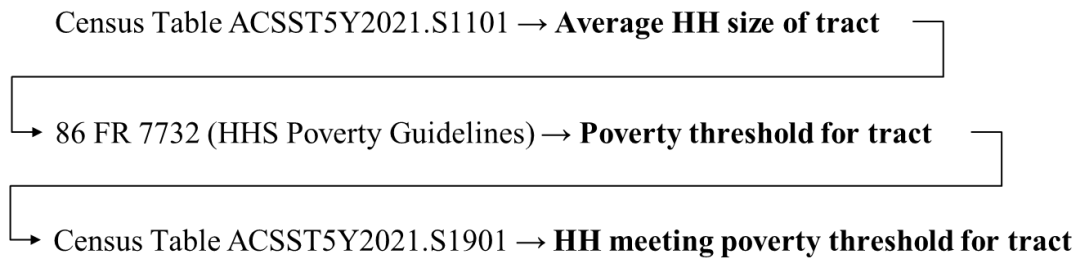


Figure 4: Low-income household identification process

Census tracts with a population density greater than 5,000 persons per square mile were considered high density tracts. Similar minority and low-income resident data was collected for high density tracts in Hartford and New Haven. The percentage of the service area covered by the stop buffers is also calculated and presented in the results.

Table 79: 2021 ACS 5 Year Data tables

Population	ACS table
Hispanic or Latino	ACSDT5Y2021.B03001
Black Or African American	ACSDT5Y2021.B02009
American Indian and Alaska Native	ACSDT5Y2021.B02010

Asian	ACSST5Y2021.B02011
Native Hawaiian and other Pacific Islander	ACSST5Y2021.B02012
Average Household Size	ACSST5Y2021.S1101
Median Household Income	ACSST5Y2021.S1901

Table 80: Low Income Household Data Identification

Average household size (D^t)	Poverty Threshold (V^t)($\\$)	Upper bound of Income category to identify low-income households (U^t)($\\$)
1	19320	15,000
2	26130	25,000
3	32940	35,000
4	37950	45,000

Result

Tables 81 and 82 provide the results of the service availability analysis. The baseline service area serves as the basis for comparison across all other service configurations. Should minority or low-income residents receive 15% or more less service coverage during other service times, a disparate impact or disproportionate burden would be identified.

Results are organized by system (Hartford and New Haven) and by tract density (all tracts in service area and high density tracts). Each system then has a baseline percentage minority or low-income persons reported, which serves as the basis for comparison for other service configurations. Service configuration results are then presented by day of week based upon the changes in service provision on that day and the stop buffers defined in the CTDOT service availability standard. Details of calculations are provided in Appendix A.

Table 81: Service Availability of Minority Population for Hartford and New Haven Regions

		minority percentage of service s on day d ($m_{s,d}$)						
		Baseline Service Area	Weekday		Saturday		Sunday	
			Express	Local	Express	Local	Express	Local

Hartford	All tracts	39.1	36.8	49.4	45.9	50.1	45.9	52.5
	High density tracts		72.9	80.6	66.3	79.6	66.3	80.5
New Haven	All tracts	40.5	40.5		43.0		46.5	
	High density tracts		66.4		68.8		67.7	

Table 82: Service Availability of Low-Income Population for Hartford and New Haven Regions

		low income percentage of service s on day d ($I_{s,d}$)						
		Baseline Service Area	Weekday		Saturday		Sunday	
			Express	Local	Express	Local	Express	Local
Hartford	All tracts	19.0	18.0	20.0	23.0	21.3	23.0	22.0
	High density tracts		35.1	36.0	36.1	36.2	36.0	36.0
New Haven	All tracts	20.0	20.0		21.0		21.5	
	High density tracts		31.7		33.4		32.2	

Discussion

In all but two service configurations, the percentage of minority residents having transit service available is greater than the baseline – indicating that for all weekend services and all New Haven service there is not a disparate impact or disproportionate burden.

The two instances in which there is a smaller percentage of minority or low-income residents having service available is the Hartford weekday express configuration. In this case, minority residents make up 36.8% of the service area (as opposed to a 39.1% baseline) and low-income residents 18.0% of the service area population (as opposed to a 19.0% baseline). Taken as raw differences, the 2.3% reduction in minority residents and 1.0% reduction in low-income do not meet disparate impact or disproportionate burden thresholds. Applying a stricter definition, the minority population percentage reduction represents a 5.9% reduction from the 39.1% baseline, and the fall in service to low-income persons a 5.3% reduction from the 19.0% baseline. In all cases, these do not meet the 15% threshold and therefore no disparate impact or disproportionate burden is observed.

Supplementary Information

Table 83 provides supplementary information on the coverage of service areas in the Hartford and New Haven systems. These numbers provide insight into the spatial coverage of service areas. For example,

the stop buffers defining Hartford system’s baseline service area covers 45.8% of the actual area of the census tracts counted in the population statistics. For comparison, the New Haven Saturday service covers 79.3% of the area of high density tracts in its service area.

Table 83: Percentage of Area in the stop buffer for Hartford and New Haven Regions

		% area in the stop buffer ($B_{s,d}/A_{s,d}$)						
		Baseline Service Area	Weekday		Saturday		Sunday	
			Express	Local	Express	Local	Express	Local
Hartford	All tracts	45.8	45.4	30.2	37.9	39.8	37.9	36.8
	High density tracts		73.5	80.5	87.2	85.4	87.0	83.4
New Haven	All tracts	22.8	22.8		33.0		38.7	
	High density tracts		73.2		79.3		90.8	

Glossary

Sets

d	day of service { <i>Weekday, Saturday, Sunday</i> }
s	type of service { <i>local, express</i> }
t	census tracts
h	households
L^t	set of low-income households in tract t

Parameters

δ_h^t	1 if household h is in tract t
$C_{s,d}^t$	1 if tract t intersects service buffer for service s on day d
M^t	minority population of tract t
L^t	number of low-income households of tract t
D^t	average (rounded) household size of tract t
V^t	poverty threshold according to HHS guidelines for tract t
U^t	upper bound of income category below which is considered low-income in tract t
H^t	total households in tract t
P^t	total population in tract t
I_h	Income of household h
a^t	area of tract t
b^t	area of tract t within stop access buffer of service

Calculated Sets and Parameters

$$L^t = \{h: I_h < U^t \text{ and } \delta_h^t = 1\}$$

$$m_{s,d} = \sum_{t \in T} C_{s,d}^t \frac{M^t}{P^t} \quad \text{minority percentage of service } s \text{ on day } d$$

$$l_{s,d} = \sum_{t \in T} C_{s,d}^t \frac{|L^t|}{H^t} \quad \text{low-income percentage of service } s \text{ on day } d$$

$$A_{s,d} = \sum_{t \in T} C_{s,d}^t a^t \quad \text{total service area of } s \text{ on day } d$$

$$B_{s,d} = \sum_{t \in T} C_{s,d}^t b^t \quad \text{total service area of } s \text{ on day } d \text{ within stop access buffer}$$

Rail Service Availability Disparate Impact Analysis

Service availability will be analyzed by adding up the entire rail service population and the entire population of all people within a 2.5 mile intersect with the rail lines. CTDOT will then compare the ratio of the general population with the minority population to determine if there is any impacts. CTDOT staff

extracted the populations from the census and then eliminated duplicate census tracts for the station service areas as a census tract may overlap multiple stations.

Table 84: Service Availability Analysis

<i>Total Rail Service Availability</i>	Total	Non-Minority	Minority
<i>Service Area</i>	1,426,513	773,067	653,446
<i>Population within 2.5 miles</i>	2,079,433	1,129,657	949,776
<i>Ratio</i>		68.4%	68.8%
<i>Difference</i>			0.5%

There is no finding of disparate impact as service availability is slightly favorable for minority populations.

Demographic and Service Profile Maps

49 CFR Section 21.9(b) requires transit providers to collect and analyze racial and ethnic data showing the extent to which members of minority groups are beneficiaries of programs receiving Federal financial assistance. Service area maps of CTDOT’s public transportation system were created and include transit service areas, transit facilities, fixed guideway alignment, and transit stations.

The maps overlay Census demographic data and highlight tracts where the percentage of the total minority population residing in the tract exceeds the average percentage of the minority population for the service area as a whole. Additionally, service area maps identify where the percent of low-income population residing in a given census tract exceeds the average percentage of low-income populations for the service area as a whole. Maps identifying Limited English Proficient (LEP) populations were also developed for each service area. Maps are used to identify and analyze impacts to Title VI and low-income communities, and to insure that needs of LEP populations are considered and addressed.

The rail system maps were developed by first adding various base layers including geographic boundaries, major traffic generators, and highway system information. Rail stations were then added, and a 2 ½ mile buffer was applied around each station to create a rail service area.

The bus system maps were developed using the same first layer as the rail maps and then various buffers were added depending on the type of route. Local bus routes were mapped with a quarter (1/4) mile buffer around the route, while a 2 ½ mile buffer was established around express bus stops. Rural transit districts with deviated fixed route service were mapped with a three-quarter (3/4) mile buffer around the route; all other routes within the transit districts were mapped with a quarter mile buffer.

