

**LAREDO WEBB COUNTY AREA
METROPOLITAN PLANNING ORGANIZATION
POLICY COMMITTEE
VIRTUAL MEETING**

LIVE WEB LINK: <http://laredotx.swagit.com/live>

PUBLIC ACCESS CHANNEL: Spectrum TV channel 1300

September 21st, 2020

1:30 p.m.

In order to adhere to the current public gathering guidelines, this meeting will be held in a virtual meeting format. Citizens wishing to provide public comment may phone in their comments during the meeting, or submit them electronically through means provided. (see information below).

MEETING AGENDA

I. CHAIRPERSON TO CALL MEETING TO ORDER

II. CHAIRPERSON TO CALL ROLL

III. CITIZEN COMMENTS

Citizens interested in providing comments on a particular item are to submit their comments in writing via the "Online Response Form", available in the "Contact Us" of the MPO website located at <https://www.cityoflaredo.com/Planning/MPO/Index.html>. Comments are to be submitted no later than 1:15 p.m. the day of the meeting. During the meeting, a telephone number shall be provided to allow citizens the opportunity to call in to speak on a particular item. Comments are limited to three (3) minutes per speaker. No more than three (3) persons will be allowed to speak on any side of an issue. Should there be more than three (3) people who wish to speak on a specific issue, they should select not more than three (3) representatives to speak on their behalf. The presiding officer may further limit public on the interest of order or time. Speakers may not transfer their minutes to any other speaker. Comments should be relevant to MPO business and delivered in a professional manner. No derogatory remarks shall be permitted.

IV. ITEMS REQUIRING POLICY COMMITTEE ACTION:

A. Approval of the minutes for the virtual meeting held on August 17th, 2020.

B. Motion to approve and adopt the Laredo Transit Management Inc. (LTMI) Public Transportation Agency Safety Plan (PTASP) and Safety Performance Targets and, to incorporate into the Metropolitan and Statewide Planning Process with the Laredo Metropolitan Planning Organization (MPO).

C. Motion to accept the ranking of firms that submitted proposals in response to the Request For Qualifications (RFQ) invitation issued for the development of the Comprehensive Operations Analysis (COA) of El Metro Project, and authorize contract negotiation fee.

D. Discussion with possible action on Hachar-Reuthinger.

V. REPORT(S) AND PRESENTATIONS (No action required).

A. Welcome to new member Humberto "Tito" Gonzalez, Jr., filling the "PRIVATE SECTOR Member at large" position on the Policy Committee.

B. Status report by the Regional Mobility Authority (RMA).

VI. ADJOURNMENT

THIS NOTICE WAS POSTED AT THE MUNICIPAL GOVERNMENT OFFICES, 1110 HOUSTON STREET, LAREDO, TEXAS, AT A PLACE CONVENIENT AND READILY ACCESSIBLE TO THE PUBLIC AT ALL TIMES. SAID NOTICE WAS POSTED BY SEPTEMBER 18TH, 2020, BY 1:30 P.M.

All meetings of the MPO Committee are open to the public. Persons who plan to attend this meeting and who may need auxiliary aid or services such as: interpreters for persons who are deaf or hearing impaired, readers of large print or Braille, or a translator for the Spanish language are requested to contact Ms. Vanessa Guerra, City Planning, 1413 Houston St. at 956-794-1613, vguerra@ci.laredo.tx.us, at least five working days prior to the meeting so that appropriate arrangements can be made. Materials in Spanish may also be provided upon request.

Disability Access Statement-This meeting is wheelchair accessible. The accessible entrances are located at 1110 Victoria and 910 Flores. Accessible parking spaces are located at City Hall, 1110 Victoria.

Ayuda o Servicios Auxiliares: Todas las reuniones del Comité del MPO están abiertas al público. Personas que planean asistir a esta reunión y que pueden necesitar ayuda o servicios auxiliares como: interpretes para personas con discapacidad auditiva, lectores de letra grande o en Braille, o un traductor para el idioma español deben comunicarse con la Sra. Vanessa Guerra, en el Departamento del Planificación de la Ciudad, 1413 Houston St. al (956) 794-1613, vguerra@ci.laredo.tx.us, al menos cinco días hábiles antes de la reunión para que los arreglos apropiados se pueden hacer. Materiales en español se proveerán a petición.

Declaración de Acceso a la Discapacidad: Esta reunión es accesible para sillas de ruedas. Las entradas accesibles están ubicadas en 1110 Victoria y 900 Flores. Los espacios de estacionamiento para discapacitados se encuentran por la calle Victoria.

Información en Español: Si usted desea esta información en español o si desea explicación sobre el contenido, por favor llámenos al teléfono (956) 794-1613 o comunicarse con nosotros mediante correo electrónico a vguerra@ci.laredo.tx.us.

CITY OF LAREDO REPRESENTATIVES:

Honorable Pete Saenz, Mayor and LWCAMPO Chairperson
Honorable Norma "Nelly" Vielma, City Councilmember, District V
Honorable Dr. Marte Martínez, City Councilmember, District VI

LAREDO MASS TRANSIT BOARD REPRESENTATIVE:

Honorable George Altgelt, City Councilmember, District VII

COUNTY OF WEBB REPRESENTATIVES:

Honorable Tano E. Tijerina, Webb County Judge
Honorable Jesse Gonzalez, Webb County Commissioner, Pct. 1
Honorable John Galo, Webb County Commissioner, Pct. 3

STATE REPRESENTATIVES:

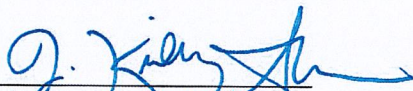
Mr. David M. Salazar, Jr. P.E., TxDOT District Engineer

PRIVATE SECTOR

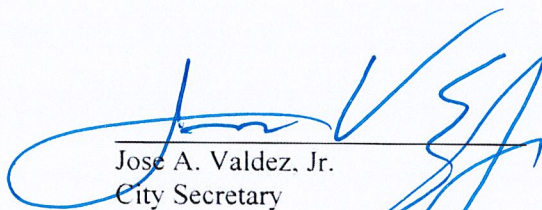
Humberto "Tito" Gonzalez, Jr.

*****EX-OFFICIO*****

Honorable Judith Zaffirini, State Senator, District 21
Honorable Richard Raymond, State Representative, District 42
Honorable Tracy O. King, State Representative, District 80



J. Kirby Snideman, ATCP
MPO Director



Jose A. Valdez, Jr.
City Secretary

SEP 17 '20 PM2:33
REC'D CITY SEC OFF

Laredo Webb County Area (LWCA)

Metropolitan Planning Organization Policy Committee Virtual Meeting via Webex



LIVE WEB LINK: <http://laredotx.swagit.com/live>
PUBLIC ACCESS CHANNEL: Spectrum TV channel 1300

MINUTES OF THE VIRTUAL AUGUST 17TH, 2020 MEETING

Regular members present:

Honorable Pete Saenz, City of Laredo Mayor and LWCAMPO Chairperson
Honorable Tano E. Tijerina, Webb County Judge
Honorable Dr. Marte Martinez, City Councilmember, District VI
Honorable John Galo, Webb County Commissioner, Pct. 3
David M. Salazar, Jr., TxDOT District Engineer
Honorable Norma “Nelly” Vielma, City Councilmember, District V
Honorable Jesse Gonzalez, Webb County Commissioner, Pct. 1

Regular members not present:

Honorable George Altgelt, City Councilmember, District VII
(Member At Large- Currently Vacant)

Ex-Officio Members Not Present:

Honorable Richard Raymond, State Representative, District 42
Honorable Judith Zaffirini, State Senator, District 21
Honorable Tracy O. King, State Representative, District 80

Staff (Of Participating LWCA Agencies) Present:

City: J. Kirby Snideman, City Planning/LWCAMPO Staff
Vanessa Guerra, City Planning/LWCAMPO Staff
Jason Hinojosa, City Planning/LWCAMPO Staff
Juan Mendive, City Planning/LWCAMPO Staff
Graciela Sosa-Briones, City Planning/LWCAMPO Staff
Angie Quijano, City Planning/LWCAMPO Staff
Riazul Mia, City Manager’s Office
Ramon Chavez, City Engineering Department
Danny Magee, City Traffic Safety Department

State: Humberto “Tito” Gonzalez, TxDOT
Roberto Rodríguez, TxDOT

Others: Guillermo Cuellar, Webb County Engineering
Luis Perez Garcia, Webb County Engineering
Antonio “Tony” Rodríguez, HNTB, Inc.
Martha Palacios
Lalo Uribe

I. CHAIRPERSON TO CALL MEETING TO ORDER

Mayor Pete Saenz called the meeting to order at 1:32 p.m.

II. CHAIRPERSON TO CALL ROLL

Vanessa Guerra, MPO Division Manager, called roll and verified a quorum existed.

III. CITIZEN COMMENTS

Speakers are required to fill out witness cards, which must be submitted to MPO Staff no later than 15 minutes after the start of the meeting. Speakers shall identify themselves at the microphone. Comments are limited to three (3) minutes per speaker. No more than three (3) persons will be allowed to speak on any side of an issue. Should there be more than three (3) people who wish to speak on a specific issue, they should select not more than three (3) representatives to speak on their behalf. The presiding officer may further limit public on the interest of order or time. Speakers may not transfer their minutes to any other speaker. Comments should be relevant to City business and delivered in a professional manner. No derogatory remarks shall be permitted.

Kirby Snideman, MPO Director, stated no comments had previously been received and suggested to wait for possible comments from the public via telephone call.

There were no citizen’s comments.

IV. ITEMS REQUIRING POLICY COMMITTEE ACTION:

A. Approval of the minutes for the virtual meeting held on July 20th, 2020.

Judge Tijerina made a motion to approve the minutes for the meeting held on July 20th, 2020.

Second: CM. Galo
For: 7
Against: 0
Abstained: 0

Motion carried unanimously

B. A Motion to accept the ranking of firms that submitted proposals in response to the BID INVITATION issued for the development of the MPO Website Redesign Project, approve the selection of SGS Technologie L.L.C., and authorize execution of a contract in the amount of \$13,080.

Kirby Snideman, briefly presented this item. He stated that the evaluation process was developed in compliance with the procurement requirements and we received a total of eight (8) submittals. He further mentioned a committee was formed by three evaluators which they took into consideration the scope of work as well as the proposed fee, and, recommended SGS Technologie, L.L.C. for the development of the project.

CM. Galo stated he was not totally familiar with the scope of work but, he would support the item and staff recommendation for the selection of company, as presented.

CM. Galo made a motion to **accept** the ranking of firms that submitted proposals in response to the BID INVITATION issued for the development of the MPO Website Redesign Project, **approve** the selection of SGS Technologie L.L.C., and **authorize** execution of a contract in the amount of \$13,080.

Second by Judge Tijerina

For: 7
Against: 0
Abstained: 0

Motion carried unanimously

C. Discussion with possible action on the repair of IH 35 Del Mar Access Road and underpass surface. (CM. Altgelt).

Mayor Saenz asked if this item could be tabled as CM. Altgelt was not in attendance.

David M. Salazar, Jr., TxDOT District Engineer, stated the objective for the MPO was to approve future funding and/or future projects. This item was considered a maintenance issue and would be addressed as part of the pavement and preservation plan which has already been approved for the District. The project was scheduled for March, 2021.

Danny Magee, City Traffic Safety Department, mentioned TxDOT had already presented the Traffic Control Plan for this project, for their review.

CM. Galo made a motion to **table** this item, time uncertain.

Second by Judge Tijerina

For: 7
Against: 0
Abstained: 0

Motion carried unanimously

D. Motion to add TxDOT Director of Transportation Planning & Development, Humberto Gonzalez Jr, P.E. into the vacant At-Large position on the MPO Policy Committee. (CM. David Salazar).

Judge Tijerina made a motion to approve appointment of Humberto Gonzalez Jr, P.E. into the vacant At-Large position on the MPO Policy Committee

Second by Dr. Marte Martinez

For: 7

Against: 0

Abstained: 0

Motion carried unanimously

E. Discussion with possible action on Hachar-Reuthinger.

Guillermo Cuellar, Assistant Webb County Engineer provided a brief update. He stated they were currently working on the environmental aspect. They had finished coordination with Texas Parks and Wildlife, and had some traffic noise technical reports currently under TxDOT review.

Mayor Saenz, mentioned Mr. Salazar from TxDOT had approached the city regarding the co-sharing funding sources. He further mentioned that for the Hachar portion, the city had committed \$4.1 Million. However, some financial aspects for the Reuthinger side, were still pending to be resolved.

David Salazar from TxDOT stated that there was no Advance Funding Agreement with the County and unfortunately, the existing Advance Funding Agreement with the city didn't allow to be carry over into future affidavits with the County. He further mentioned there were options available that would like to discuss with Judge Tijerina specifically for the 3-mile section of their portion of the project.

Judge Tijerina stated he agreed and, was willing to meet with Mr. Salazar as it was in their best interest to review the formula to reduce the financial obligation.

Ramon Chavez, City Engineer, stated that in regards to the Right-of-Way title issues, he had been in communication with Mr. Nicholas Van Steenberg representing the Hachar Trust and everything looked on track. He further mentioned there were plans to have a discussion with their attorney for final edits to the document.

Mayor Saenz asked Mr. Chavez to prepare a status report for the next meeting.

V. REPORT(S) AND PRESENTATIONS (No action required).

A. Status report by the Regional Mobility Authority (RMA)

Tony Rodriguez, HNTB Inc., gave a brief report on the status of the projects led by the Regional Mobility Authority (RMA).

Regarding the Killam Industrial Boulevard Turning Lane project, the Plans, Specification and Estimates (PS&E) were at 100% completion, comments were received from the Laredo District and planned to be addressed the following week to stay on track for the November letting.

In regards to the Utilities, they were on track for clearance by August, 2020, with the exception of the gas line which would probably take until September, 2020.

The Los Presidentes (Cuatro Vientos to Concord Hills) project was being developed in coordination with the City of Laredo and Webb County Drainage District (WCDD). The plans received were at 95%, and planned to be submitted for letting in September, 2020. Construction is anticipated to commence early 2021.

In regards to the Vallecillo Road project, the geotechnical studies were being completed and planned to begin the traffic studies by the end of August, 2020.

The Springfield Rd. project, they were in the process of developing a draft of interlocal agreement to be presented to the City for co-sharing funding participation.

Next Board meeting would be scheduled for September, 2020.

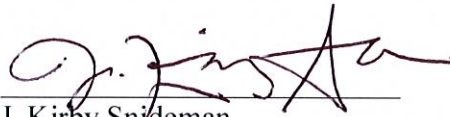
Mayor Saenz asked for a motion to adjourn the meeting if there were no additional questions or further business to be discussed.

A. ADJOURNMENT

Judge Tijerina made a motion to adjourn the meeting at 1:52 p.m.

Second: CM. Galo
For: 7
Against: 0
Abstained: 0

Motion carried unanimously



J. Kirby Snideman
MPO Director



Pete Saenz, Mayor and LWCAMPO
Chairperson

**LAREDO WEBB COUNTY AREA
METROPOLITAN PLANNING ORGANIZATION
ACTION ITEM**

DATE: 9-21-20	ITEM: IV-B.
SUBJECT: MOTION(S) Motion to approve and adopt the Laredo Transit Management Inc. (LTMI) Public Transportation Agency Safety Plan (PTASP) and Safety Performance Targets and to incorporate into the Metropolitan and Statewide Planning Process with the Laredo Metropolitan Planning Organization (MPO).	
INITIATED BY: MPO Staff El Metro Staff	STAFF SOURCE: J. Kirby Snideman, MPO Director Claudia San Miguel, Transit General Manager
PREVIOUS COMMITTEE ACTION: None	
BACKGROUND: In accordance with 49 U.S.C. 5303(h)(2)(B) and 5304(d)(2)(B), each State and transit agency must make its safety performance targets available to States and Metropolitan Planning Organizations to aid in the planning process. 49 C.F.R. § 673.15(b) requires, to the maximum extent practicable, a State or transit agency to coordinate with States and Metropolitan Planning Organizations in the selection of State and MPO safety performance targets. Performance Measures in Transportation Improvement Programs (TIP) and Metropolitan Transportation Plans MPOs are required to reference the safety performance targets and agency safety plans in their TIPs and Metropolitan Transportation by December 31, 2020. As a result, the Laredo transit public transportation provider, El Metro, also known as the Laredo Transit Management Inc. (LTMI), has developed and is recommending for the Laredo MPO to adopt the LTMI Public Transportation Agency Safety Plan (PTSAP) and Safety Performance Targets which have been approved by the City of Laredo Mass Transit Board and certified by Texas Department of Transportation (TxDOT) Public Transportation Division (PTN). The LTMI's PTASP was adopted and approved by the Laredo Mass Transit Board on May 4, 2020 and subsequently certified by TxDOT Public Transportation Division on July 16, 2020. Attachments: <ul style="list-style-type: none"> • Texas Department of Transportation letter of approval. • Federal Register / Vol. 83, No. 139 / Thursday, July 19, 2018/Rules and Regulations. • El Metro Transit Agency Safety Plan. 	
FINANCIAL IMPACT: No Impact.	
COMMITTEE RECOMMENDATION: Approval	STAFF RECOMMENDATION: Approval



125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

July 30, 2020

Ms. Claudia San Miguel
General Manager
Laredo Transit Management, Inc.
1301 Farragut St
Laredo, TX 78040

Dear Ms. Miguel,

I am pleased to inform you that the Texas Department of Transportation (TxDOT), as the certifying agency for small public transportation providers in the State of Texas, certifies the El Metro Public Transportation Agency Safety Plan (PTASP), dated July 16, 2020.