Elderly/Disabled Dial-A-Ride services, provided by rural transit districts, were mapped separately. In these maps, the service area is determined by the towns served. Similarly, 5310 vehicle grants were mapped using a statewide map and the service area is determined by towns served.

Demographic and socio-economic data layers were developed using 2017-2021 American Community Survey (ACS) data. The data was used to identify statewide and service-area based Limited English Proficiency (LEP) populations, minority populations, and low-income populations.

Service area, low income, minority and LEP maps for all CTDOT transit and rail service areas can be found on in the CTDOT FTA Title VI Map Appendix.

Additionally, statewide minority, low income, and LEP maps can be found on pages 96-98 of the CTDOT FTA Title VI Map Appendix.

Surveys and Demographic Profile

Bus and rail surveys were conducted during the reporting period to identify demographic information of bus and rail riders, as well as travel patterns. Below is a listing of the surveys conducted during the reporting period. Copies of the survey reports can be found on pages 304-440 of the CTDOT FTA Title VI Program Appendix.

Surveys

- CTtransit 2023 Customer Satisfaction Survey
- Shore Line East 2022 Passenger Survey
- Shore Line East 2019 Passenger Study
- Metro-North 2022 Customer Satisfaction Survey

Demographic Profile

The FTA circular requires CTDOT to develop a demographic profile comparing minority riders and non-minority riders, including a comparison of trips taken and fare usage of minority riders vs. non-minority riders. To collect this data, CTDOT incorporates demographic questions into its surveys. A profile, by service type, is provided below. These profiles were generated from survey data collected through the administration of the surveys noted above.

New Haven Rail Line

MTA conducted an online survey in October 2022 throughout all services. There were 7,827 responses received from New Haven Line CT passengers. This survey included demographic questions with the responses aggregated below. Not all passengers answered every question and if a response was not provided that survey was not included in the calculation.

Table 85: Metro-North Railroad racial / ethnicity demographics from the 2022 Fall survey respondents

Race	Percentage of responses
White Only	71.1%
Black Only	7.4%
Asian Only	7.0%
Multi-racial	2.4%
Hispanic	8.9%
Other	3.4%

Table 86: Metro-North Railroad income demographics from the 2022 Fall survey respondents

Income	Percent of responses
Less than \$13,000	3.2%
\$13,000 to \$17,399	1.4%
\$17,400 to \$21,999	1.0%
\$22,000 to \$26,499	1.2%
\$26,500 to \$30,999	1.1%
\$35,600 to \$40,999	2.0%
\$41,000 to \$44,699	1.5%
\$44,700 to \$48,999	1.4%
\$49,000 to \$53,799	2.0%
\$53,800 to \$57,999	2.2%
\$58,000 to \$62,899	2.2%
\$62,900 to \$67,999	1.8%
\$68,000 to \$71,999	2.7%
\$72,000 to \$99,999	10.8%
\$100,000 to \$199,999	27.8%
\$200,000 to \$299,999	14.3%
\$300,000 and greater	23.4%

Table 87: NHL Fare Media Purchases by race / ethnicity

Fare Type	Total	Non-Minority		Minority	%
Monthly	1382	731	52.9%	651	47.1%
Weekly	88	33	37.5%	55	62.5%
Ten-Trip Peak	702	434	61.8%	268	38.2%
Ten Trip Off-Peak	429	241	56.2%	188	43.8%
One-Way Peak	468	256	54.7%	212	45.3%
One-Way Off-Peak	751	446	59.4%	305	40.6%
Round Trip Peak	669	395	59.0%	274	41.0%
Round Trip Off-Peak	1309	787	60.1%	522	39.9%
Twenty-Trip	888	553	62.3%	335	37.7%

UniTicket	12	8	66.7%	4	33.3%
Senior / Disabled (All Types)	721	524	72.7%	197	27.3%
Other (specify)	76	39	51.3%	37	48.7%

Shore Line East Survey 2022

In June 2022 CTDOT had a consultant conduct an on-board survey aboard SLE trains. The survey asked demographic questions. 314 Shore Line East passengers provided responses. Not all respondents answered all questions. If a question was not answered that survey question blank response is not included in the calculation. There was no fare media purchase question which required CTDOT to include the 2019 Shore Line East Passenger Study to evaluate fare purchase patterns.

Table 88: Shore Line East 2022 survey racial / ethnicity demographics

Race	Percentage of responses
Asian	2.1%
Black or African American	2.1%
Hispanic / Latino	6.6%
Native American Indian / Alaska Native	0.7%
Native Hawaiian / Pacific Islander	0.0%
Subcontinent Asian (India, Pakistan, Bangladesh, Bhutan, Nepal, Maldives, Afghanistan, Iran and Sri Lanka)	1.0%
White	85.7%
Other	1.7%

SLE Survey 2022 population income demographic results

Table 89: Shore Line East 2022 survey income population demographics

Income	Percentage of responses
Under \$12,500	4.4%
\$12,500-\$24,999	2.6%
\$25,000-\$37,499	3.5%
\$37,500-\$49,999	4.8%
\$50,000-\$74,499	13.2%
\$75,000-\$99,999	20.2%
\$100,000-\$149,999	18.0%
\$150,000-\$199,999	15.8%
\$200,000-\$299,999	9.6%
\$300,000 or more	7.9%

Shore Line East Passenger Study 2019

In June 2019 CTDOT had a consultant conduct an on-board survey aboard SLE trains. The survey asked demographic questions. 641 Shore Line East passengers provided responses. Not all respondents

answered all questions. If a question was not answered that survey question blank response is not included in the calculation.

Table 90: Shore Line East 2019 Passenger Study racial / ethnicity demographics

Race	Percent
African-American	4.5%
Asian	5.0%
Caucasian	80.6%
Hispanic/Latino Heritage	5.8%
Native American Indian / Alaska Native	0.5%
Native Hawaiian / Pacific Islander	0.2%
Subcontinent Asian (India, Pakistan, Bangladesh, Bhutan, Nepal, Maldives, Afghanistan, Iran and Sri Lanka)	0.9%
other	2.6%

Table 91: Shore Line East 2019 Passenger Study Income population demographics

Income	Percentage of responses
Under \$12,500	6.1%
\$12,500-\$24,999	4.4%
\$25,000-\$37,499	6.3%
\$37,500-\$49,999	6.3%
\$50,000-\$74,999	12.7%
\$75,000-\$99,999	16.3%
\$100,000-\$149,999	21.1%
\$150,000-\$199,999	10.6%
\$200,000-\$299,999	8.6%
\$300,000 or more	7.7%

Table 92: Shore Line East 2019 Passenger Study Fare Media Purchases by Race / ethnicity demographics

Shore Line East 2019 Fare						
Fare Media	Total		Non-Minority		Minority	
One Way	210	39.5%	158	75.2%	52	24.8%
One Way Senior	52	9.8%	43	82.7%	9	17.3%
Unirail One Way	5	0.9%	4	80.0%	1	20.0%
10-Trip	48	9.0%	41	85.4%	7	14.6%
Senior 10-trip	14	2.6%	12	85.7%	2	14.3%
Monthly	139	26.1%	119	85.6%	20	14.4%
Monthly Plus Bus	30	5.6%	26	86.7%	4	13.3%

Unirail Monthly	34	6.4%	31	91.2%	3	8.8%
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CTDOT considered Caucasian to be non-minority and all others were summed into minority. All were cross-referenced by fare purchase.

CTtransit

CTtransit operates bus service throughout the state. In 2023, *CTtransit* conducted a customer satisfaction survey statewide.

Maps of the *CTtransit* service areas by minority population can be found in the CTDOT FTA Title VI Map Appendix.

CTtransit New Haven Division race demographics from the 2023 Customer Satisfaction Survey conducted by *CTtransit* are provided in Tables 93 and 94; and ridership distribution by income from the same survey is provided in Table 95.

Table 93: *CTtransit* Ridership: Hispanic Origin

	Hispanic Origin?
Yes	32%
No	68%

Table 94: *CTtransit* Ridership by Race

Race	Percentage of Ridership
American Indian or Alaska Native	1.4%
Asian	6%
Black or African American	41%
Native Hawaiian and Other Pacific Islanders	0.7%
White	25%
Two or more of these Races	7%

Table 95: *CTtransit* Ridership by Income

Income Category	Percentage of Ridership
Under \$15,000	28%
\$15,001 - \$20,000	11%
\$20,001 - \$25,000	7%
\$25,001 - \$30,000	6%
\$30,001 - \$35,000	6%
\$35,001 - \$50,000	9%
\$50,001 - \$65,000	5%
More than \$65,000	9%
Don't know	19%

Table 96 provides ridership fare purchase distribution by media type.

Table 96: CTtransit Ridership Fare Distribution by Media Type

Fare Media Type	Percentage of Ridership
All-Day Pass	15%
2 Hour Pass	39%
31 Day Pass	16%
3, 5- and 7-Day Pass	2%
10 Ride Ticket	7%
GoCT Card	8%
U Pass (Student discount)	6%
Token Transit	7%

Figures 5 and 6 present the distribution of fare media usage for Hartford and New Haven divisions of CTtransit. The 2-hour pass usage tends to be higher for minority and LI riders than for non-minority and non-LI respondents. Figures 7 and 8 present the distribution of fare media usage focusing solely on commuting trips (based on Question 17). The same trend for minority and LI riders to utilize the 2-hour pass is observed again for commuters in both Hartford and New Haven.