The PTASP is compliant with the elements outlined in The Final PTASP Rule (49 C.F.R. Part 673).

If you have any questions or require additional information, please contact Theodore Kosub, PTASP Program Manager at 512-486-5971 or by email at theodore.kosub@txdot.gov.

Sincerely,

DocuSigned by:
Mark Sprick

615C2AE8C799461...
Mark A. Sprick, AICP
Director, Administration and Program Support
Public Transportation Division

DEPARTMENT OF TRANSPORTATION**Federal Transit Administration****49 CFR Part 673**

[Docket No. FTA–2015–0021]

RIN 2132–AB23

Public Transportation Agency Safety Plan**AGENCY:** Federal Transit Administration (FTA), DOT.**ACTION:** Final rule.

SUMMARY: The Federal Transit Administration (FTA) is publishing a final rule for Public Transportation Agency Safety Plans as authorized by the Moving Ahead for Progress in the 21st Century Act (MAP–21). This final rule requires States and certain operators of public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53 to develop Public Transportation Agency Safety Plans based on the Safety Management System approach. Operators of public transportation systems will be required to implement the safety plans. The development and implementation of safety plans will help ensure that public transportation systems are safe nationwide.

DATES: The effective date of this rule is July 19, 2019.

FTA's Office of Transit Safety and Oversight (TSO) will host a series of webinars to discuss the requirements of the Public Transportation Agency Safety Plan (PTASP) final rule. The first two webinars will be held at 2 p.m. on Wednesday, July 25, 2018 and Tuesday, July 31, 2018.

ADDRESSES: To register for webinars and for information about future webinars, please visit <https://www.transit.dot.gov/about/events>.

FTA is committed to providing equal access for all webinar participants. If you need alternative formats, options, or services, contact FTA-Knowledge@dot.gov at least three business days prior to the event. If you have any questions, please email FTA-Knowledge@dot.gov.

FOR FURTHER INFORMATION CONTACT: For general information, contact PTASP_QA@dot.gov. For program matters, contact Adrienne Malasky, Office of Transit Safety and Oversight, (202) 366–1783 or Adrienne.Malasky@dot.gov. For legal matters, contact Michael Culotta, Office of Chief Counsel, (212) 668–2170 or Michael.Culotta@dot.gov. Office hours are from 8:30 a.m. to 5:00 p.m., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:**Table of Contents**

- I. Executive Summary
 - A. Purpose of Regulatory Action
 - B. Legal Authority
 - C. Summary of Major Provisions
 - 1. Summary of the Final Rule
 - 2. Summary of Public Comments
 - 3. Summary of the Major Changes to the Rule
 - D. Costs and Benefits
- II. Background
- III. Notice of Proposed Rulemaking and Response to Relevant Comments
 - A. Scope and Applicability of Public Transportation Agency Safety Plans
 - 1. Section 5310, Section 5311, Small Section 5307, and Tribal Operators
 - 2. Commuter Rail and Passenger Ferry Service
 - 3. Contracted Service
 - B. Definitions
 - 1. Accident
 - 2. Incident
 - 3. Occurrence
 - 4. Serious Injury
 - 5. Accountable Executive
 - 6. Chief Safety Officer
 - 7. Operator of a Public Transportation System
 - 8. Rail Transit Agency
 - 9. Performance Target, Safety Performance Target, and Performance Criteria
 - 10. Small Public Transportation Provider
 - 11. Requests for New Definitions
 - C. General Requirements
 - 1. Role of the Accountable Executive
 - 2. Approval of a Public Transportation Agency Safety Plan
 - 3. Documentation of SMS Processes and Activities
 - 4. Safety Performance Targets
 - 5. Future Requirements in FTA's Public Transportation Safety Program and National Public Transportation Safety Plan
 - 6. Process and Timeline for Annual Review and Update
 - 7. Emergency Preparedness and Response Plans
 - 8. Multiple Modes of Transit Service
 - D. State and Transit Agency Roles
 - 1. Large Transit Agencies
 - 2. Small Public Transportation Providers, Section 5311 Providers, and Section 5310 Providers
 - 2.1. States Must Draft and Certify Safety Plans on Behalf of Small Public Transportation Providers
 - 2.1.1. Option for State-Wide or Agency-Specific Safety Plans
 - 2.1.2. Drafting and Certifying Safety Plans for Small Section 5307 Providers
 - 2.2. Other Comments
 - 3. Small Transit Providers May Draft and Certify Their Own Safety Plans
 - 4. Direct and Designated Recipients Drafting and Certifying Safety Plans on Behalf of Smaller Transit Providers
 - E. Existing System Safety Program Plan Is Effective for One Year
 - 1. General Comments
 - 2. One-Year Compliance Timeframe
 - F. Certification of Safety Plans
 - G. SSOA Review and Approval of PTASPs for Rail Transit Systems

- H. Safety Performance Targets and Performance-Based Planning
- I. Safety Management Systems
 - 1. Safety Management Policy: General Comments
 - 1.1. Safety Management Policy Statement
 - 1.2. Employee Reporting Program
 - 1.3. Safety Accountabilities and Responsibilities
 - 2. Safety Risk Management
 - 2.1. Safety Risk Management: General Comments
 - 2.2. Safety Hazard Identification and Analysis
 - 3. Safety Assurance
 - 3.1. Safety Assurance: Safety Performance Monitoring and Measurement
 - 3.2. Safety Assurance: Management of Change
 - 3.3. Safety Assurance: Continuous Improvement
 - 4. Safety Promotion
 - 5. Scalability of SMS
 - 6. SMS and Safety Culture
- J. Safety Plan Documentation and Recordkeeping
 - 1. Safety Plan Documentation
 - 2. Safety Plan Records
 - 3. Other Comments on Documentation and Recordkeeping
 - 4. Database Systems
 - 5. Staffing and Resources as a Result of Documentation and Recordkeeping
- K. Funding
- L. Staffing
- M. Enforcement and Oversight
 - 1. Triennial Reviews and State Management Reviews
 - 2. State Oversight
 - 3. Other Comments
- N. NTD Reporting
- O. Security
- P. SSPP–PTASP Crosswalk
- Q. Safety Performance Measures
- R. Technical Assistance and Guidance
- S. Coordination With Other Entities
- T. Nexus Between the PTASP Rule and Other FTA Requirements
- U. Americans With Disabilities Act Issues
- V. Other Comments on the Rule
- W. Regulatory Impact Analyses
 - 1. Costs
 - 2. Benefits
 - 3. Regulatory Flexibility Act
- X. Tribal Issues
 - 1. Applicability of the Rule to Tribes
 - 2. The State's Role in Tribal Safety Plans
 - 3. Financial Impact on Tribes
 - 4. Tribal Consultation
- IV. Section-by-Section Analysis
- V. Regulatory Analyses and Notices

I. Executive Summary**A. Purpose of Regulatory Action**

The public transportation industry remains among the safest surface transportation modes in terms of total reported safety events, fatalities, and injuries.¹ Nonetheless, given public

¹ See United States Department of Transportation, Bureau of Transportation Statistics, "Table 2–1: Transportation Fatalities by Mode 1960–2016," at https://www.bts.gov/archive/publications/national_transportation_statistics/table_02_01; and "Table

transportation service complexities, the condition of transit equipment and facilities, turnover in the transit workforce, and the quality of policies, procedures, and training, the public transportation industry remains vulnerable to catastrophic accidents.

This rule outlines requirements for Public Transportation Agency Safety Plans that would carry out explicit statutory mandates in the Moving Ahead for Progress in the 21st Century Act (Pub. L. 112–141; July 6, 2012) (MAP–21), which was reauthorized by the Fixing America's Surface Transportation Act (Pub. L. 114–94; December 4, 2015) (FAST Act) and codified at 49 U.S.C. 5329(d), to strengthen the safety of public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53. This rule requires the adoption of Safety Management Systems (SMS) principles and methods; the development, certification, implementation, and update of Public Transportation Agency Safety Plans; and the coordination of Public Transportation Agency Safety Plan elements with other FTA programs and rules, as specified in 49 U.S.C. 5303, 5304, and 5329.

B. Legal Authority

In Section 20021 of MAP–21, which is codified at 49 U.S.C. 5329, Congress directed FTA to establish a comprehensive Public Transportation Safety Program, one element of which is the requirement for Public Transportation Agency Safety Plans. Pursuant to 49 U.S.C. 5329(d), FTA must issue a final rule requiring operators of public transportation systems that receive financial assistance under Chapter 53 to develop and certify Public Transportation Agency Safety Plans.

C. Summary of Major Provisions

1. Summary of the Final Rule

This rule adds a new part 673, “Public Transportation Agency Safety Plans,” to Title 49 of the Code of Federal Regulations. The rule implements the requirements of 49 U.S.C. 5329(d).

One year after the effective date of this rule, each State, local governmental authority, and any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53, must certify that it has established a comprehensive Public Transportation Agency Safety

Plan (PTASP). 49 U.S.C. 5329(d)(1). At this time, the rule does not apply to an operator of a public transportation system that only receives Federal financial assistance under 49 U.S.C. 5310 (Section 5310), 49 U.S.C. 5311 (Section 5311), or both 49 U.S.C. 5310 and 49 U.S.C. 5311. Large transit providers must develop their own plans, have the plans approved by their Boards of Directors (or equivalent authorities), and certify to FTA that those plans are in place and comply with this part. Small public transportation providers that receive Urbanized Area Formula Program under 49 U.S.C. 5307 may have their plans drafted or certified by the State in which they operate. A small public transportation provider may opt to draft and certify its own plan.

At a minimum, and consistent with 49 U.S.C. 5329(d), each Public Transportation Agency Safety Plan must:

- Include the documented processes and procedures for the transit agency's Safety Management System, which consists of four main elements: (1) Safety Management Policy, (2) Safety Risk Management, (3) Safety Assurance, and (4) Safety Promotion, as discussed in more detail below (49 CFR 673.11(a)(2));
- Include performance targets based on the safety performance criteria established under the National Public Transportation Safety Plan (49 CFR 673.11(a)(3));
- Address all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program and National Public Transportation Safety Plan (49 CFR 673.11(a)(4)); and
- Establish a process and timeline for conducting an annual review and update of the Public Transportation Agency Safety Plan (49 CFR 673.11(a)(5)).

Each rail transit agency must include in its Public Transportation Agency Safety Plan an emergency preparedness and response plan, as historically required by FTA under the former regulatory provisions of the State Safety Oversight rule at 49 CFR part 659 (49 CFR 673.11(a)(6)).

A transit agency may develop one Public Transportation Agency Safety Plan for all modes of its service, or it may develop a Public Transportation Agency Safety Plan for each mode of service that is not subject to safety regulation by another Federal entity. 49 CFR 673.11(b). A transit agency must maintain records associated with its Public Transportation Agency Safety Plan. 49 CFR 673 subpart D. Any rail fixed guideway public transportation system that had a System Safety

Program Plan (SSPP) compliant with the former regulatory provisions of 49 CFR part 659 as of October 1, 2012, may keep that plan in effect until one year after the effective date of this rule. 49 CFR 673.11(e). A transit agency that operates passenger ferry service regulated by the United States Coast Guard (USCG) or rail fixed guideway public transportation service regulated by the Federal Railroad Administration (FRA) is not required to develop a Public Transportation Agency Safety Plan for those modes of service. 49 CFR 673.11(f).

States and transit agencies must make their safety performance targets available to States and Metropolitan Planning Organizations (MPO) to aid in the planning process, and to the maximum extent practicable, States and transit agencies must coordinate with States and MPOs in the selection of State and MPO safety performance targets. 49 CFR 673.15.

On an annual basis, transit agencies and States must certify compliance with this rule. 49 CFR 673.13.

2. Summary of Public Comments

On February 5, 2016, FTA issued a Notice of Proposed Rulemaking (NPRM) for Public Transportation Agency Safety Plans. 81 FR 6344 (<https://www.gpo.gov/fdsys/pkg/FR-2016-02-05/pdf/2016-02017.pdf>). The public comment period closed on April 5, 2016. FTA received approximately 647 comments from approximately 77 entities, including States, transit agencies, trade associations, and individuals.

The majority of the comments addressed the administration of the rule. Over 100 comments focused on definitions, with the vast majority of those commenters requesting FTA to align terms and definitions with the terms and definitions that FTA recently finalized in other rules, such as the State Safety Oversight rule at 49 CFR part 674 and the Transit Asset Management rule at 49 CFR part 625. FTA received nearly 300 comments on issues relating to (1) the effective date and compliance date of the rule; (2) the drafting and certification of safety plans on behalf of recipients of FTA's Enhanced Mobility of Seniors and Individuals with Disabilities Program at 49 U.S.C. 5310 and other smaller recipients; (3) clarification of FTA's oversight process; (4) the need for FTA's technical assistance; (5) documentation and recordkeeping; and (6) the applicability of the rule.

FTA received over 80 comments on SMS. Many of the commenters expressed support for SMS, particularly given its flexibility and scalability.

1–40: U.S. Passenger Miles (Millions) 1960–2015,” at https://www.bts.gov/archive/publications/national_transportation_statistics/table_01_40.

Some commenters requested clarification of the flexibility and scalability of SMS, and to that end, they requested that FTA develop and issue a safety plan template. Other commenters requested clarification regarding specific provisions of SMS. In the NPRM, FTA sought comments on alternative regulatory frameworks to SMS, and in response to this request, FTA received no comments.

Detailed comment summaries and responses are below.

3. Summary of the Major Changes to the Rule

In response to the public comments, FTA made a number of changes to the rule. Below is a summary of those changes, which are discussed in more detail in the sections that follow.

Section 673.1 Applicability

In the NPRM, FTA proposed to apply the rule to every “State, local governmental authority, and any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53.” FTA specifically asked the public whether the rule should apply to recipients and subrecipients of funds under FTA’s Enhanced Mobility of Seniors and Individuals with Disabilities Program at 49 U.S.C. 5310 (Section 5310). FTA also specifically asked the public for alternative regulatory frameworks that satisfy the statutory requirements of 49 U.S.C. 5329 and are tailored to fit the needs of smaller operators of public transportation.

FTA received numerous comments in response to these questions and the regulatory proposal. Several commenters suggested that FTA exempt Section 5310 recipients from the rule because they are smaller non-traditional transit providers. Several commenters suggested that FTA adopt a more streamlined and simplified approach that is more tailored for smaller operators. At least one commenter suggested that FTA exempt subrecipients of Section 5311 Rural Area Formula Program funds from the rule.

In light of these public comments and the need for further evaluation, FTA is deferring regulatory action at this time on operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds. This deferral will provide FTA time to further evaluate information and safety data related to these systems to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these systems. Thus,

this final rule does not address operators of public transportation systems that only receive Federal financial assistance under 49 U.S.C. 5310, 49 U.S.C. 5311, or both 49 U.S.C. 5310 and 49 U.S.C. 5311.

Section 673.5 Definitions

FTA updated the definitions of the terms “Accountable Executive” and “Transit Asset Management Plan,” and FTA changed the term “Performance Criteria” to “Performance Measure,” in an effort to align these terms and definitions with those in FTA’s Transit Asset Management rule at 49 CFR part 625, which was published on July 26, 2016. FTA updated the definition of the term “Safety Risk Management,” added the term “Rail Fixed Guideway Public Transportation System,” and changed the term “Safety Risk” to “Risk” in an effort to align these terms and definitions with those in FTA’s State Safety Oversight rule at 49 CFR part 674, which was published on March 16, 2016. FTA clarified in its definition of “Safety Management System Executive” that it means a “Chief” Safety Officer or an equivalent. FTA changed the term “Safety Risk Evaluation” to “Safety Risk Assessment” to add clarity to the final rule.

In the NPRM, FTA proposed to define “operator of a public transportation system” to exclude operators that “provide service that is closed to the general public and only available for a particular clientele.” This language was intended to narrow the type of Section 5310 recipients that would be subject to the rule. In light of FTA’s decision to defer action on the applicability of the rule to all Section 5310 recipients and subrecipients—including operators that “provide service that is closed to the general public and only available for a particular clientele”—FTA is removing this language from the definition of “operator of a public transportation system.”

In the NPRM, FTA proposed to define “Small Public Transportation Provider” to mean “a recipient or subrecipient of Urbanized Area Formula Program funds under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in revenue service and does not operate a rail fixed guideway public transportation system.” In response to public comments and for consistency with the Transit Asset Management Rule (81 FR 48889), FTA changed the definition of the term “Small Public Transportation Provider” to mean 100 or fewer vehicles in “peak” revenue service, as opposed to revenue service generally.

Section 673.11(a)(6) General Requirements: Emergency Preparedness and Response Plans

Based on public comments, FTA will provide rail transit agencies with the option to either include an emergency preparedness and response plan as a section of their Public Transportation Agency Safety Plan, or they may incorporate an existing emergency preparedness and response plan into their Public Transportation Agency Safety Plan by reference.

Section 673.11(d) General Requirements; § 673.13 Certification of Compliance: The Drafting and Certification of Public Transportation Agency Safety Plans on Behalf of Section 5310 Recipients and Subrecipients

In the NPRM, FTA proposed to require States to draft and certify safety plans on behalf of certain recipients and subrecipients of funds under Section 5310 and the Section 5311 Formula Grants for Rural Areas Program. In light of the public comments from these recipients requesting exemptions from the rule and a more streamlined and tailored regulatory approach for smaller operators, and given FTA has decided to defer action on applicability of the rule to Section 5310 and Section 5311 recipients and subrecipients, FTA does not need to require States to draft and certify safety plans for those recipients and subrecipients at this time.

Section 673.23(a) Safety Management Policy

In the NPRM, FTA proposed to require transit agencies to develop a written Safety Management Policy, which would include safety performance targets. FTA received numerous comments noting that FTA also was proposing to require transit agencies to set safety performance targets in the General Requirements section of the rule, so the requirement in the Safety Management Policy section appeared redundant. FTA agrees, and to eliminate any redundancies, FTA deleted that requirement from the Safety Management Policy section of the rule.

Section 673.25 Safety Risk Management

In response to comments, FTA revised its Safety Risk Management requirements to add clarity to the safety hazard identification, safety risk assessment, and safety risk mitigation processes in the final rule.

Section 673.27 Safety Assurance

In the NPRM, FTA proposed to require all transit agencies to develop

and implement a comprehensive Safety Assurance process. FTA proposed to require all transit agencies to develop and implement processes for (1) safety performance monitoring and measurement, (2) management of change, and (3) continuous improvement.

FTA received comments seeking clarity on one of the requirements related to safety performance monitoring and measurement, specifically, the requirement for each transit agency to “[m]onitor its operations to identify hazards not identified through the Safety Risk Management process established in § 673.25 of this subpart.” 49 CFR 673.27(b)(2) (as proposed in the NPRM). Some commenters suggested that this requirement appeared redundant and duplicative of each of the requirements under Safety Risk Management. FTA agrees with these commenters, and to add clarity, reduce redundancy, and lower burdens, FTA eliminated this requirement from the final rule.

More significantly, FTA received numerous comments requesting a reduction in the regulatory requirements for small public transportation providers. Given the limited administrative and financial resources available to small public transportation providers, FTA believes that a reduction in their regulatory burdens is appropriate. To that end, and to address the concerns expressed by commenters, FTA eliminated significant Safety Assurance requirements for all small public transportation providers. In the final rule, small public transportation providers only need to develop processes for safety performance monitoring and measurement. Small public transportation providers are not required to develop and implement processes for management of change and continuous improvement. FTA believes that these changes in the final rule will reduce their burdens significantly. Rail fixed guideway public transportation systems and recipients and subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that have more than one hundred vehicles in peak revenue service must develop and implement Safety Assurance processes that include all of the regulatory requirements under 49 CFR 673.27, specifically, processes for safety performance monitoring and measurement, management of change, and continuous improvement.

Section 673.29(a) Safety Promotion

In the NPRM, FTA proposed to require transit agencies to establish comprehensive safety training programs for staff and contractors directly responsible for “the management of” safety. FTA received several comments expressing confusion over this requirement and the requirements of FTA’s proposed Safety Certification Training Program Rule, which applies to staff and contractors who responsible for safety “oversight” on rail transit systems. In an effort to respond to the commenters and to eliminate confusion, FTA struck the language “the management of” from the rule, so it now requires safety training for staff and contractors who are “directly responsible for safety.”

Section 673.31 Safety Plan Documentation

In the NPRM, FTA proposed to require transit agencies to maintain their safety plan documents for a minimum of three years. To add clarity in the final rule, FTA is requiring transit agencies to maintain safety plan documents for three years “after they are created.”

Also, in the NPRM, FTA proposed to require a number of additional records related to a Public Transportation Agency Safety Plan. Specifically, FTA proposed to require transit agencies to maintain records related to (1) safety risk mitigations, (2) results of safety performance assessments, and (3) employee safety training. FTA received numerous comments requesting reduced recordkeeping burdens. FTA also received numerous comments, in general, from smaller transit operators requesting reduced regulatory burdens.

Upon review of these comments, FTA has eliminated the recordkeeping requirements in proposed 49 CFR 673.33 in their entirety. FTA believes that the records developed and maintained in accordance with 49 CFR 673.31 are sufficient to ensure that transit agencies are complying with the requirements of the statute and this final rule. FTA believes that this change in the final rule significantly will reduce the administrative, financial, and regulatory burdens on all transit operators.

D. Costs and Benefits

As discussed in greater detail below, FTA was able to estimate some but not all of the rule’s costs. FTA was able to estimate the costs for transit agencies to develop and implement Public Transportation Agency Safety Plans,

which are approximately \$41 million in the first year, and \$30 million in each subsequent year, with annualized costs of \$31 million discounted at 7 percent. These costs result from developing and certifying safety plans, documenting SMS processes and procedures, implementing SMS, and maintaining records. FTA was not able to estimate the costs of actions that transit agencies would be required to take to mitigate risk as a result of implementing this rule, such as vehicle modifications, additional training, technology investments, or changes to operating procedures and practices. It is not possible for FTA to anticipate the strategies and actions agencies may adopt to address safety risks, or the time period over which these actions would occur.

FTA was unable to quantify the rule’s benefits. To estimate safety benefits, one would need information regarding the causes of safety events and the factors that may cause future events. This information is generally unavailable in the public transportation sector, given the infrequency and diversity of the type of safety events that occur. In addition, one would need information about the safety problems that agencies are likely to find through implementation of their safety plans and the actions agencies are likely to take to address those problems. Instead of quantifying benefits, FTA estimated the potential safety benefits. The potential safety benefits are an estimate of the cost of all bus and rail safety events over a future 20-year period. The estimate is an extrapolation of the total cost of bus and rail events that occurred from 2010 to 2016.

Table 1 below shows the summary of the Costs and the Potential Benefits. The benefits of the rule primarily will result from mitigating actions, which largely are not accounted for in this analysis. FTA has not estimated the benefits of implementing the rule without mitigating actions, but expects they are unlikely to be large. Estimated costs for agencies’ safety plans include certain activities that could yield safety improvements, such as improved communication, identification of hazards, and greater employee awareness, as well as increased accountability at the higher echelons of the organization. It is plausible that these activities alone could produce accident reductions that surpass the cost of developing the plan, though even greater reductions could be achieved in concert with other mitigating actions.

TABLE 1—SUMMARY OF THE COSTS AND THE POTENTIAL BENEFITS IF ADDITIONAL UNQUANTIFIED MITIGATION INVESTMENTS OCCUR
[2016 Dollars]

	Current dollar value	7% Dis-counted value	3% Dis-counted value
Qualitative Benefits	<ul style="list-style-type: none"> • Reduced bus and rail safety incidents with mitigation actions. • Reduced delays in operations. 		
Estimated Costs (20-Year Estimate)	\$602,485,710	\$323,732,747	\$450,749,898
Unquantified Costs	<ul style="list-style-type: none"> • Investments associated with mitigating safety risks (such as additional training, vehicle modification, operational changes, maintenance, and information dissemination). 		
Estimated Cost (Annualized)	30,558,081	30,297,473

II. Background

On July 6, 2012, the President signed into law MAP-21 (Pub. L. 112-141). MAP-21 authorized a number of fundamental changes to the Federal transit programs at 49 U.S.C. Chapter 53. This rule addresses the Public Transportation Agency Safety Plan within the Public Transportation Safety Program authorized under 49 U.S.C. 5329. This authority was reauthorized when the President signed into law the FAST Act on December 4, 2015.

The Public Transportation Safety Program consists of several key elements: The National Public Transportation Safety Plan, authorized by 49 U.S.C. 5329(b); the Public Transportation Safety Certification Training Program, authorized by 49 U.S.C. 5329(c); the Public Transportation Agency Safety Plans, authorized by 49 U.S.C. 5329(d); and the State Safety Oversight Program, authorized by 49 U.S.C. 5329(e). FTA has issued rules and guidance, and it will continue to issue rules and guidance, to carry out all of these plans and programs under the rulemaking authority of 49 U.S.C. 5329 and 5334(a)(11).

On October 3, 2013, FTA issued an Advance Notice of Proposed Rulemaking (ANPRM) for Public Transportation Agency Safety Plans, the National Public Transportation Safety Plan, the Safety Certification Training Program, and a new Transit Asset Management System. 78 FR 61251 (<http://www.gpo.gov/fdsys/pkg/FR-2013-10-03/pdf/2013-23921.pdf>). Through the ANPRM, FTA sought comments on 123 questions related to the implementation of the public transportation safety program and transit asset management; 42 of the 123 questions specifically were related to Public Transportation Agency Safety

Plans. The public comment period for the ANPRM closed on January 2, 2014. In response to the ANPRM, FTA received comments from 167 entities, including States, transit agencies, trade associations, and individuals.

Following a comprehensive review of the comments, FTA issued several NPRMs for safety and transit asset management. In particular, FTA issued the NPRM for Public Transportation Agency Safety Plans on February 5, 2016. In this NPRM, FTA addressed comments related to the 42 questions in the ANPRM on Public Transportation Agency Safety Plans, specifically, question numbers 8-10, 17-31, 33-44, 47, 107-110, 112, and 116-121. Through the NPRM, FTA proposed to create a new part 673 in Title 49 of the Code of Federal Regulations, which would require each operator of a public transportation system to develop and implement a Public Transportation Agency Safety Plan. FTA proposed specific requirements for these safety plans in accordance with 49 U.S.C. 5329(d), including the following minimum requirements:

- An approval by the transit agency’s board of directors, or an equivalent entity, and a signature from the transit agency’s Accountable Executive;
- Documented processes and procedures for an SMS, which would include a Safety Management Policy, a process for Safety Risk Management, a process for Safety Assurance, and Safety Promotion;
- Performance targets based on the safety performance measures set out in the National Public Transportation Safety Plan;
- Compliance with FTA’s Public Transportation Agency Safety Plan and FTA’s Public Transportation Safety Program; and
- A process and timeline for conducting an annual review and

update of the plan. In addition, rail transit agencies would be required to include an emergency preparedness and response plan in their Public Transportation Agency Safety Plans.

In light of the public interest in this rulemaking, and in an effort to provide guidance on the proposal and to solicit well-informed comments, FTA conducted numerous public outreach sessions and a webinar series related to the NPRM. Specifically, on February 12, 2016, FTA conducted public outreach for tribes and hosted a Tribal Technical Assistance Workshop wherein FTA presented its proposed rule and responded to technical questions from tribes. FTA subsequently delivered the same presentation during a webinar series open to all members of the public on February 24, March 1, March 2, and March 3. On March 7, FTA delivered the same presentation at an outreach session hosted by the National Rural Transit Assistance Program, which also was open to all members of the public. During each of these public outreach sessions and the public webinar series, FTA received and responded to numerous technical questions regarding the NPRM. FTA recorded the presentations, including the question and answer sessions, and made available the following documents on the public docket for this rulemaking (Docket FTA-2015-0021): (1) FTA’s PowerPoint Presentation from the public outreach sessions and public webinar series (<https://www.regulations.gov/document?D=FTA-2015-0021-0012>); (2) a written transcript of FTA’s public webinar of March 1, 2016 (<https://www.regulations.gov/document?D=FTA-2015-0021-0010>); (3) a consolidated list of every Question and FTA Answer from the public outreach sessions and public webinar series (<https://www.regulations.gov/>

document?D=FTA-2015-0021-0041); and (4) the results of polling questions from FTA's public outreach sessions (<https://www.regulations.gov/document?D=FTA-2015-0021-0011>). FTA also uploaded onto YouTube an audiovisual recording of its webinar from March 1, 2016. The video is available at the following link: <https://www.youtube.com/watch?v=FBj5HRatwGA&feature=youtu.be>.

III. Notice of Proposed Rulemaking and Response to Relevant Comments

As stated above, FTA issued an NPRM for Public Transportation Agency Safety Plans on February 5, 2016. 81 FR 6344 (<https://www.gpo.gov/fdsys/pkg/FR-2016-02-05/pdf/2016-02017.pdf>). The public comment period for the NPRM subsequently closed on April 5, 2016. FTA received approximately 647 comments from approximately 77 entities, including States, transit agencies, trade associations, and individuals. FTA reviewed all of the comments and took them into consideration when developing today's final rule. Some comments were outside the scope of this rulemaking and FTA did not respond to comments that were outside the scope.

FTA received a number of comments related to the definitions of terms that are defined in other safety rulemakings. For example, FTA received comments on the terms, "Accident," "Incident," and "Occurrence," which FTA defined in the NPRM to provide clarity regarding the types of safety "Events" that a transit agency should investigate, and these terms are defined in the State Safety Oversight (SSO) rulemaking. Given that the Public Transportation Agency Safety Plan rule has a more inclusive universe of stakeholders than the SSO rule, FTA is including responses to the majority of the comments that it received related to these and other definitions included in other safety rules, but in this final rule, FTA does not respond to comments related to reporting thresholds and other requirements under the final SSO rule. On March 16, 2016, FTA issued a final rule for State Safety Oversight (see <https://www.gpo.gov/fdsys/pkg/FR-2016-03-16/pdf/2016-05489.pdf> for a discussion of comments received on these terms), and FTA has adopted definitions found in that rulemaking in this rulemaking, where appropriate. Similarly, FTA received several comments related to the definition of the term "State of Good Repair," which FTA was required to define in a rulemaking for transit asset management pursuant to 49 U.S.C. 5326. On July 26, 2016, FTA issued a final rule for Transit

Asset Management wherein FTA defines the term "State of Good Repair," and FTA has adopted that definition in this rulemaking. Please review the preamble of the Transit Asset Management final rule for FTA's responses to the comments that it received related to the proposed definition of "State of Good Repair" (see <https://www.gpo.gov/fdsys/pkg/FR-2016-07-26/pdf/2016-16883.pdf>). Relatedly, a number of commenters noted inconsistencies with the definitions throughout FTA's several safety rulemakings. In response, FTA has aligned the definitions in today's rule with other safety rulemakings and the Transit Asset Management final rule to ensure consistency.

Below, the NPRM comments and responses are subdivided by their corresponding sections of the proposed rule and subject matter.

A. Scope and Applicability of Public Transportation Agency Safety Plans

1. Section 5310, Section 5311, Small Section 5307, and Tribal Operators

Comments: Several commenters supported FTA's proposal to require States to draft and certify safety plans on behalf of recipients and subrecipients of FTA financial assistance through the Enhanced Mobility of Seniors and Individuals with Disabilities Program at Section 5310. Several commenters also supported FTA's proposal only to apply this rule to Section 5310 recipients and subrecipients that provide service open to the public, and not to apply this rule to Section 5310 recipients and subrecipients that provide service closed to the public and only available for a particular clientele.

Several commenters recommended that FTA exempt all Section 5310 recipients and subrecipients from this rule. These commenters asserted that many Section 5310 operators are not traditional transit agencies—they are human service organizations with a small transportation service, and they do not have sufficient staff, money, or resources to implement all aspects of a safety plan. One commenter stated that recipients and subrecipients of FTA financial assistance under Section 5310 and Section 5311 should not be considered operators of public transportation, and thus, they should not be subject to this rule. Several commenters also requested that tribal transit operators be excluded from the requirements of this rule.

A few commenters asserted that the proposed delineation between "general public" and "closed door" is ambiguous. These commenters

expressed concern that many smaller Section 5310 recipients may decide to discontinue transit service, thus reducing mobility for seniors and individuals with disabilities.

One commenter stated that any new regulations should be tailored for small operators, and that FTA should avoid adding additional requirements and regulatory burdens. This commenter requested that FTA consider an exemption for transit agencies that operate fewer than 30 vehicles in peak revenue service. Another commenter suggested requiring a limited set of streamlined and simplified requirements, without identifying what those requirements might be.

Response: FTA appreciates the comments that it received regarding the proposed applicability of this rule. Pursuant to the statutory requirements of 49 U.S.C. 5329(d), "each recipient or State" is required to draft and certify a safety plan. The statute defines "recipient" to mean "a State or local governmental authority, or any other operator of a public transportation system, that receives financial assistance under [49 U.S.C. Chapter 53]."