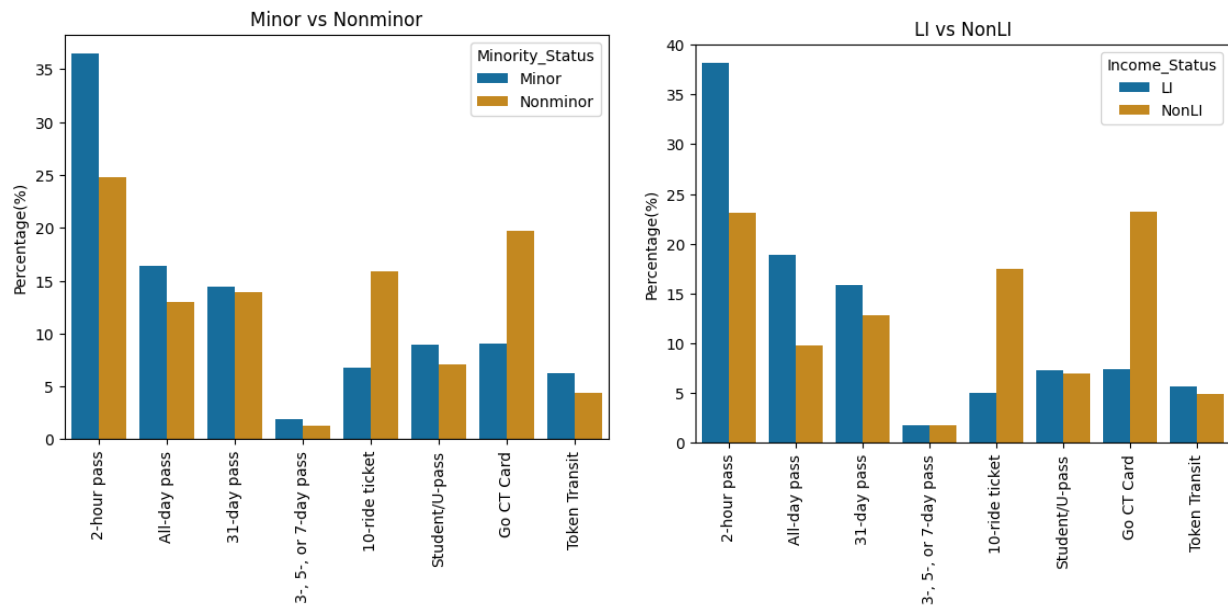


Figure 5: Distribution of Fare Media for Hartford respondents

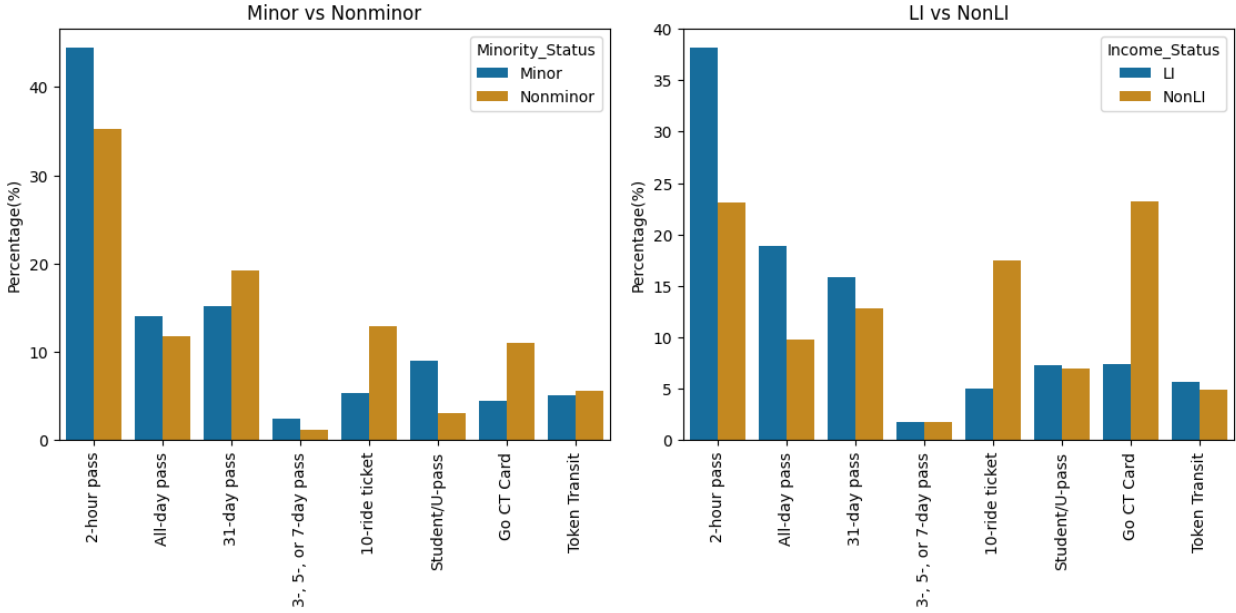


Figure 6: Distribution of Fare Media for New Haven respondents

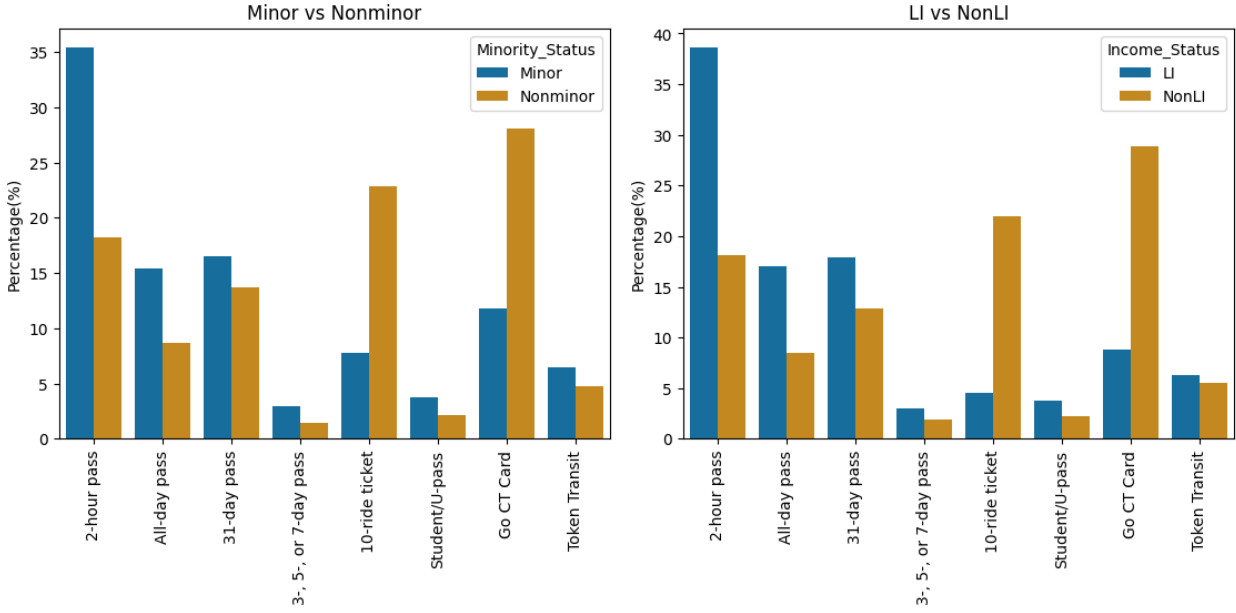


Figure 7: Distribution of Fare Media for Hartford commuters

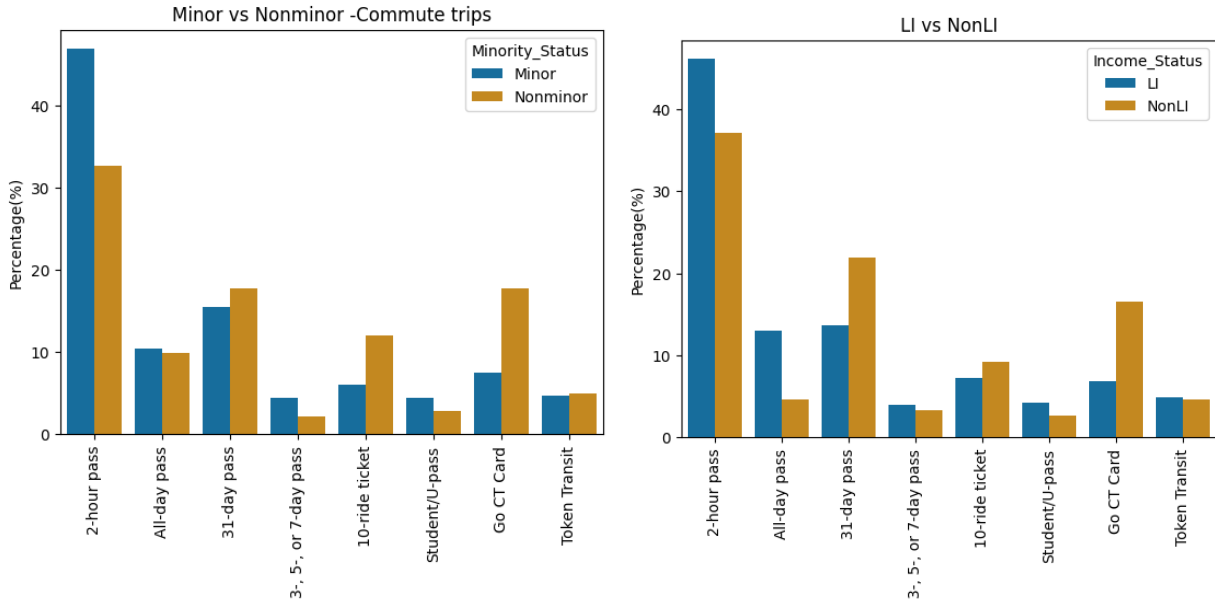


Figure 8: Distribution of Fare Media for New Haven commuters

Service and Fare Equity Policy

Pursuant to Federal Transit Administration (“FTA”) Circular 4702.1B and Title VI of the Civil Rights Act of 1964, and their related regulations, the following is the policy of the Connecticut Department of Transportation (CTDOT) for service and fare equity analyses and determination of disparate impact and disproportionate burden.

Disparate impact refers to a facially neutral policy or practice that disparately affects members of a group identified by race, color, or national origin, when the recipient’s policy or practice lacks a substantial legitimate justification and when there exists one or more alternatives that would serve the same legitimate objectives but with less disparate impact on the basis of race, color, or national origin.

Disproportionate burden refers to a facially neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations.

Major Service Change Policy

All proposed service changes, both reductions and/or expansions meeting the definition of a “Major Service Change” are subject to a Title VI Service Equity Analysis with the exceptions outlined in the Service Equity Analysis section of this policy. In the case of a fare increase (but not necessarily in the case of other major services changes), CTDOT will conduct a virtual public hearing prior to presentation of the proposal to the Commissioner of Transportation for approval and implementation actions. CTDOT defines a major service change as any service change meeting at least one of the following criteria:

There are four main criteria used to evaluate any service change: adding/eliminating a route, reducing the length of a route, extending/reducing the hours of service, or significantly increasing/reducing service frequency, as detailed in the following table:

Criteria	Bus	BRT	Rail
1a. Addition or elimination of a rail segment or entire bus route	X	X	X
1b. Elimination of a BRT or Rail station		X	X
2a. Extending or reducing the directional route miles on a bus route by more than 20%.	X	X	
2b. Eliminating trains estimated to carry 25% or more of the total line ridership on the day(s) of the week the change is made.			X
3. Starting or ending service on a rail line or bus route more than one hour earlier or later. Adding or eliminating a day of service on a rail line or bus route.	X	X	X
4a. Changes resulting in a service change of more than 25% at any rail or BRT station		X	X
4b. Bus service changes resulting in a headway reduction of 50% or more or a headway increase of 100% or more	X		

The following service changes are exempted:

- Pilot programs or experimental services
- Standard seasonal variations in service and temporary service additions or suspensions intended to be in place for less than twelve months
- Changes to service to accommodate sporting events, special events, or service contracted through other cities or agencies
- Any service change that does not meet the definition of a major service change as described above, including routine running time or schedule adjustments, route or stop changes due to construction, service disruptions or emergencies, and disruptions due to labor issues, fuel shortages or safety concerns

Service Equity Analysis

A Service Equity Analysis will be conducted whenever CTDOT proposes a major service change to the rail or bus system as defined in the policies provided above; providing these changes will remain in effect in excess of twelve (12) months. When a service change is proposed, there shall be a twelve-month look-back, to determine if the aggregate of any changes in the prior twelve (12) months would have triggered one of the major service change criteria.

The following service changes are exempted:

- Standard seasonal variations in service: a seasonal route or routing variation is usually a modification to service to provide “added” access that is not broadly needed year-round, or the

discontinuation of same. Any temporary service addition, change, or discontinuation of a route with the intention that it will be in operation for less than twelve months. While all changes from regular service to seasonal service and the reverse are exempt, should there be changes within the seasonal service from one year to the next, CTDOT will conduct a SAFE analysis should the change exceed fifty percent (50%), regardless of increase or decrease in service;

- Changes on routes serving sporting events, special events, or service contracted through other cities or agencies;
- Any service change that does not meet the definition of a major service change such as minor route alignments, frequency, span, or time point adjustments; route or bus stop changes due to temporary road detours caused by construction, maintenance, closures, emergencies, labor disruptions or strikes, fuel shortages, or safety concerns; etc.

Fare Equity Analysis

A fare equity analysis will be conducted whenever CTDOT proposes a fare change, regardless of the amount of increase or decrease.

For proposed fare changes CTDOT will –

1. Determine the number and percent of users of each fare media proposed for increase or decrease;
2. Review fares before the change and after the change;
3. Analyze the fare media 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 fare media proposed for change;
4. Compare the impacts for each particular fare media between minority users and overall users;
5. Compare the impacts for each particular fare media between low-income users and overall users; and
6. Identify alternatives and mitigation strategies if the impacts exceed the thresholds established with the disparate impact and disproportionate burden policies.

A fare change is defined as an increase or decrease in fares: (a) on the entire system, (b) on certain transit modes, or (c) by fare payment type or fare media. The exceptions are as follows:

1. “Spare the air days” or other instances when a local municipality, the State or CTDOT has declared that all passengers ride free;
2. Temporary fare reductions that are mitigating measures for other actions (i.e. construction activities that close a segment of the rail system for a period of time); or
3. Promotional fare reductions that last less than six (6) months.

FTA Circular 4702.1B states that a recipient can implement a fare increase that would have a disproportionate or adverse effect provided that it demonstrates the action meets a substantial need that is in the public interest, and that alternatives would have more severe adverse effects than the preferred alternative.

Disparate Impact/Disproportionate Burden Policy

The purpose of this policy is to establish thresholds which identifies when adverse effects of a major service or fare change result in a disparate impact to minority populations, or a disproportionate burden to low income populations.

The Department applies the Disparate Impact Policy and the Disproportionate Burden Policy uniformly to all major service and fare changes regardless of mode.

Major Service Changes

A major service change to the rail or bus system will be deemed to have a disparate impact on minority populations or a disproportionate burden on low income populations, if the percentage of riders or vehicle revenue hours on affected minority-classified or low-income classified routes is at least fifteen (15%) percent higher than the percentage of riders or vehicle revenue hours on non-minority-classified or non-low income classified routes affected by the major service change.

Fare Changes

A fare change will be deemed to have a disparate impact on minority populations or a disproportionate burden on low income populations if its implementation results in either:

1. When one fare change is proposed, the percentage of impacts of the proposed fare change borne by minority or low income riders as a result of the proposed fare change is at least ten (10%) percentage points higher than the percentage of impacts of that proposed fare change on the overall rider population; or
2. When more than one fare change is proposed:
 - a. For each fare change in the package: the percentage of impacts of each individual proposed fare change borne by minority or low income riders as a result of the proposed fare change is at least ten (10%) percentage points higher than the percentage of impacts of that proposed fare change on the overall rider population; and
 - b. For the total package of fare changes: the aggregate percentage of impacts for the proposed fare changes borne by minority or low-income riders as a result of the proposed fare changes is at least five (5%) percentage points higher than the aggregate percentage of impacts on the overall rider population.

FTA Circular 4702.1B states that a recipient can implement a fare change that would have a disproportionate or adverse effect provided that it demonstrates the action meets a substantial need that is in the public's interest and that alternatives would have more severe adverse effects than the preferred alternative. A copy of the resolution signed by Commissioner Garrett Eucalitto can be found on page 876-877 of the CTDOT FTA Title VI Program Appendix.

Service and Fare Equity Policy Public Engagement

In previous years the Connecticut Department of Transportation (CTDOT) conducted public hearings to consult with the public as part of its process to adopt new service and fare equity policies. Due to the unpredictable impacts of COVID-19, CTDOT was forced to conduct all public outreach using virtual platforms available to the Department prior to 2023, during which both virtual and in-person hearings

were held for the SAFE. The following activities were undertaken to publicize the draft Service and Fare Equity Policies and to advise the public of their opportunity to comment during the public comment periods. CTDOT also partnered with *CTtransit*, and *CTrides*. The SAFEs from 2021, 2022, and 2023 are included in the appendices for further details.

A [webpage](#) dedicated to the proposed Service and Fare Equity Policies was developed and a link was posted on the homepage of the CTDOT website.

The SAFE webpage hosted the following:

- DRAFT Service and Fare Equity Policy;
- DRAFT Service and Fare Equity Policy (Spanish);
- Voluntary Feedback Survey;
- Instructions on how to submit comments; and
- “For additional information, or free language assistance, please call (860) 594-2109” in twelve languages (Spanish, Simplified Chinese, Italian, Portuguese, Polish, Russian, Haitian Creole, Arabic, French, Hindi, Korean and Vietnamese).