Notwithstanding this definition, and in light of the public comments and need for further evaluation, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds. Further evaluation of information and safety data related to these operators is needed to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators. Consequently, the rule does not apply to an operator of a public transportation system that only receives Federal financial assistance under 49 U.S.C. 5310, 49 U.S.C. 5311, or both 49 U.S.C. 5310 and 49 U.S.C. 5311.

FTA disagrees with the suggestion to create a threshold of 30 vehicles in peak revenue service, and it is adopting the definition of "operator of a public transportation system" as "a provider of public transportation as defined under 49 U.S.C. 5302(14)."

FTA agrees with the commenters who suggested that the final rule should be tailored for small operators and that the final rule should have simplified requirements. To that end, and as discussed in more detail below, FTA eliminated several significant requirements related to Safety Assurance for all small public transportation providers. Additionally, FTA eliminated requirements for Safety Assurance and a series of recordkeeping

requirements for all transit operators, regardless of size, in an effort to reduce their administrative, financial, and regulatory burdens.

2. Commuter Rail and Passenger Ferry Service

Comments: Several commenters supported FTA's proposal to exclude from this rule rail fixed guideway public transportation (commuter rail) service regulated by FRA. Several commenters requested FTA to clarify that the rule applies to rail transit systems not subject to regulation by FRA. Three commenters requested FTA to clarify what it means to exclude rail transit agencies subject to regulation by another Federal agency. One commenter urged FTA to ensure that the rule does not duplicate the efforts of State Safety Oversight Agencies (SSOAs) and overly burden transit agencies.

One commenter suggested that FTA replace the term "commuter rail system" with the term "passenger rail system." This commenter stated that the term "commuter" is not defined in the rule, leaving no context for determining what types of rail systems would be excluded. The commenter also asserted that rail transit agencies might provide passenger rail service that is subject to FRA regulations, but that service may not be considered "commuter" service, thus resulting in a too-narrow description of "commuter" and a contradiction to FTA's intent to prevent "duplicative, inconsistent, or conflicting regulations."

Several commenters supported FTA's proposal to exclude from this rule passenger ferry service regulated by USCG. Two commenters expressed support for the exclusion of USCG-inspected ferry vessels from the proposed rule. However, these commenters suggested that FTA should revise the term "passenger ferries" to clarify that the exclusion refers to passenger-only ferry vessels and ferry vessels that carry both passengers and vehicles (the commenters suggested the phrase "ferry as defined by title 46 United States Code 2101(10b)"). Additionally, this commenter urged FTA to clarify that the exclusion of USCG-inspected vessels applies to subparts C and D of the proposed rule, in addition to subpart B.

Response: FTA appreciates the support for its proposal to exclude passenger rail service regulated by FRA and passenger ferry service regulated by USCG from the requirements of this rule. As discussed throughout this document, this rule applies to each operator of a public transportation system, including rail fixed guideway

public transportation passenger rail service that is not regulated by another Federal agency. To further clarify, to the extent that an operator of a public transportation system provides passenger rail service that is regulated by FRA and rail fixed guideway public transportation service that is not regulated by FRA, this rule only would apply to that portion of the rail fixed guideway public transportation service that is not regulated by FRA.

FTA appreciates the concerns regarding the use of the term "commuter rail system," which is not defined in this rule, and the suggestion to replace the term "commuter rail system" with the term "passenger rail system." Instead, in an effort to use terms consistently throughout all of FTA's rules and regulations, FTA is replacing the term "commuter rail system" with the term "rail fixed guideway public transportation" and is adopting the definition of this term as used in FTA's new State Safety Oversight (SSO) rule at 49 CFR part 674.

With respect to passenger ferry service, FTA clarifies that this rule would not apply to any passenger ferry service that is regulated by USCG, including passenger ferry service and ferry service that involves the transportation of both passengers and vehicles. The exclusion of ferry service regulated by USCG applies to the rule in its entirety.

3. Contracted Service

Comments: Several commenters requested FTA to clarify how the rule would apply to transit agencies that contract for transit service. A commenter stated that the proposed elements of PTASPs are being implemented in the majority of transit systems operated by contractors, but contractors generally do not have direct relationships with transit agencies' top leadership. A commenter requested that FTA clarify how contracted agencies should divide roles and responsibilities and implement SMS without having to revisit existing contractual agreements. This commenter also encouraged FTA to provide additional technical assistance to assist agencies operating in contract environments in the development and implementation of PTASPs. Another transit agency urged FTA to clarify the extent to which the implementation and administration of SMS principles could be delegated to contractors. One commenter stated that if inter-city bus service is contracted, then the contractor, not the transit agency, should have primary responsibility for safety and compliance with the rule.

Two commenters asked FTA to clarify the rule's application to paratransit service. One of these commenters requested clarification as to how the rule would apply to an instance where a contractor provides paratransit service for a Section 5311 recipient and a separate Section 5310 recipient.

Response: As noted above, the statutory provisions of 49 U.S.C. 5329(d) require each "State or local governmental authority, or any other operator of a public transportation system, that receives financial assistance under [49 U.S.C. Chapter 53]" to draft and certify a safety plan. Consequently, this rule applies to FTA's recipients and subrecipients, unless the transit operator only receives Section 5310 and/or Section 5311 funds. To the extent that a recipient or subrecipient contracts for transit service, FTA will defer to the recipient or subrecipient to ensure that each of the requirements of this rule are being satisfied through the terms and conditions of its contract, including the identification of safety roles and responsibilities. Ultimately, under the statute, each FTA recipient or subrecipient has the responsibility to ensure compliance with this rule and to certify compliance annually—not a contractor.

Similarly, paratransit service—whether general public or ADA complementary, and including contracted paratransit service—is subject to this rule, unless the transit operator only receives Section 5310 and/or Section 5311 funds. To the extent that a contractor provides paratransit service for multiple FTA recipients, each FTA recipient ultimately has responsibility for ensuring that its transit operation complies with this rule.

B. Definitions

1. Accident

Comment: Several commenters expressed concerns with the proposed definition of "Accident." Many of these commenters expressed concern with the phrase "a report of a serious injury to a person" within the definition of Accident. One commenter stated that "serious injury" relies on information that a transit agency is unlikely to possess or be able to validate. Another commenter expressed that this phrase would significantly increase transit agencies' notification and follow-up burdens. One commenter stated that the term "Accident" is a bias-laden term which suggests that an undesirable event could not be foreseen, prevented, or avoided. This commenter also asserted that the continued use of this

term diminishes advances made by safety and risk management professionals to adopt and promote bias-free language describing and categorizing incidents. Another commenter suggested that the proposed definition offers several categorizations for accidents without regard to cause, circumstance, or affected environment.

Several commenters suggested alternatives for the proposed definition of “Accident.” A commenter recommended using the threshold for accident notification in the former SSO rule at 49 CFR 659.33: “[M]edical attention away from the scene for two or more individuals.” Another commenter proposed that the definition for “Accident” should include a threshold of at least \$100,000, otherwise every minor collision would be reportable in accordance with 49 CFR part 674, creating a burden on rail transit agencies’ resources. This commenter suggested that accidents which result in property damage of \$100,000 or less be classified as “incidents,” and be reportable to the SSOA and FTA, with a corresponding report to the National Transit Database (NTD) within thirty days. Another commenter remarked that the proposed definition of “Accident” should be more applicable to rail and bus/paratransit operations by using separate definitions for train and bus/paratransit accidents. For bus/paratransit, the commenter recommended that FTA should use the current Federal Motor Carrier Safety Administration (FMCSA) definition for “Accident” found in 49 CFR part 390. The commenter suggested that FTA could use an amended version of their proposed definition for “Accident” for rail operations that replaces “a report of serious injury to a person,” with “injuries requiring immediate medical attention away from the scene for two or more individuals.”

Response: FTA included the definition of “Accident” in the proposed rule because the term appears in the definition of “Event” which is mentioned in the Safety Assurance section of the NPRM (a transit agency must develop a process to “[i]nvestigate safety events to identify causal factors”). FTA defined “Event” as an “Accident, Incident, or Occurrence,” and to provide guidance to the industry on these terms, FTA defined them in its safety rules. Notably, FTA finalized a definition for “Accident” in its new SSO rule at 49 CFR part 674, and FTA is adopting that definition in today’s rule to ensure consistency throughout FTA’s regulatory framework for safety.

FTA did not propose any reporting or notification requirements in this rule.

FTA established reporting and notification requirements in the new SSO rule at 49 CFR part 674 and FTA’s NTD Reporting Manual. Today’s rule requires transit agencies to develop safety plans, and this rule outlines the requirements for those plans. Accordingly, FTA will not amend those notification and reporting requirements through today’s rule.

FTA disagrees with the commenter who suggested that the phrase “serious injury” will increase transit agencies’ notification and follow-up burdens; this language should simplify, streamline, and make consistent any follow-up process. FTA also disagrees with the commenter who stated that the term “Accident” is a bias-laden term. Its use is intended to define the universe of safety Events that must be investigated. FTA disagrees with the suggestion that the proposed definition offers several categorizations for Accidents without regard to cause, circumstance, or affected environment. FTA has offered clarification on this term in Appendix A to the new SSO rule at 49 CFR part 674 (<https://www.gpo.gov/fdsys/pkg/FR-2016-03-16/pdf/2016-05489.pdf>).

FTA acknowledges that a transit agency may have difficulty ascertaining a precise type of injury due to medical privacy laws. FTA does not expect transit agencies to violate any medical privacy laws to determine whether an injury is serious. FTA does not expect transit agencies to seek medical records of individuals involved in Accidents that may have resulted in serious injuries.

FTA disagrees with the commenter who recommended using the threshold for accident notification in 49 CFR 659.33, “medical attention away from the scene for two or more individuals,” as FTA believes that a serious injury to a single person is of sufficient concern to warrant designation as an “Accident.” Additionally, ambulance transportation away from the scene may not necessarily be an accurate indicator of the actual gravity of the Event, given the possibility of ambulance operators transporting individuals with minor injuries.

FTA disagrees with the commenter who suggested that the definition of “Accident” include a threshold of at least \$100,000, and that Events which result in property damage of \$100,000 or less be classified as “Incidents.” FTA did not utilize the original \$25,000 threshold for “Accident” in the SSO rule because most collisions involving rail transit vehicles exceeds \$25,000 in property or equipment damage and FTA believes that any threshold for property damage is arbitrary when determining

whether an Event qualifies as an Accident. Removal of the \$25,000 threshold also eliminates any need to separate rail transit property from non-rail transit property when making an assessment of damages.

Finally, FTA disagrees with the commenter who suggested that the proposed definition of “Accident” be made more applicable to rail and bus/paratransit by using separate definitions for train and bus/paratransit accidents. FTA intends to be consistent with its definitions, especially since this final rule applies to all operators of public transportation systems.

2. Incident

Comments: One commenter stated that the proposed definition of “Incident” seems broad and undefined, asserting that under the proposed definition, any reported injury could be classified as an Incident. Another commenter asked how to distinguish between medical transport for serious and non-serious injuries. A commenter asked FTA to clarify what is considered “damage to facilities, equipment, rolling stock, or infrastructure” and how “damage” would be assessed to determine qualification for an Incident. Additionally, the commenter asked how a transit agency would differentiate damage and a simple mechanical issue, and whether every defect found on an inspection would now be considered “damage.” This commenter also remarked that the terms “personal injury” and “injury,” which are used in the definition for “Incident,” are not defined. A commenter suggested that the definition of “Accident” would be the better place to include one or more injuries requiring medical transport away from the scene.

One commenter asked whether a transit agency must track Incidents. Another commenter stated that the Appendix to 49 CFR part 674 requires rail transit agencies to report Incidents to FTA using NTD within thirty days; the commenter asked whether transit agencies providing bus transportation also must report bus-related incidents to FTA using NTD.

Response: FTA included the definition of “Incident” in the proposed rule because the term appears in the definition of “Event” which is mentioned in the Safety Assurance section of the NPRM (a transit agency must develop a process to “[i]nvestigate safety events to identify causal factors”). FTA defined “Event” as an “Accident, Incident, or Occurrence,” and to provide guidance to the industry on these terms, FTA defined them in its safety rules. Notably, FTA finalized a

definition for “Incident” in its new SSO rule at 49 CFR part 674, and FTA is adopting that definition in today’s rule to ensure consistency throughout FTA’s regulatory framework for safety.

FTA disagrees with the commenter who stated that the definition of “Incident” is broad and undefined and that any reported injury could be classified as an Incident. As discussed in more detail in response to the comments on the definition for “Serious Injury,” FTA believes that there is a clear delineation between “serious injury” and “non-serious injury.”

FTA provided guidance in Appendix A to 49 CFR part 674 on how to define “damage to facilities, equipment, rolling stock, or infrastructure” and how “damage” would be assessed to determine qualification for an Incident. In Appendix A, “damage” that meets the Incident threshold is any non-collision-related damage to equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency. Ultimately, each transit agency must assess the safety risk associated with any damage to its equipment facilities, equipment, rolling stock, or infrastructure, and whether it meets the definition of Accident, Incident, or Occurrence.

FTA does not believe that it is necessary to define “injury” or “personal injury” in this rule, and it defines “Serious Injury” for purposes of establishing a threshold by which an Event would be considered an Accident instead of an Incident. In today’s rule, FTA has revised the definitions of “Accident” and “Incident” to make them consistent with FTA’s SSO rule at 49 CFR part 674. Under the updated definitions, one or more “serious injuries” is the threshold for Accident and one or more non-serious injuries requiring medical transport away from the scene is considered an Incident.

Under FTA’s new SSO rule at 49 CFR part 674, a rail transit agency must track and report an “Incident” through NTD, as has been the historical practice. Furthermore, a transit agency also must report Incident information for other modes to FTA through NTD. Please refer to the NTD Reporting Manual for further information on what information is collected on safety Events as a well as Accidents and Incidents, for both rail transit and bus agencies.

3. Occurrence

Comments: One commenter asked how damage would be differentiated from mechanical issues or normal wear-and-tear. This commenter asked FTA to clarify the relationship between “Occurrence” and “Injury” given that

neither “personal injury” nor “injury” are defined in the rule. Another commenter asked FTA to define “disrupt transit operations.” Finally, one commenter recommended omitting the proposed definition because it is too broad and does not serve a clear purpose.

Response: FTA included the definition of “Occurrence” in the proposed rule because the term appears in the definition of “Event” which is mentioned in the Safety Assurance section of the NPRM (a transit agency must develop a process to “[i]nvestigate safety events to identify causal factors”). FTA defined “Event” as an “Accident, Incident, or Occurrence,” and to provide guidance to the industry on these terms, FTA defined them in its safety rules. Notably, FTA finalized a definition for “Occurrence” in its new SSO rule at 49 CFR part 674, and FTA is adopting that definition in today’s rule to ensure consistency throughout FTA’s regulatory framework for safety.

FTA believes that there is a clear distinction between damage and mechanical issues or normal wear and tear. Damage is physical harm done to something or someone.² Mechanical issues and normal wear and tear are not the result of something or someone inflicting harm on equipment, facilities, equipment, rolling stock, or infrastructure.

A disruption to transit operations could be any interference with normal transit service at an agency. An Occurrence is a safety Event that only involves a disruption of transit service. A safety Event that results in a serious or non-serious injury would not be an Occurrence.

FTA disagrees with the commenter who suggested that FTA should omit the proposed definition of “Occurrence” because it does not serve a clear purpose. The definition helps identify the universe of activity that a transit agency should investigate because it could present a safety risk.

4. Serious Injury

Comments: Several commenters stated that transit agencies would not be able to obtain enough information about injuries to classify them as “serious,” given Federal Health Insurance Portability and Accountability Act (HIPAA) privacy regulations. These commenters suggested that HIPAA privacy regulations prevent transit agencies from obtaining personal medical information from individuals involved in accidents. One commenter

² See Merriam-Webster’s Collegiate Dictionary (11th edition).

remarked that, in their experience, hospital staff refused to provide personal medical information to a transit police officer.

One commenter recommended that FTA should explain how transit agencies and SSOAs can comply with this definition, and this commenter suggested that FTA create the legal authority for States to do so, or develop an alternative approach. A commenter remarked that if FTA has authority to obtain this type of information, then FTA should do so on its own accord. The commenter asked if it would meet one of the exemptions from the Government in the Sunshine Act if FTA collects information. One commenter asked how FTA would address and reconcile the proposed definition with other applicable Federal policies and regulations.

One commenter asked whether FTA would expect transit agencies, States, and SSOAs to obtain contact information for every individual involved in an accident, and then monitor local hospitals or contact these individuals in the seven-day period to determine if anyone involved in the accident had to be hospitalized for more than 48 hours as a result of this accident. Finally, one commenter asked whether a doctor would be required to respond to every transit event that has the possibility of being classified as an accident to triage the situation and determine whether the event meets the definition of an accident.