The OOE utilized the “CTDOT Resource Directory for Community Outreach and Employee Referrals” directory to conduct targeted outreach to organizations that serve minority, low income, and/or limited English proficient (LEP) populations. Emails were sent to announce the availability of the SAFE webpage and the start of the comment period, as a reminder of the opportunity to submit comments, and a final reminder a couple of days prior to the close of the comment period. On each occasion the distribution list included over four hundred (400) organizations including community and faith-based organizations, educational institutions, libraries, and Neighborhood Revitalization Zone (NRZ) leaders.

Additionally, press releases was issued announcing the launches of the webpages and the dates of the public comment periods.

In addition to conducting the outreach detailed above, CTDOT partnered with *CTtransit*, *CTrides* and Metro-North Railroad (MNR). The sizable networks of each organization offered CTDOT an opportunity to largely extend its reach. An outline of the outreach conducted by each organization is detailed below.

CTtransit

Interior notices regarding the availability of the draft policy and the opportunity for public comment were placed on board buses, along with a QR code where riders could access the SAFE webpage directly from their mobile device.

Additionally, *CTtransit* posted a link to the SAFE webpage on their website and generated social media posts using Facebook and Twitter.

CTrides

CTDOT has developed a family of commuter services designed to meet the needs of Connecticut commuters. *CTrides* helps commuters find the best way to get to work or school and offers information and resources for travel options throughout Connecticut. *CTrides* has an extensive social media presence and reaches both rail and bus riders statewide.

Voluntary Feedback Survey

CTDOT utilized a voluntary feedback survey during the SAFE outreach. The survey was generated to measure the public's opinion of the draft policies and outreach efforts. The survey included demographic questions to measure the success of CTDOT's targeted outreach efforts. A summary of survey results over the last 3 years are provided below:

- 87.5% of respondents rated the date and time of the hearings as fair or better;
- 87.5% of respondents rated the ability to submit comments and ask questions as fair or better;
- 62% of respondents felt the presentation provided a sufficient amount of detail;
- 75% of respondents rated the presentation as fair or better; 75% of respondents were made aware of the availability of the webpage through the CTDOT website, newspapers, or social media;
- 25% of respondents are of Hispanic origin;
- 37.5% of respondents self-identified as minority; and
- 50% of respondents had an annual income of less than \$50,000.

Comments

All public comments from the two public hearings, email, and voicemail were logged and analyzed for incorporation into the Final SAFE Analyses. A copy of the public comments received during the public comment period may be requested by reaching out to CTDOT.

Future Service and Fare Equity Analyses

The Connecticut Department of Transportation (CTDOT) will conduct a Service and Fare Equity Analysis for any proposed fare changes and/or major service changes, as defined by the Service and Fare Equity (SAFE) Policy.

CTDOT will utilize the process detailed below:

- 1) CTDOT will develop a narrative of the proposed fare and/or major service change(s). These narratives are prepared as part of the normal service review process and analysis of proposed changes, or as part of the financial analysis package for a proposed fare increase that is done as part of the budgeting process.
- 2) CTDOT will analyze the proposed major service and/or fare changes to determine if the change results in a disparate impact or disproportionate burden as defined in the Department's SAFE Policy. If a disparate impact or disproportionate burden exists, based on the established thresholds within the SAFE Policy, CTDOT will examine whether alternatives exist to maintain the effect of the proposed major service and/or fare change(s), while taking steps to avoid, minimize, or mitigate disparate or disproportionate impacts where practicable.

Should an alternative not be practicable or available that avoids, minimizes, or mitigates the disparate impact or disproportionate burden, an explanation and justification of the proposed changes will be prepared and incorporated into the SAFE Analysis documents. In the Service and Fare Equity Analysis – Final Statement of Impacts and Mitigations, CTDOT will clearly state whether the proposed changes would result in a disparate impact on the basis of race, color, or national origin; and/or a disproportionate burden on the basis of income and detail any mitigation efforts.

3) CTDOT will conduct a comprehensive community outreach process, to provide the public with an opportunity to provide input, suggest alternatives, or request clarification on all proposed major service changes and/or proposed fare changes.

The Connecticut Department of Transportation will issue a news release announcing the public hearings. The news release will include the dates and location, or virtual platform, of each hearing and will be posted to the CTDOT website at least two weeks prior to the public hearings. In addition to the press releases, legal notices will be published in newspapers; and interior notices announcing the public hearings and the opportunity for public comment will be placed on board buses and at New Haven Line, Hartford Line Shore Line East rail stations as appropriate for the changes proposed.

Targeted outreach to minority, Limited English Proficient (LEP) and low-income communities will be utilized to ensure inclusive public participation. The Department will employ the following engagement strategies:

- Engage Community Based Organizations (CBOs) and Faith Based Organizations (FBOs): CTDOT will email the SAFE Analysis and a copy of the news release announcing the public hearings to all identified CBO/FBOs in the impacted service area(s); or to all CBO/FBOs statewide for proposed fare changes. The email will request that the organizations share the information with their constituents and will provide contact information for requesting free language assistance.
- Community/Neighborhood Meetings: CTDOT recognizes the importance and effectiveness of meeting residents where they are. CTDOT will request to be added to agendas of established community and neighborhood meetings in areas affected by the proposed changes to present the SAFE Analysis and advise the public on how they can submit comments.
- Social Media: Social media has become a cornerstone of effective communication. A combination of social media accounts actively managed by CTDOT, including but not limited to Facebook, Instagram, Twitter (X), and LinkedIn, will be used for announcing public hearings and notifying the public of the public comment period. CTDOT will ask stakeholders, including community and faith-based organizations to share this information on their own social media platforms. The Department will keep in mind that this outreach tool is only reaching those with access to the internet.
- Limited English Proficient (LEP)/Safe Harbor Maps: The public hearing notices are considered vital documents and the CTDOT will adhere to its Language Assistance Plan (LAP) to ensure that Limited English Proficient (LEP) populations within the affected service area(s) are informed of the proposed major service or fare changes and can participate in community discussions. The Department will include information in the identified safe harbor languages in the targeted

service area(s), on how to request free interpretation and translation services of documents describing the proposed changes and the SAFE analysis.

In addition to contacting the CBOs and FBOs the Department will provide this information to all Regional Planning Organizations (RPOs). During the two weeks leading up to the public hearings, the Department will periodically send reminders and any updates to all CBOs, FBOs and RPOs.

During the hearing the Department will explain the purpose of the hearing and the proposed changes. CTDOT will discuss strategies to minimize and mitigate any disparate impacts or disproportionate burdens identified during the analysis (should any exist). The moderator will open the hearings to provide the public with the opportunity to submit comments. All comments pertaining to the proposed changes will be documented and addressed as appropriate for the final hearing record.

4) CTDOT will review all comments and feedback received during the public comment period and make any necessary revisions to the proposed changes. If the proposed major service changes and/or fare changes must be implemented, despite disparate impacts or disproportionate burdens, the Department will demonstrate that it has a substantial legitimate justification and has analyzed the alternatives to determine that the impacts of the proposed service and/or fare changes have been minimized to the extent possible.

Service and Fare Equity Analyses

In 2021, 2022, and 2023, the Department conducted Service and Fare Equity Analyses on proposed major service change to the bus and rail systems and proposed statewide fare changes for bus and rail services. The Service and Fare Equity Analyses completed in 2021, 2022, and 2023 can be found on pages 441-816 of the CTDOT FTA Title VI Program Appendix.

Distribution of State and Federal Funds Analysis

As part of its Title VI Program covering January 1, 2020 – December 31, 2022, CTDOT conducted an analysis of capital investments to determine if any disparate impacts exist in the Department's distribution of funds.

There are many factors that drive public transit capital project spending including, grant awards for infrastructure improvements, property ownership, ridership, and the nature and concentration of the fixed guideway infrastructure. Additionally, the age and condition of the fleet impacts the planned purchase of new capital equipment, as well as 'aged equipment' phase out and/or refurbishment programs. All of these are subject to available funding which may be limited by budgetary constraints.

This three year look back period is only a snapshot of capital spending for transit projects. Capital projects often take far longer than three years for design and completion. In many cases the infrastructure will have a useful life that spans decades. For example, the 'Hartford Line' Rail Service project (est. 2018), completed its environmental impact statement in 2012, its design phase was completed in 2014 and track improvements will be ongoing through 2020.

Capital investments are an integral part of the state's Strategic Long-Range Transportation Plan. As such, on-going capital investment is required for equipment purchases, facilities repair, other support structures, and state of good repair programs. These capital investments are evaluated either through

the CTDOT's Title VI engagement and planning process for siting new facilities or through service monitoring, which is done every three years to determine if any disparate impact or disproportionate burden exists within our program. If any analysis finds that a disparate impact or disproportionate burden exists, CTDOT will review the issue to determine if the burden/impact can be avoided or mitigated.

Capital Analysis Methodology

An analysis was performed on all rail and transit service area census tracts within, and/or intersected by, the transit buffer zone to classify tracts as minority or non-minority. The buffers used for this analysis are reported in Table 97.

Table 97: Transit Buffers

Service Type	Buffer
Rail Service	2.5 Miles
Express Bus Service	2.5 Miles
Local Weekday Service	0.25 Miles
Local Weekend Service	0.50 Miles
Deviated Fixed Route Service	0.75 Miles

Census tract information was extracted from ACS 2017-2021 Minority table B03002. The total census tract population from the ACS table was subtracted by the total non-Hispanic Caucasian population to determine the total minority population for each census tract. The total minority population was then divided by the total population for each census tract to determine the minority percentage of each census tract. CTDOT compared the average minority state population (33.323%) against the minority population percentage of each census tract. When a tract within the service area has a minority population percentage higher than the state average 33.323%, it was identified as a minority serving tract in this study.

When designating an entire transit system (i.e. The New Haven Line) as a minority or non-minority serving system, the Department follows federal guidance which uses a 33.33% threshold. Under the federal standard, if the total number of minority serving census tracts for a given service area is more than 33.33% (or 1/3) of the total number of number of tracts in that system, then then the entire transit service is designated as a minority serving system.

To determine the distribution of funds spent on public transit capital projects, CTDOT totaled the capital expenditures by each service system area (i.e. Shore Line East, CTtransit Hartford Division, New Haven Line, etc.). To the extent possible, the amounts spent within minority serving tracts are compared to amounts spent in non-minority serving tracts to determine if there is any disparate impact in the Department's distribution of funds.

Rail Distribution of Capital Funds Analysis and Conclusion

During the three year look back used for this analysis (January 1, 2020 – December 31, 2022), \$251,900,000 was spent on rail transit capital projects that serve population areas with a minority population percentage higher than the state average of 33.323%. During the same period, \$600,000 was spent on rail transit capital projects that serve population areas where the percent of minority residents is lower than the state average. Thus, CTDOT spent 99.76% of all capital rail transportation funding on rail transit projects along minority serving lines.

In the state of Connecticut, the majority of our urban centers have a higher proportion of minority residents when compared to the more sparsely populated suburban centers. CTDOT's rail service areas include several urban population centers with a high proportion of minority residents. Capital project spending generally occurs at higher rates in these areas as they have higher density populations which better support transit service initiatives. It should be noted that within a given system (Shore Line East, etc.) rolling stock improvements benefit all passengers within the total service area.

CTDOT has no finding of disparate impacts in its distribution of funds for rail capital project funding.

Bus Distribution of Capital Funds Analysis and Conclusion

During the three year look back used for this analysis (January 1, 2020 – December 31, 2022), CTDOT spent \$152,645,446 on bus transit capital projects that serve population areas where the total percentage of minority residents is higher than state average of 33.323%. During the same period, CTDOT spent \$10,180,000 on bus transit capital projects that serve population areas where the minority population is lower than the state average. Thus, CTDOT spent 93.75% of all capital bus transportation funding on bus transit projects which serve population centers where the minority population percentage is higher than the state average of 33.323%.

In the state of Connecticut, the majority of our urban centers have a higher proportion of minority residents when compared to the more sparsely populated suburban centers. CTDOT's bus service areas include some suburban centers, but the vast majority of CT *transit* services emanate from the State's urban population centers. These urban areas have a higher proportion of minority residents. Capital project spending generally occurs at higher rates in these areas because they have higher density populations which better supports transit service initiatives. It should be noted that within a given system (CT *transit* New Haven, etc.) rolling stock improvements generally benefit all passengers within the total service area.

CTDOT has no finding of disparate impacts in its distribution of funds for bus capital project funding.

Overall Conclusion

Overall, public transit capital spending for CTDOT state and federally funded projects totaled \$415,325,446 for the reporting period. \$404,545,446 was spent on public transit capital projects that serve population centers where the total percentage of minority residents is higher than the state average of 33.323%. Additionally, \$10,780,000 was spent on public transit capital projects in service areas where the percentage of minority residents was less than the state average. CTDOT spent 97.4% of all capital public transportation funding on public transit projects that reach a high proportion of the state's minority residents.

This finding is reasonable and consistent with the State's demographics and comports to the mission of CTDOT. The state's general transportation priority is to deliver a high quality, safe, multimodal transportation system. To achieve these goals, CTDOT generally seeks to maximize efficiency which often

means investing strategically in more densely populated areas. In the state of Connecticut, many of the urban and/or more densely populated areas also have a higher proportion of minority residents than more sparsely populated suburbs.

As a result of the data presented, it is clear that CTDOT's capital investments in the rail and bus systems are accessible to a large proportion of the state's minority population. CTDOT has no finding of disparate impact through the bus or rail capital project funding.

Maps highlighting CTDOT's distribution of funds for completed and planned facility improvements can be found on pages 100-103 of the CTDOT FTA Title VI Map Appendix.

Statewide Planning Process - Identifying the Transportation Needs of Minority Populations

Existing (codified) Activities: The Connecticut Department of Transportation employs several mechanisms to engage minority populations in the planning process to identify their needs. The Department's primary procedures for public involvement are the Department's Public Involvement Procedures (PIP) document. This document is intended to provide the framework for an early, often, and continuous public involvement process. The PIP has been updated in 2020.

Current Activities (Ongoing update of the Statewide Transportation Improvement Program (STIP) and the Public Involvement Procedures (PIP) document): The 2021 Draft Statewide Transportation Improvement Program (STIP) and the updated Public Involvement Procedures (PIP) document went through a public involvement process. Listed below is the extensive public outreach conducted. The PIP was updated in January 2022 to include procedures for virtual and hybrid meetings, to update the information pertinent to the translation contract, and to add a new version of the Voluntary Feedback Survey to evaluate the Department's outreach.

CTDOT Homepage: A direct link to the STIP and PIP webpages (2021 STIP and Public Involvement Plan - Public Review Procedures) was added to the Department's homepage under *Most Popular* during the public comment period on the STIP and PIP.

STIP Webpage: The STIP webpage of the Department's website includes:

- Narrative of the development of the Draft STIP;
- Information on the opportunities for public involvement;
- Links to the virtual public informational meetings;
- Instructions for individuals with limited internet access;
- Instructions on how to request language assistance;
- Instructions on how to submit comments;
- The draft 2021 STIP document;
- The draft 2021 STIP project list;
- The draft 2021 Multi regional project list;
- The most recent bridge report;
- The most recent safety list;

- Copy of the press release;
- Link to the draft Public Involvement Procedures (PIP); and
- Link to the Air Quality Conformity Determination reports.

Press Release

- A Press release was developed and posted to the Department's website;
- An alert was sent to 875 subscribers, including all news outlets statewide

DOT Calendar of Events

- The virtual public informational meeting on the STIP and PIP was added to the Department's and State's calendar of public events.

Brochure -1

- A brochure was developed outlining the availability of the draft STIP and PIP (both online and in the office), notification of public meetings and how to access the live events. The brochure provided detailed instruction on the ways the public could request additional information or comment on the documents. This brochure was forwarded to the following:
- Eight Metropolitan Planning Organizations (MPOs) and two Rural Planning Organizations (RPOs). These entities forwarded the brochure to:
 - All chief elected officials;
 - Transportation committee members, if applicable;
 - Transit districts in their area;
 - Stakeholders, and
 - Interested parties' lists.
- 180 Community and Faith Based Organizations; and
- All Connecticut Legislators, Connecticut Congressional Delegates, and Connecticut Agency Heads.

Brochure – 2

- A second brochure was developed reminding the public of the continued availability of the draft STIP and PIP (both online and in the office). Additionally, the brochure advised the public that the comment period was still open and encouraged continued public comment until October 9, 2020. This brochure was sent to:
- 180 Community and Faith Based Organizations; and
- *CTtransit*, *CTrides* and all Transit districts for posting to their social media platforms, on their buses, their operator websites and direct email lists.

Advertisement

The CTDOT developed an advertisement for the virtual public informational meeting on the draft STIP and PIP and sent it to twenty newspapers, statewide. The MPOs also developed an advertisement or a legal notice for their virtual public informational meeting on their TIP, along with CTDOT's STIP and PIP and sent it to area newspapers for their Region. These newspapers, used by the CTDOT and the MPOs are listed below:

- Bristol Press
- CT Post
- Danbury News Times
- Greenwich Time
- Hartford Courant
- Inner-City News *
- Inquiring News *
- La Voz Hispana *
- Manchester Journal Inquirer
- Meriden Record
- Middletown Press
- New Britain Herald
- New Haven Register
- New London Day
- Norwalk Hour
- Norwich Bulletin
- Stamford Advocate
- Torrington Register Citizen
- Waterbury Republican
- Willimantic Chronicle
- La Tribuna*
- Northeast Minority News*
- Hartford News *
- Identidad Latina*
- White Eagle *
- El Sol *

*denotes newspapers targeted to reach minority populations

Social Media

- An announcement of the public meeting on the STIP and PIP was posted to the Department's Twitter page.
- WestCOG included announcements on Facebook, Twitter and LinkedIn referencing their TIP and provided a link to their webpage which provided links to the STIIP and PIP.
- CNVCOG and SECCOG included an announcement of the public meeting on their TIP and our STIP on their Facebook account.