Several commenters expressed concern about the definition of “Serious Injury” and its associated burden on transit agency staff. A commenter concluded that the proposed definition would require transit agencies, States, and SSOAs to step outside their training to practice some form of medicine—for which they are not licensed—to comply with the proposed rule, unless transit agencies, States, and SSOAs are expected to hire trained medical personnel as a part of their programs. The commenter stated that transit agency staff may not be aware of the nature or extent of an individual’s injury, and these staff may only know that an individual was transported away from the scene for medical attention with very limited ability (and no authority) to confirm the individual’s injury status. A commenter stated that, in order to meet a similar FRA requirement, the commenter expends considerable resources following up on individual claims, and is sometimes unable to properly classify events for months or years after the event date. The commenter concluded that the resources needed to gather this

proposed information would be burdensome, as the volume of passengers is much greater for FTA.

A commenter asserted that transit agency staff could report certain findings on their initial incident reports, but this effort would be burdensome, and the transit agency staff would have to rely on eyewitness reports rather than medical professionals' opinions, rendering the effort unreliable. The commenter asked whether an initial patient/scene assessment would suffice, or whether a definitive medical diagnosis would be required.

Several commenters suggested alternatives to the proposed definition of "Serious Injury." Two commenters recommended that FTA use the definition in the former SSO rule at 49 CFR 659.33, which states that an accident involves injuries if there is a need for "immediate medical attention away from the scene for two or more individuals." According to these commenters, verifying transport away from the scene would have several benefits, such as: Not requiring transit agencies, States, and SSOAs to practice medicine to classify events; avoiding HIPAA complications; allowing events classified as accidents and incidents to be reported and investigated in a timely manner; being a more reasonable threshold for injury definitions; requiring only easily attainable information; and its alignment with NTD reporting requirements.

One commenter questioned how FTA determined the classification for "serious" and questioned how serious an injury could be if no medical treatment was sought for seven days. The commenter stated that FTA needs to define "serious" and remove the subjectivity of whether or not an injury is serious. Two commenters asked for the value of defining "Serious Injury" (that is, why does FTA want to collect this information and how would it enhance overall safety). One commenter recommended that FTA remove this definition from all of its safety rules.

Response: Through the Safety Assurance section of today's rule (49 CFR 673.27), FTA requires each operator of a public transportation system to develop a process for conducting investigations of safety events to identify causal factors. FTA defines the word "Event," to mean an "Accident, Incident, or Occurrence," and FTA defines "Accident" to mean, among other things, "a report of a serious injury to a person." To provide guidance to the industry on this term, FTA defined "Serious Injury" in its safety rules, including its new SSO rule at 49 CFR part 674. FTA is adopting the

definition of "Serious Injury" from the new SSO rule to ensure consistency throughout FTA's regulatory framework for safety.

FTA has addressed comments regarding its proposed definition of "Serious Injury" in the final SSO rule at 49 CFR part 674 (<https://www.gpo.gov/fdsys/pkg/FR-2016-03-16/pdf/2016-05489.pdf>) and in its responses to the definition of "Accident," above. FTA acknowledges that a transit agency may have difficulty ascertaining a precise type of injury due to medical privacy laws, such as HIPAA. FTA does not expect transit agencies to violate these laws in order to obtain the information needed to determine whether an injury is serious, and it does not expect transit agencies to request the medical records of individuals involved in safety Events that may be classified as Accidents resulting in Serious Injuries. Nor does FTA expect transit agency staff to undergo medical training in order to determine whether an injury meets the threshold of "serious." Instead, FTA expects safety personnel to exercise a common sense approach when evaluating injuries. As several commenters noted, some injuries may be readily known or observable at the scene of an event, in which case, a transit agency may make a determination as to whether an injury is serious. Other injuries may not be apparent until the individual undergoes a medical examination, in which case the injury would be deemed "serious" only if a transit agency becomes aware that the injury meets the threshold for seriousness. FTA believes that a transit agency may utilize these approaches when determining the seriousness of an injury, and it does not believe that it needs to reconcile the definition of "Serious Injury" with other laws.

Given the ability of transit agencies to make observations at the scenes of safety events and to evaluate data and information collected at these scenes, FTA does not believe that any burdens of this rule are unreasonable. FTA does not expect transit agencies to monitor local hospitals or contact individuals involved in safety events within the seven day period to determine if the individuals were hospitalized for more than 48 hours. FTA is not requiring doctors to respond to every safety Event that has the possibility of being classified as an Accident to triage the situation and determine whether the event meets the definition of an Accident, and FTA is not requiring transit agencies to hire medical personnel. In today's rule, FTA is requiring transit agencies to develop a

process for conducting safety investigations.

5. Accountable Executive

Comments: FTA received numerous comments regarding its proposed definition of "Accountable Executive." Several commenters provided input on the definition of "Accountable Executive" as it relates to "Chief Safety Officer." One commenter stated that, according to the proposed rule, the Accountable Executive is responsible for implementing and maintaining the SMS; however, this should be a primary responsibility of the Chief Safety Officer. Another commenter asked whether an Accountable Executive would experience a conflict of interest if he or she also serves as the Chief Safety Officer or SMS Executive, as allowed under proposed 49 CFR 673.23(d)(2), because the duties also involve operational, financial, and other responsibilities that may be in conflict with safety responsibilities.

Several commenters recommended that FTA clarify in the final rule that State officials are not "Accountable Executives" unless the State is a transit operator, and if so, only with respect to the State's activities as a transit operator. Several commenters asked whether the Accountable Executive is the chief elected official, such as a county executive or mayor, in cases where the transit operator is a county or city government. A transit agency, with a general manager who is responsible for the day-to-day aspects of the transit system and a chief administrator who is responsible for the administrative aspects of the organization, asked how it would designate a single Accountable Executive who meets all of the criteria of 49 CFR part 673.

A few commenters expressed concerns about the overlapping and burdensome responsibilities of the Accountable Executive, which may not allow for sufficient attention to safety. Several commenters said the proposed definition may give an elected official or board chair the designation of an Accountable Executive despite serving at a policy, rather than an operational, level. A transit agency argued that the proposed definition is ambiguous and inconsistent with the proposed National Public Transportation Safety Plan, and some definitions state that the Accountable Executive is in charge of an asset management plan, while other areas omit this requirement. One commenter asserted that the job duties of planning staff are inherently much different from maintenance staff activities, and staff should report to their respective managers instead of a

single executive. Similarly, a commenter stated that, in some instances, a transit agency's reporting structure is shaped by State or local laws to promote a separation of duties and financial checks and balances, and these important governmental tenets should not be disrupted by the new safety requirements. Several commenters suggested that the definition of Accountable Executive may not be applicable in some non-traditional transit agency hierarchies.

Several commenters suggested that the Accountable Executive should be a general manager, president, or equivalent officer who is responsible for safety, asset management, and human resources, but not have full control over the budgeting process. Another commenter stated that that proposed definition may be inappropriate because having one Accountable Executive for SMS, the asset management plan, and the safety plan is ineffective because the Accountable Executive should be represented by different individuals for each regulatory program. The commenter recommended that FTA define an Accountable Executive to be "an individual who is responsible for the Safety Management System and Agency Safety Plan, who shall be required to have a role in the [transit asset management plan] and investment prioritization for the respective agency."

Response: Each transit operator must identify an Accountable Executive within its organization who ultimately is responsible for carrying out and implementing its safety plan and asset management plan. And to be clear, a State that drafts a plan on behalf of another recipient or subrecipient is not the Accountable Executive for those transit operators.

An Accountable Executive should be a transit operator's chief executive; this person is often the president, chief executive officer, or general manager. FTA understands that at many smaller transit operators, roles and responsibilities are more fluid. However, FTA believes that, even in circumstances where responsibilities are either shared or delegated, there must be one primary decision-maker who is ultimately responsible for both safety and transit asset management. It is a basic management tenet that accountabilities flow top-down. Therefore, as a management system, safety and transit asset management require that accountability reside with an operator's top executive.

FTA received numerous comments on its proposed definition of "Accountable Executive" in its rulemaking on transit asset management, and FTA directs

readers to the final Transit Asset Management rule at 49 CFR part 625 for further information (<https://www.gpo.gov/fdsys/pkg/FR-2016-07-26/pdf/2016-16883.pdf>).

6. Chief Safety Officer

Comments: One commenter agreed with FTA that a Chief Safety Officer should not serve in other service, operational, or maintenance capacities. Several commenters agreed with FTA's proposal to allow Section 5310, Section 5311, and small public transportation providers to designate as the Chief Safety Officer a person who also undertakes other functions. Several commenters asked FTA to clarify the term "adequately trained."

One commenter expressed concern that FTA may be assuming that any rail transit agency is large enough to merit its own Chief Safety Officer with no additional operational or maintenance responsibilities, indicating that this requirement is burdensome because a rail transit agency would have to hire or contract a separate Chief Safety Officer for a limited role. The commenter suggested that FTA should permit an exemption for small rail transit agencies similar to the exemption for small public transportation providers to resolve this concern. This commenter also asked FTA to clarify whether a Chief Safety Officer has to be in the direct employ of a rail transit agency and whether he or she could be a part-time employee.

A commenter stated that FTA has proposed, but not promulgated, training rules for SSOA managers, Federal employees, and transit agency staff who are responsible for safety oversight, and argued that these training requirements also should apply to a Chief Safety Officer prior to designation by the Accountable Executive.

One commenter stated that the terms "Chief Safety Officer" and "Safety Officer" are inconsistently used, and the term "Safety Officer" was not defined in the NPRM. To rectify this inconsistency, the commenter, who concluded that it is implied that the Safety Officer is the Chief Safety Officer, suggested that FTA should replace the term "Safety Officer" with "Chief Safety Officer."

Response: FTA appreciates the support from commenters regarding its proposed definition of "Chief Safety Officer." Given the different sizes of transit operators, and given the varying operating environments of transit systems across the nation, FTA is deferring to each transit operator to determine the level of training that is adequate for their Chief Safety Officer.

FTA disagrees with the commenter who suggested that a Chief Safety Officer at a rail transit agency should be able to have multiple roles within the organization. Given the more complex operating environments of rail transit systems and the increased safety risks in these environments, FTA will not allow the Chief Safety Officers for rail transit agencies to have additional operational and maintenance responsibilities; it is necessary to have a single individual wholly dedicated to ensuring safety. FTA believes that this role should be a full-time responsibility at rail transit agencies, unless a rail transit agency petitions FTA to allow its Chief Safety Officer to serve multiple roles given administrative and financial hardships with having a single, dedicated, and full-time Chief Safety Officer.

Finally, FTA notes that all references to the term "Safety Officer" in the NPRM were intended to mean the term "Chief Safety Officer."

7. Operator of Public Transportation System

Comments: One commenter suggested that an "Operator of a Public Transportation System" should be "any organization, agency, or company that operates, or contracts someone to operate, any mode of transportation that is used by the general public in a defined city, State, or region."

Response: The proposed rule defines "Operator of a Public Transportation System" as "a provider of public transportation as defined under 49 U.S.C. 5302(14), and which does not provide service that is closed to the general public and only available for a particular clientele." Given that FTA is deferring action regarding the applicability of this rule to Section 5310 recipients, FTA has changed this definition in the final rule to be "a provider of public transportation as defined under 49 U.S.C. 5302(14)." The additional language—"and which does not provide service that is closed to the general public and only available for a particular clientele"—is not needed since the rule is not applicable to Section 5310 recipients at this time. FTA believes that the proposed definition is sufficiently broad to encompass the categories of transit providers referenced in the commenter's definition. FTA does not agree that the definition needs to specify that an operator provide service in a defined city, State, or region.

8. Rail Transit Agency

Comments: The proposed rule defines a "Rail Transit Agency" as "any entity that provides services on a rail fixed

guideway public transportation system.” One commenter asked FTA to clarify whether the proposed definition applies equally to a public transit operator and a contracted private firm that operates and maintains services on a rail fixed guideway public transportation system.

Response: This rule applies to any operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53, including rail transit operators that receive FTA funds and are not regulated by FRA, unless the operator only receives Section 5310 and/or Section 5311 funds. The application of this rule extends to contracted private firms that operate public transportation and receive FTA funds, but it does not extend to private contractors that provide service that is not public transportation.

9. Performance Target, Safety Performance Target, and Performance Criteria

Comments: One commenter remarked that the proposed definition for “Performance Target” needs clarity. Another commenter stated that FTA should consider deleting the proposed definition for “Performance Target,” because the proposed definition for “Safety Performance Target” is more appropriate for this safety-related rule. This commenter also suggested revising the definition of “Safety Performance Target” to “a specific level of measurable performance for a given safety performance criteria over a specified timeframe.”

FTA proposed to define “Performance Criteria” as “categories of measures indicating the level of safe performance within a transit agency.” One commenter stated that this definition is confusing and possibly inconsistent with the proposed National Public Transportation Safety Plan. The commenter stated that the terms “Criteria” and “Measures” appear to be synonymous, and proposed the following definition for “Performance Criteria”: “Categories of safety performance measures that focus on the reduction of safety events, both for the public who use or interface with the rail system, and employees who operate and maintain the system.”

Response: As appropriate, FTA has incorporated into this rule definitions that appear in other rulemakings undertaken pursuant to 49 U.S.C. 5329 and 5326, as well as the final joint FHWA/FTA Planning Rule which was published May 27, 2016 (see <https://www.gpo.gov/fdsys/pkg/FR-2016-05-27/pdf/2016-11964.pdf>). Accordingly, FTA

has revised the definition of “Performance Target” and added the definition of “Performance Measure” to match the definitions used in the joint FHWA/FTA Planning rule and FTA’s Transit Asset Management rule.

To avoid redundancy, FTA is deleting the definition for “Safety Performance Target” and keeping the definition of “Performance Target,” since these terms are one and the same for purposes of this rule.

FTA had to reconcile the use of similar terms throughout its statutory authorizations for safety and asset management, including the terms “criteria” and “measures.” Although Congress used two different terms throughout 49 U.S.C. Chapter 53, it intended these terms to be synonymous. In the NPRM, FTA proposed to define “Performance Criteria” to mean “categories of measures indicating the level of safe performance within a transit agency,” but to eliminate confusion in this final rule, FTA removes that term, replaces it with the term “Performance Measure,” and incorporates the definition of “Performance Measure” as used in FTA’s Transit Asset Management rule. Consequently, FTA uses the term “Performance Measure,” in the place of “Performance Criteria,” throughout this final rule.

10. Small Public Transportation Provider

Comments: The proposed rule defines “Small Public Transportation Provider” as “a recipient or subrecipient of Urbanized Area Formula Program funds under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in revenue service and does not operate a rail fixed guideway public transportation system.”

Several commenters requested FTA to clarify that the “100 buses in revenue service standard” applies only to recipients of Section 5307 funds, and not recipients of Section 5310 or 5311 funds. One commenter asked whether the threshold of 100 vehicles in revenue service refers to total revenue fleet vehicles, peak vehicles, or something else. Another commenter that operates commuter rail service regulated by FRA, but has fewer than 100 buses in revenue service, asserted that they met the definition of a “Small Public Transportation Provider.” The commenter stated it posed this assertion to FTA during a webinar for this rulemaking on March 2, 2016, and it requested that FTA clarification the application of the rule to its scenario.

A couple of commenters remarked that the proposed definition for “Small

Public Transportation Provider” differed between related rulemakings and notices, specifically the TAM proposed rule and FTA’s Circular 9030.1E. Commenters noted that the TAM rule’s reference to “in revenue service” is a typical definition in the industry and should be adhered to across all proposed rulemakings.

Other commenters suggested that the definition include providers with “100 or fewer fixed-route vehicles,” or be based on the service area’s population rather than the number of buses. Additionally, one commenter suggested that vanpool fleets that are not open to the general public should be counted as revenue service vehicles.

Several commenters noted that significant differences exist between rail transit operators, large bus operators, and smaller operators, particularly in the ways in which they conduct business and in the rate of accidents and the consequences of those accidents. One commenter stated that the categories in the proposed rule are too broad and rigid and could have unintended consequences for small operators. The commenter remarked that the rigidity of a “two-tier system” could cause a Section 5307 recipient, with under 100 vehicles, to have their oversight provided by the State. Another commenter stated that the two-tier system does not take into account a Section 5311 recipient that may serve multiple counties with over 100 vehicles. The commenter remarked that there is no definition for this type of system within the “tiers” and that the Section 5311 recipient might be bumped into a higher category. One commenter suggested adding a third tier for systems operating fifty or fewer vehicles and no rail fixed guideway public transportation service to provide States with the opportunity to implement SMS scalable to the size and complexity of the transit organization.

Response: FTA appreciates the comments that it received regarding its proposed definition for “Small Public Transportation Provider.” FTA agrees with the commenters who suggested that FTA align this definition with the definition in the final TAM rule, and FTA agrees with the commenters who suggested that FTA create the threshold for Small Public Transportation Providers based on vehicles utilized in peak revenue service, as opposed to revenue service in general, as peak revenue service is a threshold commonly used in the transit industry. Therefore, in today’s final rule, FTA defines “Small Public Transportation Provider” to mean “a recipient or subrecipient of Federal financial

assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operate a rail fixed guideway public transportation system.”