Virtual Public Informational Meetings

The Department held two virtual public informational meeting sessions on the draft STIP and PIP, September 23, 2020 at 1:00 pm and at 7:00 pm.

- Three methods to participate were provided – Microsoft TEAMS Live event, YouTube, and a conference call in number.
- Closed captioning was available in multiple languages.

- The live event was streamed on CT-N.
- Approximately thirty-six (36) people attended the 1:00 pm event and sixteen (16) people attended the 7:00 pm event.
- Three options were available to provide questions and comments during the live event – by a dedicated email box, by a dedicated voicemail, or by using the chat box in MS Teams.
- The email and voicemail options were available until the close of the public comment period on October 9, 2020.
- A recording of the live event is included on the Department’s virtual public informational meeting library located on its website.

Coordination with the Metropolitan Planning Organizations

- As requested by the CTDOT, the STIP and PIP documents were made available for public review in the MPOs offices and on their websites, throughout both the Department’s and MPOs respective public comment periods.
- As requested by the CTDOT, the state’s eight MPOs included the review of the STIP when they advertised their review of their TIP and their public meeting was for both the TIP and STIP.
- All MPOs included a link to the Department’s STIP/PIP website on their website.
- The eight MPOs and the two Rural Council of Governments forwarded our brochure to their first elected officials, transit districts, stakeholders and interested parties list.
- The eight MPOs included announcements of the availability of the STIP/PIP in their quarterly and/or monthly email newsletters.
- CTDOT staff attended all Public Informational meetings on the STIP/TIP held by the MPOs.
- As defined in each MPO’s Title VI, Public Involvement Plan, and LEP Plan, legal notices/advertisements were published in required languages: English, Spanish, Polish and Chinese (specific to each MPO).

Comments received and addressed on the STIP and PIP

- The Department did not receive any comments on the PIP.
- The Department received 103 questions/comments on the STIP. Ninety-two (92) were associated with the Cribari Bridge project in Westport, CT. Also received were six transit related questions/comments, three project specific related questions/comments and one comment that was project specific and included maintenance questions. All questions/comments received were responded to, and appropriate CTDOT contact information was provided.

Procedures to Ensure Nondiscriminatory Pass-through of FTA Financial Assistance.

CTDOT is permitted to retain up to fifteen (15) percent of the state’s fiscal year apportionment of 5311 program funding for state administration, planning and technical assistance and up to ten (10) percent of the fiscal year apportionment of 5310 program funding for state administration, planning and technical assistance.

CTDOT uses these funds for staff, support costs associated with managing the grant programs, and to provide technical assistance to subrecipients and grant applicants. Examples of assistance include:

- Conducting site visits and desk reviews.
- Meeting with the staff of providers and applicants to clarify requirements.
- Obtaining and updating the required assurances and documentation.
- Developing grant application to FTA.
- Developing and monitoring the grant agreements with grantees
- Preparing required reports to FTA.
- Providing technical assistance.
- Updating the State Management Plan.
- Legal advertisements and room rental costs for applicant workshops.
- Conducting requests for proposals.

To assist applicants, the applications and the instructions for these programs provide guidance to assist eligible subrecipients in applying for operating, administrative, capital, and/or training assistance. The information provided by the applicant is used by CTDOT to evaluate, approve and prioritize proposed projects, and to incorporate them in CTDOT's applications to FTA for funding.

Section 5310

CTDOT seeks to ensure that all eligible applicants are informed of the availability of the grant. The annual grant application is posted on Biznet/CTsource, the State of Connecticut's procurement portal. Information about how to access the annual grant application is distributed in the following ways:

- Interested parties can sign up on BizNet/CTsource for notification;
- Flyer emailed to previous applicants, including those that serve predominantly minority populations;
- Flyer emailed to Community Based Organizations (CBOs) and Faith Based Organizations (FBOs);
- Flyer emailed to Regional Council of Governments for distribution; and
- CTDOT maintains an email list of those organizations interested in the funding.

Applications for Section 5310 funding require the applicant to estimate the number of individuals in the following demographic categories that are eligible to receive service:

- Black
- Asian/Pacific Islander
- Hispanic
- American Indian/Alaskan Native
- Other

Depending on the type of project, the estimate may be based on actual client records or census data for the service area. Applicants must explain the data source being used to capture this demographic information (i.e. current client base; census data for the service area; or some other source).

The demographic data submitted as part of the application is also used to determine whether applicants that serve minority populations are being reached. If applications from organizations that serve minority populations are not received, additional research is required to determine why there were no applicants

serving minority populations, including a review of the application process and outreach to make sure the process itself is not a barrier. CTDOT will then make additional targeted outreach to further assist organizations that serve minority populations or adjust the process to remove any barriers.

As indicated in the Section 5310 State Management Plan, ridership demographics and race/ethnic data are part of routine project monitoring and quarterly reporting. To verify compliance during site visits, staff reviews how the grantee provides information about the services they provide' how they inform people of their rights under Title VI; and how they put into practice their public participation plan and language assistance plan.

Criteria for Selecting Projects

In selecting Section 5310 recipients, CTDOT works cooperatively with regional councils of governments and area agencies on aging to ensure the equitable distribution of grant funding throughout the State. As part of the development of the locally coordinated human services – public transportation plan, CTDOT worked with stakeholders to develop uniform prioritization criteria to be applied statewide. These were developed and were extensively reviewed and amended by the stakeholders. Projects are evaluated using the following criteria (not in priority order):

Traditional Section 5310 Projects

1. Legal Notice, Complete Application and Submission Deadline. Application must be submitted prior to the deadline, signed and completed entirely, with one Legal Notice published within the required timeframe.
2. Eligibility for Replacement. Vehicle proposed for replacement must be four (4) years old or have 100,000 miles for vans and minivans and five (5) years old or have 150,000 miles for buses and minibuses or, have documentation of excessive maintenance costs. Equal consideration will be given to applicants who do not have a vehicle to replace but are expanding service or starting a new service.
3. Planning Process. Priority will be given to nonprofit organizations and local municipalities whose project serves a priority target group (individuals with disabilities, older adults, and people with low incomes, as defined by FTA C 9070.1G) and fills a gap identified in the LOCHSTP process.
4. Limited English Proficiency. Priority will be given to applicants that describe how people with Limited English Proficiency will be informed about the service.
5. Utilization of Equipment. Effective utilization of the equipment should be demonstrated with reliable estimates of the number of individuals that will receive service, and the total number of passenger trips to be provided. Priority will be given to vehicles that will be utilized evenings, weekends, out of region, more than six hours per day, and/or are available for a coordinating entity.

6. Degree of Need in the Applicant's Proposed Service Area for Transportation Services. Clear demonstration of the lack of accessible transportation through existing public and private transportation providers.
7. Coordination. Priority will be given to applicants that coordinate with another organization on providing more/expanded service, use of the vehicle, client transport, driver training, fuel purchase, etc.
8. Transportation Budget. Priority will be given to applicants that can attest to and correctly demonstrate having sufficient matching dollars to provide the local match, as well as enough operating income to cover estimated operating expenses.

For organizations that have operated vehicles under this program in past years, CTDOT applies the following additional criteria:

- A review of quarterly operating reports.
- A review of vehicle maintenance/inspection reports.
- The past cooperation of the organization with the Department during the application and operating processes.

Other (Nontraditional) Section 5310 Projects

The proposed strategy must:

1. Serve the target population categories and address an identified gap.
2. Achieve efficiency in service delivery.
3. Not replace other funding programs or resources.
 - a. If the strategy has been funded in prior years by a different resource, in order to be eligible for FTA funding programs, the strategy must have been rejected for future funds or had funding for the specific strategy reduced.
4. Be able to start up in a reasonable period of time.
5. Provide regional/geographical equity.
 - a. Each community should be able to share in the benefits from these funds.
6. Maximize the use of available local, state and federal-funded public transportation resources.
 - a. This will allow CTDOT to make use of resources already in place and will prevent the creation of a secondary layer of services.
7. Be subcontracted with a subrecipient that has the technical and managerial capabilities to conduct the project.
8. Have appropriate resources available to provide the service.

- a. This would include wheelchair accessible vehicles and could possibly include resources such as dispatch capabilities or other resources as determined by the strategy.

9. Have an adequate plan to make the target population aware of the available service.

Extra credit points may be earned if the strategy (a) provides continued operating funding for a service which is already in operation; (b) provides a service where or when no other service is available; (c) has matching funding available from sources other than CTDOT or US DOT funding; (d) coordinates with other public and private programs to maximize resources and (e) attain any other regionally determined productivity measures.

Projects included in the Program of Projects (POP) submitted to FTA for approval and funding are jointly selected by CTDOT and the regional councils of governments, based on a score compiled from the evaluation criteria. Applicants whose scores result in a tie are more closely assessed in terms of need and the potential impact to the proposed service area (how many people would be served, operating hours and days, etc.) to determine how to refine, detract or award more points to break the tie.

A copy of the Department's Traditional 5310 Grant Scoring Sheet can be found on page 817 of the CTDOT FTA Title VI Program Appendix. Additionally, a listing of funding requests received from private nonprofit organizations, State or local governmental authorities and Indian tribes during the reporting period can be found on pages 818-824 of the CTDOT FTA Title VI Program Appendix.