11. Requests for New Definitions

Comments: One commenter requested that FTA add new definitions for the term “safety performance assessment.” One commenter recommended that FTA clarify whether the term “Public Transportation Vehicle” includes rail, bus, paratransit, maintenance, and non-revenue vehicles. Several commenters recommended that FTA define the term “Transit Provider” as follows: “A State is not considered to be a transit provider by virtue of passing on funds to subrecipients under 49 U.S.C. 5310, 5311, or 5339, administering these programs, developing and implementing a TAM plan, or safety plan or certifying a safety plan, or taking any other steps required of a State by Chapter 53 of title 49, United States Code or other Federal statute, or by this or other FTA rules.”

Response: For purposes of implementing this rule, FTA does not find it necessary to further define the term “safety performance assessment.” Generally, this term refers to a transit agency’s evaluation of its success of managing safety risks. To the extent there is any confusion over this term, FTA will provide technical assistance.

FTA notes that a public transportation vehicle may include rail, bus, paratransit, maintenance, and non-revenue vehicles, as the term is utilized in the definition of “Accident.”

Finally, FTA did not propose to define the term “Transit Provider” in the NPRM, and FTA believes that the term is sufficiently descriptive and does not need to be defined in this rule.

C. General Requirements

Comments: Several commenters provided high-level feedback regarding the general requirements for PTASPs as proposed in 49 CFR 673.11. One commenter suggested that FTA should clearly emphasize that these elements are minimum requirements and that a transit agency should be able to enhance its SMS and incorporate tools and best practices that are proven to be effective, particularly given the adaptability, scalability, and flexibility of SMS.

One commenter asserted that the combination of the general requirements for each written safety plan, along with the requirements to “establish SMS processes,” results in a lack of clarity regarding the required contents of the actual document that a transit agency would consider to be its safety plan. This commenter stated that FTA should

provide at least the same degree of specificity with regard to the required contents of a transit agency’s written safety plan that FTA provided for SSPPs under the former SSO rule at 49 CFR part 659.

Response: As discussed throughout today’s final rule, SMS is scalable and flexible, and it can be adapted to any transit agency’s unique operating environment. The requirements in the rule provide the skeleton framework for safety plans, and FTA encourages transit agencies to incorporate tools and best practices that effectively mitigate and eliminate safety risks throughout their systems.

To be clear, each written safety plan must include the documented processes and procedures related to SMS, and the written plan must include each of the other requirements as outlined in the rule. FTA intentionally drafted broad, non-prescriptive requirements for SMS in an effort to develop a safety framework that could fit within the thousands of unique transit operating environments across the nation.

1. Role of the Accountable Executive

Comments: Pursuant to FTA’s proposed provisions at 49 CFR 673.11(a)(1), each transit agency’s Accountable Executive must sign the agency’s safety plan and subsequent updates thereto. One commenter supported this provision and asserted that the requirement is essential for SMS and for maintaining a positive safety culture. Another commenter agreed that the Accountable Executive with budgetary authority should review and approve the safety plan.

A couple of commenters asked whether the Accountable Executive must be the same individual for purposes of approving the agency’s safety plan and the agency’s transit asset management plan, and they asked whether the Accountable Executive must be the individual explicitly “responsible for implementing SMS.” These commenters also inquired about the Accountable Executive’s role for municipal government agencies, and they asked whether the head of a city’s department of transportation, the head of a city’s department of public works, or a city manager may serve as the Accountable Executive for a municipal government agency, as opposed to a city’s mayor.

Response: As a preliminary matter, FTA distinguishes the role of the Accountable Executive from the role of a Board of Directors, or an Equivalent Authority. Pursuant to 49 CFR 673.11(a)(1), the Accountable Executive must sign the safety plan; the Board of

Directors or an Equivalent Authority must approve the safety plan in accordance with 49 U.S.C. 5329(d)(1)(A).

Given the varying sizes and natures of transit systems, FTA defers to those systems in their designation of an Accountable Executive, so long as that single individual has the ultimate responsibility and accountability for the implementation and maintenance of the SMS of a public transportation agency; responsibility for carrying out the agency’s transit asset management plan; and control or direction over the human and capital resources needed to develop and maintain both the agency’s public transportation agency safety plan and the agency’s transit asset management plan. For municipal government agencies, that individual could be a county executive or a mayor, or it could be the head of a city’s department of transportation, the head of a city’s department of public works, or a city manager. FTA has offered this non-exhaustive list of examples of Accountable Executives for illustrative purposes only. And while many individuals within a transit agency may be responsible for “implementing” SMS, the Accountable Executive is the individual with the ultimately responsibility for SMS implementation at the agency.

2. Approval of a Public Transportation Agency Safety Plan

Comments: Pursuant to FTA’s proposed provisions at 49 CFR 673.11(a)(1), each transit agency would be required to have its safety plan, and subsequent updates thereto, approved by the agency’s Board of Directors, or an Equivalent Authority. One commenter supported this provision, indicating that this activity is essential for SMS and for maintaining a positive safety culture.

Several commenters asserted that the agency’s Accountable Executive, not the Board of Directors, would be the more appropriate entity to approve the safety plan. These commenters stated that a Board of Directors, which can consist of limited-term elected officials, are not subject to the same training requirements as the Accountable Executive, and do not have the operational knowledge and expertise suitable for the review and approval of a safety plan. One of these commenters suggested that the Accountable Executive have top-level ownership of the safety plan, with a stipulated responsibility to educate and report to the Board of Directors on the agency’s safety program.

Several commenters asked questions about the implementation of this

provision for agencies that lack Boards of Directors. A couple of commenters asked if transit agencies can request FTA to approve their "Equivalent Authorities," or whether they must wait for an FTA oversight review to determine whether their Equivalent Authorities are consistent with the rule. A couple of commenters had specific questions regarding the adequacy of an Equivalent Authority. One example involved a streetcar being owned by a city, but being operated and maintained by a non-profit organization with its own Board of Directors. Another example involved a State Department of Transportation which does not have a Board of Directors, but instead, has an Administrator/CEO. One commenter asked FTA to provide a clear example of an "Equivalent Authority" if a recipient does not have a Board of Directors. Similarly, another commenter asserted that a State may have difficulty identifying an Equivalent Authority because a subrecipient may be a parish or county that does not necessarily have a Board of Directors. Another commenter recommended that an Equivalent Authority should have a thorough knowledge of a transit agency's daily operations and the authority to obtain operational and safety data so that it could provide safety oversight.

One commenter asked about the measure of "approval" for the Board of Directors, and inquired as to what that approval would denote in terms of safety responsibility.

Another commenter observed that a transit agency with rail and bus operations must have its safety plan approved by the SSOA for purposes of its rail operations, and suggested that FTA would have to approve the safety plan for purposes of its bus operations. This commenter expressed concern that, unless there are very clear guidelines for the review and approval of the safety plans, there is the potential for conflicting views and approvals, including approval of one operation and not the other.

Response: FTA appreciates concerns from commenters indicating that members of a transit agency's Board of Directors may not be fully educated in safety; however, through the statutory provisions of 49 U.S.C. 5329(d)(1)(A), Congress required each transit agency's Board of Directors, or an Equivalent Authority, to approve the agency's safety plan. Through the Safety Management Policy provisions of 49 CFR 673.23 and the Safety Promotion provisions of 49 CFR 673.29, each transit agency is required to identify individuals who are responsible for

safety in their organization and to ensure that those individuals are adequately trained, including staff and executive leadership, and this requirement should extend to a transit agency's Board of Directors.

If a transit agency does not have a Board of Directors, then an Equivalent Authority may approve its safety plan. An Equivalent Authority is an entity that carries out duties similar to that of a Board of Directors, including sufficient authority to review and approve a safety plan. For example, an Equivalent Authority could be the policy decision-maker/grant manager for a small public transportation provider; the city council and/or city manager for a city; a county legislature for a county; or a State transportation commission for a State. Given the varying sizes and organizational structures of the thousands of recipients and subrecipients throughout the country, FTA is not providing a prescriptive definition of this term, and it is deferring to each transit agency to identify who would be an Equivalent Authority for its system. FTA intends its list of examples to be non-exhaustive and illustrative only.

The approval of the safety plan should mean that the Board of Directors or the Equivalent Authority accepts the safety plan as satisfactory, that the safety plan complies with each of the requirements of this rule, and that the safety plan effectively will guide the transit operator with the management of safety risks.

Finally, to clarify, FTA does not intend to collect and "approve" safety plans. FTA intends to ensure that transit agencies comply with this rule by reviewing their safety plans through FTA's existing Triennial Reviews and State Management Reviews. Through these oversight processes, FTA may collect various documents, including safety plans, to ensure compliance with this part, but FTA will not provide regular "approvals" of the plans. SSOAs, however, must approve the safety plans of rail fixed guideway public transportation operations within their jurisdictions.

3. Documentation of SMS Processes and Activities

Comments: Pursuant to FTA's proposed provisions at 49 CFR 673.11(a)(2), each transit agency would be required to document its processes and activities related to SMS in its safety plan. One commenter sought clarity regarding whether the safety plan must detail the processes and activities, or just indicate that such processes and activities exist. Another commenter

asked which documents should be included in the safety plan, specifically whether the safety plan should include documents that are generated by the results of ongoing SMS activities, or only those documents which formally present a description of SMS processes.

Response: Each safety plan must include documented SMS processes; it is not sufficient to merely indicate in the safety plan that SMS processes exist. Through the practice and implementation of SMS, each transit agency may generate data and other documentation, but the safety plan itself must document each of the processes as outlined in this rule. FTA is providing discretion to each transit agency to decide for itself whether it will incorporate processes and documented activities beyond those required in today's final rule.

4. Safety Performance Targets

Comments: Pursuant to FTA's proposed provisions at 49 CFR 673.11(a)(3), each transit agency would be required to identify in its safety plan performance targets based on the safety performance measures that FTA establishes in the National Public Transportation Safety Plan. One commenter supported FTA's proposed list of safety performance measures as outlined in the National Public Transportation Safety Plan, but several commenters recommended that FTA expand the list of performance measures. One commenter recommended that FTA reduce its proposed list of safety performance measures to align with the safety outcomes that transit agencies currently report to NTD. One commenter stated that the proposed definition of "Performance Criteria" is confusing and inconsistent with the National Public Transportation Safety Plan. The commenter stated that the terms "Criteria" and "Measures" are synonymous, and proposed the following alternate definition: "categories of safety performance measures that focus on the reduction of safety events, both for the public who use or interface with the rail system, and employees who operate and maintain the system." Several commenters requested that FTA provide agencies with additional guidance on the four basic safety performance measures.

One commenter asked whether the safety plan must contain specific quantitative performance targets for all performance measures. This commenter stated that specific quantitative targets would pose challenges for transit agencies and that all targets should be

broad and not static to allow agencies to adjust their targets as new information dictates. Several commenters requested FTA to allow transit agencies to update and revise their safety plans if FTA alters or adjusts performance measures.

Response: FTA appreciates the comments that it received regarding its proposed safety performance measures; however, the proper vehicle for addressing these comments is through the notice and comment process tied to FTA's proposed National Public Transportation Safety Plan (RIN 2132-ZA04). The National Public Transportation Safety Plan will identify FTA's safety performance measures, not today's rule for Public Transportation Agency Safety Plans. The Public Transportation Agency Safety Plan rule only requires transit agencies to set performance targets based on the performance measures established in the National Public Transportation Safety Plan. FTA will address all of the comments related to safety performance measures in the National Public Transportation Safety Plan, including the above-referenced comments that were directed to this rulemaking.

FTA notes that in the NPRM for this rule, FTA used the term "Performance Criteria," which it proposed to define as "categories of measures indicating the level of safe performance within a transit agency." FTA used this term because the language of 49 U.S.C. 5329 uses the term "Performance Criteria." Other parts of FTA's authorizing statute, such as the Transit Asset Management provisions of 49 U.S.C. 5326, use the term "Performance Measures." FTA believes that Congress intended the terms "Performance Criteria" and "Performance Measures" to be synonymous. To eliminate confusion over distinctions between these terms and to ensure consistency with the use of these terms throughout FTA's programs, FTA has removed the term "Performance Criteria" from today's final rule and replaced it with the term "Performance Measure."

Finally, in accordance with the statutory requirements of 49 U.S.C. 5329(d)(1)(E), each transit agency must include in its safety plan, "performance targets based on the safety performance criteria and state of good repair standards." These targets must be specific numerical targets set by transit agencies themselves. FTA emphasizes, however, that the safety plan is intended to be a living document that evolves over time. FTA expects transit agencies to modify their safety plans, and to adjust their performance targets, as they collect data and implement SMS. Indeed, the performance targets

may change from year to year, or more frequently, as safety data may necessitate.

5. Future Requirements in FTA's Public Transportation Safety Program and National Public Transportation Safety Plan

Comments: One commenter requested FTA to provide guidance on what it means to "address" the requirements and standards in its Public Transportation Safety Program and National Public Transportation Safety Plan. Another commenter expressed concern that FTA has not established formal standards for these requirements, and requested FTA to establish minimum measures and targets for safety performance and improvement.

Response: In today's final rule, FTA is requiring each transit agency to address—more specifically, to ensure that it is complying with—all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program at 49 CFR part 671 and the National Public Transportation Safety Plan. In particular, each transit agency must identify safety performance targets based on the performance measures that FTA establishes in the National Public Transportation Safety Plan. Additionally, FTA encourages transit agencies to adopt any voluntary minimum safety performance standards established in the National Public Transportation Safety Plan, until mandatory standards are established, in which case each transit agency must fully comply with those safety performance standards. To the extent that FTA amends its Public Transportation Safety Program Rule or the National Public Transportation Safety Plan in the future, FTA expects each transit agency to amend its safety plan, as appropriate.

6. Process and Timeline for Annual Review and Update

Comments: One commenter asked FTA to clarify if the timeline for the annual review process is determined by each transit agency, or whether there is a particular date by which an annual review and update is required.

Several commenters disagreed with the proposed requirement that the plans be updated annually. Some commenters suggested that safety plans only need to be updated every two years because the requirement for an annual update of safety plans is excessive and burdensome. Several of these commenters asserted that if annual action is needed, an annual review and status report would be less resource intensive. A few commenters suggested

that safety plans need only to be updated every two years, unless there is a significant policy or change in condition (such as a fatality) that warrants a change. Another commenter recommended the same approach, but with updates required every three years rather than two years. One commenter suggested alternative review schedules ranging from every two years to every five years. One commenter suggested that organizations which meet various criteria should be placed on a five year review plan and they should be required to submit any requested updates to policies for review and approval.

One commenter asserted the review requirement should be consistent with FTA's proposed rule for Transit Asset Management Plans, which would require each transit agency to update its Transit Asset Management Plan at least once every four years. Additionally, this commenter suggested that the rule should require an update of a safety plan in any year when risk assessments result in the need for substantial mitigation, or if there are significant changes to asset inventory, condition assessments, or investment prioritization.

A couple of commenters asked about the required annual update as it may relate to a rail transit agency's SSPP annual reviews. A commenter asked whether the process for conducting annual reviews would likely be similar to the SSPP annual reviews, including requirements that an Accountable Executive would perform the review and that a transit agency document all updates and revisions. A commenter suggested that the proposed requirement to conduct an annual review and update the safety plan, as needed, differed from the requirement to conduct a formal annual internal audit of the SSPP.

A commenter expressed concern with FTA's decision to publish the National Public Transportation Safety Plan with no schedule for revision, which would cause transit agencies to continuously update their safety plans to coincide with any changes in FTA guidance documents. This commenter further encouraged FTA to define prescriptive elements of the annual review and update process to better guide agencies.

Response: Pursuant to the statutory provisions of 49 U.S.C. 5239(d)(1)(D), each operator of a public transportation system must develop a safety plan which includes "a process and timeline for conducting an annual review and update of the safety plan." In light of this statutory language, today's final rule requires each transit agency to establish a process and timeline for conducting a review and update of its

safety plan, and this review and update must occur at least annually. 49 CFR 673.11(a)(5).

Given the diversity in transit systems across the country, and given each transit agency's unique operating environment, FTA is deferring to each transit agency to determine, for itself, the frequency of its safety plan reviews and updates each year, and the process for doing so. Each transit agency must certify compliance with these requirements through its annual Certifications and Assurances to FTA.

FTA disagrees with the commenters who proposed that the annual review period for the safety plans be changed to a less frequent time period, such as two years, three years, four years, or five years. The statutory provisions of 49 U.S.C. 5329(d)(1)(D) do not provide that latitude. Notwithstanding the statute, as a matter of a best safety practice, FTA believes that each transit agency should annually review its process for hazard identification and risk analysis in an effort to prevent safety events. As a transit agency collects data through the hazard identification and risk analysis processes, the transit agency should be evaluating its safety performance targets to determine whether they need to be changed, as well.

FTA agrees with the commenter who suggested that along with an annual review, a transit agency should update its safety plan at any point when risk assessments result in the need for substantial safety mitigation, or if there are significant changes to asset inventory, condition assessments, or investment prioritization.

Regarding the annual reviews of SSPPs, FTA notes that under its new public transportation safety program, the requirements for SSPPs under the former regulatory provisions of FTA's SSO rule at 49 CFR part 659 have been eliminated. Today's requirement for a PTASP under 49 CFR part 673 replaces the old requirement for an SSPP under 49 CFR part 659. Therefore, annual reviews of the PTASP now will be required, and SSPPs will become obsolete for rail transit agencies one year after the effective date of this final rule.

Finally, regarding the National Public Transportation Safety Plan, FTA will update the National Public Transportation Safety Plan when it believes it is necessary to do so, based on safety needs in the public transportation industry. FTA notes that it must make any changes to the National Public Transportation Safety Plan through the public notice and comment process, and the transit industry will have the opportunity to

provide input on any changes to this document. Furthermore, FTA believes that changes to the National Public Transportation Safety Plan will not necessarily cause transit agencies to update their PTASPs. Currently, the National Public Transportation Safety Plan and the Public Transportation Agency Safety Plans are linked through the requirements for performance targets in agency safety plans based on the performance measures in the National Public Transportation Safety Plan.

7. Emergency Preparedness and Response Plans

Comments: Pursuant to the proposed provisions of 49 CFR 673.11(a)(6), each rail transit agency would be required to include an emergency preparedness and response plan in its safety plan. Although a commenter noted that there is no statutory language in 49 U.S.C. 5329 which requires emergency preparedness and response plans, the commenter agreed that this type of plan is important and should be included in safety plans. One commenter supported the requirement that transit agencies develop a plan for the delegation of responsibilities during an emergency, but encouraged FTA to include in the final rule a requirement that ensures transit agencies provide adequate training for workers responsible for tasks during emergencies.

Two commenters suggested that FTA should provide transit agencies with the option of separating their safety plans and their emergency preparedness and response plans, developing them as two separate documents. One of these commenters suggested that these documents are fundamentally different and the emergency preparedness and response plan contains information that should not be widely distributed. One of these commenters suggested that some transit agencies that have not previously complied with 49 CFR part 659 may have difficulty developing a robust emergency preparedness and response plan. This commenter also stated that FTA should take into consideration the time and resources needed to develop a comprehensive emergency response plan by publishing templates for these plans, offering assistance to those transit agencies developing them for the first time, and extending the implementation deadline for this final rule. Another commenter requested clarification regarding whether this final rule would require a System Security Plan and an emergency preparedness and response plan to be separate documents.

One commenter suggested that FTA revise the rule to allow a transit agency to include or reference the emergency

preparedness and response plan in its safety plan. This commenter said this revision would be consistent with the intent of FTA in the Section-by-Section Analysis portion of the NPRM which states that this section would require that each rail transit agency "include, or incorporate by reference" the emergency preparedness plan in its safety plan.

Another commenter asked FTA to clarify the relationship between the emergency preparedness and response plans required in this rule to the emergency preparedness and response plans required in the former SSO provisions of 49 CFR 659.19(k).

Response: Although the statutory provisions of 49 U.S.C. 5329 do not require emergency preparedness and response plans, FTA's State Safety Oversight Rule historically has required rail transit agencies to have emergency preparedness and response plans as part of their SSPPs. Since rail transit agencies already have these plans in place, FTA is carrying over the requirement for those plans into today's rule. FTA's intent is to make transit safer, not to make transit less safe by eliminating historical requirements that have proven to be effective. FTA acknowledges the potential burdens on transit agencies that do not have these plans in place, and therefore, FTA only is requiring emergency preparedness and response plans from rail transit agencies, which should already have them in place. FTA agrees with the commenter who suggested that these plans are important, as recent safety events have demonstrated the need and utility of emergency preparedness and response plans, particularly for rail transit systems.

FTA agrees that rail transit agencies should develop plans to include the delegation of responsibilities during an emergency. FTA is deferring to transit agencies on how to document their emergency preparedness and response plans, and FTA will allow transit agencies to combine, include, incorporate by reference, or separate their emergency preparedness and response plans and their safety plans.

FTA is issuing templates and guidance for safety plans concurrently with the issuance of today's final rule. FTA intends to develop guidance specific to emergency preparedness and response plans in the future. FTA also will provide technical assistance to rail transit agencies that are modifying or developing emergency preparedness and response plans.

FTA notes that it no longer is requiring System Security Plans as previously required for rail transit agencies under the former regulatory

provisions of 49 CFR part 659—the responsibility for the oversight of transit security resides with the U.S.

Department of Homeland Security's Transportation Security Administration (TSA). However, to the extent that a transit agency has a security plan, FTA will allow a transit agency to incorporate the security plan into its safety plan, if the transit agency desires.

In light of the above, FTA is revising the language in today's final rule to match the intent referenced in the NPRM's Section-by-Section Analysis, which states that each rail transit agency is required to “include, or incorporate by reference” an emergency preparedness and response plan in its safety plan. FTA directs readers to its SSPP-PTASP Crosswalk interim guidance document for further information on the relationship between SSPPs and PTASPs (https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/PTSP_NPRM_SSPP_Side_by_Side.pdf). Additional guidance will be forthcoming, and FTA will post it on its website (see <https://www.transit.dot.gov/regulations-and-guidance/safety/transit-safety-oversight-tso>).

8. Multiple Modes of Transit Service

Comments: A few commenters supported FTA's proposed flexibility for transit agencies to develop one safety plan for all modes of transit. A couple of commenters stated that they would develop one safety plan for all modes. One of these commenters stated that updating and monitoring several plans is unrealistic and increases the workload and approval processes. This commenter also asked if FTA would issue rules specific to locally operated transit systems.

A couple of commenters encouraged the use of one safety plan that encompasses all modes of transportation. A commenter stated that if a transit agency develops one safety plan for all transportation modes, then that transit agency should identify those portions of its system that are regulated by another Federal entity and include any additional requirements from those Federal entities in the safety plan.

One commenter suggested that safety plans for all transit modes creates a difficult regulatory process for SSOAs, since SSOAs have regulatory authority over the rail mode only. This commenter recommended that FTA require rail transit agencies to develop a separate plan for rail, since the safety plan must be submitted to the SSOA for review and approval. Alternatively, the commenter requested that FTA include specific processes for SSOAs and rail

transit agencies when dealing with a single plan covering multiple modes.

Response: FTA agrees with and appreciates the commenters who would like the flexibility to either have one safety plan or multiple safety plans for multiple modes of transit service. As FTA stated in the NPRM, it intends to allow flexibility and choice so that transit agencies may draft multiple plans or only one plan, as there are many different sizes and types of transit agencies—a single plan may work better for some agencies, whereas multiple plans for multiple modes of transit service may work better for others (especially the larger transit agencies that have multiple divisions and operate commuter rail, heavy rail, light rail, bus, and other transit modes).

FTA disagrees with commenters who would like to develop a single plan for all modes of transportation service, particularly service that is regulated by another Federal entity, such as FRA. Other Federal regulators may have specific requirements for safety plans that fall under their jurisdiction that may conflict with this final rule. Notably, FRA's statutory and regulatory framework for rail safety provides data protection in safety plans; FTA's statutory and regulatory framework does not. FTA is concerned that combining PTASPs and FRA-regulated safety plans would result in a loss of that data protection for the rail safety covered by FRA. Therefore, FTA will not allow a transit agency to combine its PTASP with a safety plan for service regulated by another Federal agency.

FTA disagrees that SSOAs will have difficulty approving safety plans that address rail and bus service. Indeed, SSOAs have regulatory authority over rail transit service only, and SSOAs should review only the rail components of safety plans. FTA will provide additional guidance and training in the future to assist SSOAs with their review and oversight of PTASPs and SMS.

D. State and Transit Agency Roles

1. Large Transit Agencies

Comments: One commenter recommended that the rule detail the requirements applicable to large transit agencies.

Response: Pursuant to this rule, every operator of a public transportation system—large and small—must comply with each of the requirements outlined in today's final rule, unless the operator only receives Section 5310 and/or Section 5311 funds. All sections and requirements of this rule as outlined in 49 CFR part 673 are applicable to large transit agencies, specifically, rail fixed

guideway public transportation systems and recipients and subrecipients of FTA funds under 49 U.S.C. Chapter 53 that operate more than 100 vehicles in peak revenue service.

2. Small Public Transportation Providers, Section 5311 Providers, and Section 5310 Providers

2.1. States Must Draft and Certify Safety Plans on Behalf of Small Public Transportation Providers

2.1.1. Option for State-Wide or Agency-Specific Safety Plans

Comments: Several commenters responded to FTA's question as to whether FTA should require States to draft a single state-wide plan; individual safety plans for each Section 5310, Section 5311, and small public transportation provider located within that State; or defer to the State's preference. A few commenters recommended that each State should have the flexibility to choose whether the State will develop and certify a single state-wide plan or draft individual safety plans on for each agency. One commenter stated that the State should be required to draft an umbrella plan for more than just “small public transportation providers” and an agency can choose to use that plan or develop their own plan that complies with the overarching plan. Another commenter stated that state-wide plans should be generic and that States should develop an SMS that would be flexible enough to meet the needs of each of the individual transit agencies within their jurisdictions. This commenter also asked what might happen when a transit agency's safety plan differs from another transit agency's safety plan drafted by their State. One commenter suggested a “hybrid” approach whereby the State may draft a single safety plan, and include appendices that incorporate unique situations for certain transit agencies. Another commenter suggested that if a State develops a state-wide plan, then all transit providers should be required to provide copies of their plans and self-certifications to the State.

One commenter asserted that small urban and rural operations likely will be different, and if a State must draft separate safety plans for each transit agency, then this effort will be burdensome. On the other hand, the commenter asserted, if the State drafts only a single safety plan for all transit agencies under this regulatory provision, then the safety plans may be ineffective and meaningless.

In response to FTA's question as to how a single state-wide safety plan could respond to the Safety Risk

Management component of SMS (such as the identification of risks and hazards for each unique transit agency), several commenters stated there are already processes in place at State Departments of Transportation that can integrate individual SMS components of Safety Risk Management for small bus public transportation providers to enable the drafting of a state-wide agency safety plan.

Response: To provide maximum flexibility for States and transit providers, FTA is deferring to the States and the small public transportation providers within those States to determine whether each State will draft and certify a single state-wide safety plan for all small public transportation providers or whether it will draft and certify multiple individualized safety plans for each of these transit operators. FTA recommends as a best practice that each State draft and certify individualized safety plans on behalf of each of these small public transportation providers given the inherently unique safety concerns, issues, hazards, and risks for each transit operator. If a State drafts a single state-wide safety plan, then the State must ensure that the plan clearly identifies each transit operator that the plan will cover, the names of the Accountable Executives and Chief Safety Officers, the safety performance targets for each transit operator (and determined in conjunction with each operator), and the hazard identification, risk analysis, Safety Assurance, and other SMS processes for each transit operator (and developed in conjunction with each transit operator).

FTA notes that, in this rule, States are not required to draft and certify safety plans on behalf of transit operators that only receive Section 5310 and/or Section 5311 funds. As discussed above, FTA is deferring regulatory action regarding the applicability of this rule on these operators until a later date.

2.1.2. Drafting and Certifying Safety Plans for Small Section 5307 Providers

Comments: Several commenters suggested that States should not be required to draft and certify safety plans for small Section 5307 providers in large urbanized areas because these providers are not subrecipients of funds apportioned to States, they have a direct funding relationship with FTA, States do not review their grant applications, States do not review their NTD reports, and States do not provide their oversight.

A few of these commenters only supported the requirement that States draft and certify safety plans on behalf

of open door Section 5310 and Section 5311 subrecipients. A couple of commenters supported the requirement that a State draft and certify safety plans on behalf of small Section 5307 providers operating 100 or fewer vehicles, as long as the final rule clarifies that the “100 vehicles in revenue service” criteria applies only to Section 5307 recipients, not Section 5310 or Section 5311 recipients.

Response: FTA notes that 49 U.S.C. 5329(d)(3)(B) provides that States may draft or certify safety plans on behalf of “small public transportation providers” that receive Section 5307 funds, even though, for recipients in large urbanized areas, no funding relationship exists between the States and those small Section 5307 recipients. In response to comments and to ensure consistency across FTA’s safety rules and Transit Asset Management rule, FTA is defining “small public transportation provider” to mean “a recipient or subrecipient of Federal financial assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operate a rail fixed guideway public transportation system.” A small Section 5307 provider may opt to draft and certify its own safety plan.

FTA notes that it received numerous comments requesting reduced requirements for small public transportation providers. Given their limited resources, FTA believes that a reduction in requirements for small public transportation providers is appropriate, and to that end, FTA eliminated Safety Assurance requirements for all small public transportation providers under 49 CFR 673.27(a).

2.2. Other Comments

Comments: One commenter expressed a concern about potential conflicts of interest regarding the drafting and certifying of safety plans. This commenter stated that if a State drafts and certifies a safety plan on behalf of a transit operator, and if the State is also the grant manager for the transit agency using the safety plan, then the State may monitor compliance with the safety plan that it drafted through grant compliance reviews. The commenter suggested that this situation may create a conflict of interest, similar to the conflict of interest that would arise if an SSOA drafted and certified a safety plan on behalf of a rail transit agency subject to its jurisdiction.

One commenter asked whether a small transit provider may continue to use its safety plan drafted by its State if it grows to a size where it no longer

would be considered small. In this scenario, the commenter asked how much time the transit provider would have to draft and certify a new safety plan.

One commenter recommended that FTA clarify the definition of the term “State” so that SSOAs would not draft or develop a transit agency’s safety plan if a conflict of interest exists. Additionally, the commenter suggested adding the following language at the end of section 49 CFR 673.11: “the State Safety Oversight Agency cannot be involved in the development of the Public Transportation Agency Safety Plans they are charged with overseeing.”

Response: FTA disagrees with the commenter who suggested that a potential conflict of interest would exist if a State drafted and certified a safety plan on behalf of a small transit provider. The funding relationships created by Congress differ from the new safety relationships in 49 U.S.C. 5329(d). From a federal perspective, the State has no role in safety enforcement or oversight of small Section 5307 providers. For rail transit agencies, the SSOAs serve in a different, independent role, and they are required by 49 U.S.C. 5329(e) to provide enforcement. Moreover, as a legal matter, the statutory provisions of 49 U.S.C. 5329(d) require States to draft and certify safety plans on behalf of small Section 5307 providers.

If a transit agency grows in size so that it no longer is considered “small,” then it would have one year to draft and certify its own safety plan. The safety plan developed by the State would remain in effect until the transit agency drafts its own safety plan.

Finally, FTA does not agree that the rule text should be clarified to distinguish between a State’s role and an SSOA’s role in the development and certification of safety plans. The rule provides that a State must draft and certify safety plans only on behalf of small public transportation providers that do not operate rail service, and that an SSOA must review and approve a rail transit agency’s safety plan.

3. Small Transit Providers May Draft and Certify Their Own Safety Plans

Comments: Many commenters asserted that, when a transit agency “opts out” of the state-wide safety plan and drafts and certifies its own plan, then the final rule should clarify that the State has no further obligation related to the safety plan.

One commenter observed that the “opt out” provision places the decision on a State’s responsibilities in the hands

of its subrecipients instead of the State, which is where that responsibility exists in the context of funding relationships. The commenter recommended that FTA clarify in the final rule that the State is responsible for its own safety plan and for those of its subrecipients, and that the determination of whether the State will draft plans for its subrecipients remains at the discretion of the State.

Response: If a transit agency “opts out” and decides to draft and certify its own safety plan, then the State has no further responsibility regarding that safety plan and the transit agency may seek guidance and technical assistance directly from FTA. FTA disagrees with the commenter who suggested that States should have the discretion to draft and certify safety plans. In an effort to reduce the administrative and financial burdens of small public transportation providers, and given the statutory requirements of 49 U.S.C. 5329(d), FTA is requiring States to draft and certify safety plans on behalf of small Section 5307 recipients and subrecipients. FTA is providing those recipients and subrecipients with the discretion to “opt out” of this arrangement (however, the State will not have the option to “opt out,” as this discretion lies with the small transit operator).

4. Direct and Designated Recipients Drafting and Certifying Safety Plans on Behalf of Smaller Transit Providers

Comments: Several commenters responded to FTA’s question about whether a Section 5310 recipient should draft and certify their own safety plans if they are direct recipients, instead of having the States draft and certify their safety plans on their behalf. Many commenters stated that the designated or direct recipient should have this responsibility for themselves, given the fact that they do not receive their funds through the State under recent changes to the Section 5310 program under the FAST Act. One commenter supported the idea of having designated recipients draft and certify their own safety plans, as well as their subrecipients, only if the plans are based on templates provided by FTA. One commenter asked whether the State or the transit agency should be responsible for reviewing safety plans when a subrecipient receives funding through the transit agency and not the State.