Maps reporting the towns served by 5310 vehicles can be found on pages 104-106 of the CTDOT FTA Title VI Map Appendix.

Monitoring

As part of our monitoring of Section 5310, CTDOT prepares maps of towns served by Section 5310-funded vehicles. These are reviewed with the Office of Equity to assure coverage of low-income and minority areas. If there are low-income or minority areas that are not being served CTDOT will reach out to the regional council of governments, municipalities, CBOs and FBOs for assistance in identifying eligible organizations. CTDOT will make more targeted efforts to identify and assist organizations that serve minority and low-income populations. CTDOT also keeps track of repeat applicants that are not funded due to low scores. Program staff offer those applicants a comprehensive review of what a high-scoring application would include. That review is followed up with an email to reiterate what was discussed.

Section 5311

CTDOT conducts a Transit System Audit of Section 5311 subrecipients on a triennial basis. Prior to the audit, the subrecipient completes a questionnaire. CTDOT then conducts an on-site visit in which follow-up questions are asked, pertinent documentation (i.e., policies) is reviewed, and a bus ride checklist is completed. A final report is prepared and issued to the subrecipient noting any findings, with the required submission of a corrective action plan addressing each finding to bring the subrecipient into compliance.

As part of Transit System Audits, subrecipients are also required to provide their Limited English Proficiency (LEP) Plan which requires them to perform a four-factor analysis. Additional Title VI related

information is also verified during Transit System Audits including, but not limited to: the subrecipient's Title VI Plan; Title VI Complaint Procedures; Title VI postings on the schedules and on the vehicles visible to the passengers; and what efforts are made to hire DBE firms.

CTDOT solicits Section 5311 grant applications every four years. The most current cycle was in the Spring of 2020, and the previous cycle was in the Spring of 2016.

A copy of the Department's 5311 selection criteria and methodology for distributing funds can be found on pages 825-827 of the CTDOT FTA Title VI Program Appendix.

Procedures to Provide Assistance to Subrecipients/Efforts to Assist Applicants who Serve Predominantly Minority Populations

CTDOT maintains a record of all requests for 5310 Elderly Individuals and Individuals with Disabilities and 5311 Rural and Small Urban Area Formula Funding. The record identifies applicants that use grant program funds to serve minority populations and low-income populations. The record also identifies which applications were and were not funded. These records are reviewed by FTA at every State Management Review.

Section 5310

The Section 5310 grant program provides formula funding to States for the purpose of assisting private nonprofit groups in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. The funding allocated to large urbanized (over 200,000) areas can only be used for projects in those areas. Funding allocated to small urbanized (50,000-200,000) areas and rural (<50,000) areas cannot be used in large urbanized areas. The program aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. This program supports transportation services planned, designed, and carried out to meet the special transportation needs of seniors and individuals with disabilities. Projects that are awarded funding must be derived from the locally coordinated public transit – human services transportation plan.

Eligible projects include both "traditional" capital investment (vehicle grants) and "nontraditional" investment beyond the Americans with Disabilities Act (ADA) complementary paratransit services. 49 U.S.C. Section 5310 requires that 55% of funding be used for traditional vehicle grants to non-profit agencies or municipalities to meet the transportation needs of the elderly and persons with disabilities. The balance of funds these can be used for nontraditional projects, such as:

- Travel training
- Volunteer driver programs
- Improving signage, or way-finding technology
- Incremental cost of providing same day service or door-to-door service
- Mobility management programs
- Expanding services to areas where no service exists

On an annual basis, CTDOT opens the application cycle and keeps it open for a minimum of three (3) months. CTDOT has a one-page application notice that briefly explains the program and how to apply.

When distributing the application notice, the Office of Transit and Ridesharing uses contact lists for community and faith-based organizations that are kept up to date by the Office of Equity. The application notice is distributed by email to prior recipients, interested parties that have asked to be included in the distribution, community and faith-based organizations, transportation providers, and Regional Planning Organizations (RPOs). The application is also posted to Biznet, which is a state administered portal for information on state contracts, solicitations, and vendor information.

The annual application process is conducted in cooperation with RPOs throughout the state. CTDOT and the RPOs assist potential applicants through the application process.

The RPOs, most of whom also have metropolitan planning responsibilities and Title VI pass-through responsibilities under the statewide metropolitan planning program are familiar with the local human service agencies who are the targeted subrecipients of 5310 grants. The RPOs reach out to local agencies and are familiar with the needs of Title VI and Environmental Justice communities in their service area. The RPOs will submit an analysis of their outreach efforts as part of the application review package discussed below.

The CTDOT website includes a [webpage](#) on the Section 5310 program. This page provides application information and explains the reporting requirements. The CTDOT staff is available by phone or by email to provide technical assistance to applicants completing the application. At the request of a potential applicant, the Department will review any section of the application prior to submittal to make sure the proposer understands what is required.

The RPO and CTDOT separately review each application to ensure that all required documentation has been submitted. If there are any issues that require a resolution before the application can be reviewed, CTDOT will notify the applicant.

CTDOT provides a rating criterion to be used to select projects for participation in the program. The applications are reviewed separately by the local RPOs and by CTDOT, each using the established evaluation criteria. The RPOs submit their list to CTDOT, and the two lists are compared, any discrepancies in scoring are discussed and reconciled to create a single prioritized awards list for all of the regions. Applicants are notified of grant approval/denial in writing.

CTDOT reviews the list of applicants annually for those that consistently fail to achieve the score required to receive a grant. CTDOT proactively reaches out to applicants that serve minority populations to provide them with guidance on how to prepare a more successful application.

During TIP/STIP approval, a list of approved projects is provided for review and comment.

Section 5311

The Federal Transit Administration (FTA) Section 5311 program makes federal funds available to the states to assist in the development, implementation and promotion of public transportation systems in rural and small urban areas, using a population-based distribution formula. The goal of the program is to:

- Enhance the access of people in non-urbanized areas to health care, shopping, education, employment, public services and recreation.

- Assist in the maintenance, development, improvement, and use of public transportation systems in non-urbanized areas.
- Encourage and facilitate the most efficient use of all transportation funds used to provide passenger transportation in non-urbanized areas through the coordination of programs and services.
- Assist in the development and support of intercity bus transportation.
- Provide for the participation of private transportation providers in non-urbanized transportation.

Every four years CTDOT solicits Section 5311 Grant Applications from current Section 5311 Subrecipients and private bus companies operating intercity service in non-urbanized areas. The grant application is posted on the CTDOT website for public view. Entities that are not current recipients are welcome to submit their proposal and complete an application.

CTDOT staff is available to provide technical assistance to help applicants to complete the application; this assistance is available by via phone, email or in person at the applicant's office. Prior to the submittal due date, CTDOT sends an email reminder and makes follow-up phone calls to subrecipients to answer any questions about the application process.

In the Section 5311 grant application, subrecipients must provide data indicating the percentage of minority, low income and LEP populations they serve. Upon receipt of applications, CTDOT reviews each application to ensure that the application has been completed correctly and the required documentation has been submitted. Subrecipients are notified that they are required to address any outstanding or pending issues with their application that was determined necessary by CTDOT. CTDOT also offers to meet with the subrecipients to go over their application to make sure they understand what is required. If after review, the completed application is approved by CTDOT, a letter is mailed to the applicant notifying them of their approval.

For over three decades CTDOT has provided Section 5311 operating and capital funding to five (5) rural transit districts. On an annual basis CTDOT seeks proposals from Intercity Bus Service providers as required by the Circular 9040.1F. The Department does not limit which rural areas may submit proposals for rural demonstration project funding. Because 5311 funding is not growing at a level that would allow for increases in service, CTDOT prioritizes continuation of existing services over introducing new services. If increased federal funding levels are provided, applications would be solicited by CTDOT for feasibility of implementation.

CTDOT invites and encourages rural transit operators to participate in Quarterly Transit Meetings. These meetings are facilitated by CTDOT staff, and attendees include rural and urban transit districts, private bus operators, and other interested parties. Information is disseminated to participants on a broad range of transportation issues, such as, budgets, insurance, bus operations, capital equipment, service enhancements, and federal/state program regulations. They also serve as an opportunity for transit operators to bring forth and discuss any issues affecting their agency or bus services being provided to the general public.

Through the Section 5311 grant application process, CTDOT requires applicants to describe their public involvement efforts and community outreach.

Each Section 5311 subrecipient is required to have a public participation plan in place which is reviewed and approved by CTDOT. The public participation plan contains information to assist with engaging minority, low income and LEP communities. Strategies may include:

- a) Scheduling meetings at times and locations which are convenient and accessible for minority, low-income and LEP communities;
- b) Employing different meeting sizes and formats;
- c) Coordinating with community- and faith-based organizations, educational institutions, and other organizations to implement public engagement strategies that reach out specifically to members of affected minority, low income and/or LEP communities;
- d) Radio, television, or newspaper ads on stations and in publications that serve LEP populations. Outreach to LEP populations could also include audio programming available on podcasts; and
- e) Providing opportunities for public participation through means other than written communication, such as personal interviews or use of audio or video recording devices to capture oral comments.