Response: FTA appreciates the comments that it received regarding this issue. In light of the public comments that FTA received regarding the application of this rule to Section 5310 and Section 5311 recipients, FTA is deferring regulatory action regarding the

applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds. Further evaluation of information and safety data related to these operators is needed to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators. At this time, the rule does not apply to an operator of a public transportation system that only receives Federal financial assistance under 49 U.S.C. 5310, 49 U.S.C. 5311, or both 49 U.S.C. 5310 and 49 U.S.C. 5311. Consequently, States are not required to draft and certify safety plans on behalf of operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds.

Consistent with the statutory provisions of 49 U.S.C. 5329(d)(3)(B), a State still has the responsibility of drafting and certifying safety plans on behalf of small Section 5307 recipients, unless they opt to draft and certify their own safety plans. To ease the burdens with these efforts, FTA is issuing a safety plan template with today’s rule to assist States and smaller operators with the drafting and certification of their plans.

E. Existing System Safety Program Plan Is Effective for One Year

1. General Comments

Comments: A couple of commenters suggested that the final SSO rule and the proposed PTASP rule are contradictory in terms of implementation deadlines, and they recommended that FTA allow an SSPP to remain in effect until an SSOA has approved a rail transit agency’s new PTASP. One of these commenters stated that FTA should remove all requirements involving SSPPs from the final PTASP rule. One commenter asked if a rail transit agency must keep its SSPP and reference it in its PTASP.

Response: FTA acknowledges that the compliance dates in the final SSO rule at 49 CFR part 674 differ from those in the PTASP rule at 49 CFR part 673. These compliance dates are creations of statute. Pursuant to 49 U.S.C. 5329(e)(3), each State must have an SSO program compliant with the new SSO rule within three years after the effective date of that final rule. Pursuant to 49 U.S.C. 5329(d)(1), each operator of a public transportation system must have a PTASP compliant with the new PTASP rule within one year after the effective date of this final rule.

Although these compliance dates differ, an SSOA can apply the regulatory requirements of the PTASP rule and

ultimately review and approve a PTASP based on those requirements, even if it has not fully developed its new program standard in accordance with the new SSO rule. As demonstrated through the SSPP–PTASP Crosswalk that FTA posted to this rulemaking docket, the substantive elements of the old SSPPs carry over into the SMS portions of PTASPs. The same basic requirements exist, albeit, reshuffled into a different format that is intended to more effectively address safety risks. Finally, the staff of SSOAs have been taking training courses in SMS in accordance with the interim rule for the Public Transportation Safety Certification Training Program. Given the above, FTA expects each SSOA to review and approve each PTASP of a rail transit agency within its jurisdiction, even if it has not fully complied with the new SSO rule at 49 CFR part 674.

Ultimately, the SSPP will become obsolete one year after the effective date of this final rule, and an agency’s PTASP will replace the SSPP. However, if a transit agency would like to maintain the SSPP and use it as a reference document, it may do so. FTA only will conduct oversight, including Triennial and State Management Reviews, to ensure that a transit agency’s PTASP complies with this rule, not its former SSPP. Given the April 15, 2019 deadline for updated SSO Programs under 49 CFR 674.11, FTA believes that the effective date and compliance date of today’s final rule will provide rail transit agencies and their SSOAs with more time to harmonize their safety plans and program standards before they are finalized.

2. One-Year Compliance Timeframe

Comments: Several commenters provided input on the one-year compliance timeframe for the proposed rule. One commenter expressed support for the one-year compliance period, but stated that transit agencies may need more than one year to draft their safety plans, hire and train the necessary personnel, and certify the plan.

Some commenters stated that FTA should provide a longer compliance/implementation period for the rule. Several of these commenters remarked that the proposed compliance period is aggressive and may lead to rushed or subpar safety plans with limited SMS training for staff. The commenters also suggested that a longer compliance period may be necessary given the requirements for a signature from the Accountable Executive and approval from a Board of Directors. One commenter suggested that,

notwithstanding Federal requirements, State legislatures may not be able to amend State safety requirements prior to the compliance deadline for this rule, which may force some transit agencies to create two safety plans for purposes of Federal and State law, or be in non-compliance with the Federal and State laws.

Most commenters provided suggestions for an alternative compliance deadline, with many commenters suggesting that FTA extend the compliance deadline to two years. Several commenters suggested that FTA extend the compliance deadline or allow for a multi-part implementation or a transitional grace period for agencies to show progress with the development of their safety plans. A couple of commenters recommended that FTA extend the compliance period until one year after FTA issues templates for safety plans. One commenter stated that the compliance deadline for this rule should be tied to the finalization of the National Public Transportation Safety Plan. Several commenters also suggested aligning the compliance deadline of this rule with the two-year compliance deadline for the Transit Asset Management rule.

Response: As a preliminary matter, FTA notes that many commenters referred to the “implementation” deadline of this final rule, as opposed to the rule’s “compliance” deadline. The compliance deadline is the date by which transit operators and States must comply with the final rule and have a safety plan in place. FTA emphasizes that this rule implements a statutory requirement that each operator of a public transportation system draft and certify a safety plan within one year after the effective date of this final rule. The safety plan must include all of the information, processes, and procedures as outlined in this rule. FTA expects each operator of a public transportation system to “implement” the processes and procedures outlined in its safety plan after it drafts and certifies that plan in accordance with this rule. That implementation should take place continually, and the implementation, particularly the implementation of SMS, should mature over time. But to comply with this rule, each operator of a public transportation system must draft and certify a safety plan within one year after the effective date of this final rule—that one-year deadline is the “compliance” deadline for this rule.

The one-year compliance deadline was created by the statutory provisions of 49 U.S.C. 5329(d)(1), and FTA does not have the flexibility to extend it. Nevertheless, FTA does not expect that

all transit agencies will have fully implemented SMS one year after the effective date, but rather, FTA expects that transit agencies will have the processes and procedures put in place for SMS, including hazard identification, risk analysis, and the Safety Assurance procedures as outlined in Subpart C of this rule. The full implementation of SMS may take longer, in some cases years to fully mature in large multi-modal transit agencies. FTA is providing more guidance on how a transit agency may fully implement a mature SMS in the National Public Transportation Safety Plan, and it intends to provide additional guidance and technical assistance to the industry in the future.

FTA appreciates the comments that it received suggesting that transit agencies may need more than one year to certify compliance with the rule. Although, by statute, the compliance deadline must be one year from the rule’s effective date, FTA has discretion on setting the effective date itself. In response to the public comments and in an effort to assist the industry with meeting the requirements of this rule, FTA is making the effective date one year after its publication date. As a result, transit agencies will have a total of two years (one year from the publication date to the effective date, plus another year from the effective date to the compliance deadline) to certify that they have safety plans meeting the requirements of 49 CFR part 673.

F. Certification of Safety Plans

Comments: Several commenters requested additional information on how agencies may certify compliance with this rule and what this certification means. One commenter remarked that the rule contains neither a definition nor an explanation of the term “certification” or “certify.” Two commenters questioned how an agency may certify their safety plans if FTA may adopt additional performance measures in the future.

One commenter expressed concern with self-certification, asserting that self-certification is not a reliable method for establishing effective safety management by public transportation providers. This commenter suggested that each transit agency should submit its safety plan to FTA for approval and certification so that FTA could verify that the plan satisfies the statutory and regulatory requirements.

Several commenters expressed concern over the one-year certification timeline, indicating that one year may not be enough time for transit agencies to certify compliance with the rule. One

commenter suggested that FTA lengthen the certification period to two years, which would provide agencies with additional time and align the certification deadline for the compliance deadline for developing transit asset management plans as outlined in the TAM rule.

One commenter urged FTA to clarify the process by which a State should certify a safety plan on behalf of a Section 5310, Section 5311, or small Section 5307 recipient or sub-recipient. Additionally, the commenter asked who would conduct oversight on a safety plan if a small transit agency opts out of any plan developed by a State.

Response: As a statutory matter, pursuant to 49 U.S.C. 5329(d)(1), each recipient or State must “certify” that the recipient or State has established a comprehensive agency safety plan. Pursuant to 49 U.S.C. 5323(n), each recipient must submit to FTA a list of “Certifications and Assurances” as part of the grant award and oversight process during each fiscal year. FTA will use this existing Certifications and Assurances process to satisfy the statutory requirement for safety plan certifications. FTA has added a section to the list of Certifications and Assurances to address safety. FTA will issue future guidance on how States can certify safety plans and transit asset management plans on behalf of transit operators.

To the extent that FTA amends the National Public Transportation Safety Plan in the future, or any of its regulatory requirements in general, FTA will amend the annual list of Certifications and Assurances, as necessary.

FTA appreciates concerns regarding the self-certification process; however, FTA does not have the resources to collect and review hundreds of safety plans each fiscal year. Consequently, FTA intends to utilize its existing risk-based approach to oversight by using its Triennial Reviews and State Management Reviews to ensure compliance with this rule. FTA notes that it does not need to wait to review a safety plan every three years. FTA may review an agency’s safety plan whenever it deems necessary.

As noted above, in response to the public comments and in an effort to assist the industry with meeting the requirements of this rule, FTA is making the effective date one year after its publication date. As a result, transit agencies will have a total of two years from the rule’s publication date to certify that they have safety plans meeting the requirements of 49 CFR part 673.

G. SSOA Review and Approval of PTASPs for Rail Transit Systems

Comments: Pursuant to the proposed provisions at 49 CFR 673.13(a), each SSOA would be required to review and approve a PTASP developed by a rail fixed guideway system. Some commenters expressed concern with the one-year deadline that a transit agency has to certify its PTASP and the three-year deadline that an SSOA has to comply with the new SSO rule at 49 CFR part 674. One commenter recommended that FTA should allow rail transit agencies to certify compliance with the PTASP rule one year after the relevant SSOA develops its program standard pursuant to 49 CFR part 674. Several commenters questioned whether a rail transit agency must submit its PTASP to the SSOA by one year after the PTASP final rule's effective date, or whether the SSOA must approve the agency's PTASP by one year after the PTASP rule's effective date. Several commenters urged FTA to clarify whether SSOAs must update their program standards prior to approving rail transit safety plans since most SSOAs will be operating under a program standard based on 49 CFR part 659 when the PTASP final rule becomes effective.

A few commenters requested FTA to clarify the role of an SSOA with respect to PTASP certification. One commenter suggested that a PTASP should not be executed without SSOA approval. Several commenters suggested that FTA develop guidance for obtaining SSOA approval and a resolution process for situations in which a rail transit agency certifies compliance and then an SSOA does not approve the safety plan. Several commenters requested clarification of an SSOA's approval power and role, with a couple of these commenters encouraging FTA to modify the rule's text to make clear that SSOAs only have authority over rail transit systems. One commenter recommended that FTA require transit agencies that operate rail and bus service to develop separate safety plans for rail and bus service so that it is easier for SSOAs to approve the plans for rail safety.

A few commenters stated that FTA should define the SSOA's role and responsibilities in approving plans that contain modes of service not subject to state specific oversight rules, such as rules for bus transit. The commenters argued that while SSOAs are responsible for the review and approval of rail transit plans, FTA's proposed rule only specifies that bus agencies will self-certify.

Several commenters expressed concerns over the requirement to have the transit agency's Board of Directors and the SSOA approve the safety plan, fearing that this two-tiered review process could subject plans to conflicting evaluation criteria, which could weaken plans and cause delays in implementation.

One commenter suggested that FTA should clarify that SSPPs will become obsolete.

Response: As a preliminary matter, FTA notes that the comments above regarding state safety oversight are more appropriately addressed through FTA's SSO rule at 49 CFR part 674, which governs the activities of SSOAs. FTA's PTASP rule governs the activities of operators of public transportation systems. Nevertheless, to provide the industry with additional clarification regarding the role of SSOAs, FTA provides the responses below.

Through FTA's new SSO rule at 49 CFR part 674, each SSOA has a great deal of flexibility regarding the timing of its approval of a PTASP within its jurisdiction. Pursuant to the new rule, each SSOA is obliged to "adopt and distribute a written SSO program standard" consistent with the National Public Transportation Safety Plan and the PTASP rule (49 CFR 674.27(a)); "explain" an SSOA's "role . . . in overseeing" a rail transit agency's "execution of its Public Transportation Agency Safety Plan" (49 CFR 674.27(a)(4)); and "describe the process whereby the SSOA will receive and evaluate all material submitted under the signature of [a rail transit agency's] accountable executive" (49 CFR 674.27(a)(4)). Given these requirements, an SSOA could choose to "approve" a PTASP at virtually any point in time, and as often as it might like. FTA expects each SSOA to develop its program standard in consultation with the rail transit agencies within the SSOA's jurisdiction. FTA intends to provide deference to the State decision makers on this matter.

Optimally, an SSOA would have its program standard in place before reviewing the merits of a rail transit agency's PTASP, but it is not necessary, as a matter of law. An SSOA still operating under the old SSO rule at 49 CFR part 659 and transitioning to the new SSO rule at 49 CFR part 674 still can judge the adequacy of a rail transit agency's PTASP by applying the standards and regulatory requirements set forth in the new rules at 49 CFR parts 673 and 674.

Through the new SSO rule, FTA addresses scenarios in which an SSOA does not approve a PTASP. Pursuant to

49 CFR 674.29(c), "In an instance in which an SSOA does not approve a Public Transportation Agency Safety Plan, the SSOA must provide a written explanation, and allow the [rail transit agency] an opportunity to modify and resubmit its . . . Plan for the SSOA's approval." This mechanism should lead to negotiations that resolve disagreements between an SSOA and a rail transit agency. In those instances in which an SSOA and a rail transit agency continue to disagree in good faith, FTA may step into the dispute to help the issue. If a rail transit agency is comfortable certifying its own compliance with the rules, but it receives objections or disapprovals from its SSOA, then FTA could take regulatory enforcement action under the Public Transportation Safety Program rule at 49 CFR part 670 (see <https://www.gpo.gov/fdsys/pkg/FR-2016-08-11/pdf/2016-18920.pdf>), as necessary and appropriate, to ensure compliance with the PTASP rule.

It is abundantly clear in 49 U.S.C. 5329(e) and FTA's new SSO rule at 49 CFR part 674 that an SSOA only has jurisdiction over a "rail fixed guideway public transportation system" that is not subject to regulation by FRA. Consequently, when reviewing a PTASP for an agency that operates rail fixed guideway public transportation and bus public transportation, an SSOA should focus its review on the rail fixed guideway public transportation system only, given the fact that as a legal matter, Federal law does not give an SSOA the authority to regulate the safety of bus systems. Unless provided by State law, an SSOA has no legal authority to compel a transit agency to change its safety practices for bus operations. FTA disagrees with the commenters who believe that FTA should require separate safety plans for rail and bus; FTA will defer to each transit agency to decide whether it is more appropriate for their system to have a single plan covering rail and bus (and other modes of transit) or whether to have multiple plans for each mode of transit.

Finally, FTA re-emphasizes that every operator of a public transportation system subject to this rule, or State, must certify compliance with this rule, whether it provides rail transit service, bus transit service, or other modes of transit service. SSPPs will become obsolete one year after the effective date of this final rule.

H. Safety Performance Targets and Performance-Based Planning

Comments: Pursuant to the proposed provisions at 49 CFR 673.15, each

transit agency or State would be required to make its safety performance targets available to States and MPOs to aid in the planning process, and each transit agency or State would be required to coordinate with States and MPOs in the selection of safety performance targets.

Several commenters generally supported the coordination provisions. One commenter supported flexibility in the target-setting process and coordination of targets between the State, regional, and transit agency levels. One commenter was encouraged that FTA acknowledged the vital role of the planning process in safety management and recommended that the Transit Asset Management Plans also be included in the coordination process.

A couple of commenters asked FTA to explain the purpose of communicating safety performance targets to States and MPOs. One commenter asked FTA to clarify the MPO's role in the planning process, stating that if an MPO has any approval or review authority of safety performance targets, then an MPO should be required to have the same safety expertise and training as an SSOA.

Several commenters asked whether a transit agency only would be required to make its targets available to a State and an MPO, or whether it also would be required to make the supporting performance data pertaining to those targets available to a State and an MPO. One commenter suggested that FTA avoid creating this requirement or to make a general requirement that transit agencies cooperate with States and MPOs in the planning process.

Several commenters expressed concerns with requiring coordination among planning organizations. They argued that this coordination would be unreasonably burdensome on some transit agencies. Several commenters argued that these provisions are not required by statute and that MPOs generally do not operate transit service and do not have transit operations and safety expertise or experience. Several commenters suggested that coordination should be revised to a "consultation" requirement. One commenter recommended that FTA delete these requirements, and that planning coordination should be encouraged through guidance instead.

Several commenters requested clarification on how a State or transit agency should coordinate with MPOs and States to select safety performance targets. One of these commenters argued that if by "coordination," FTA's intent is that a transit agency share its PTASP (which will include performance

targets) with States and MPOs, then FTA should clearly state such a requirement. Additionally, the commenter stated that the proposed rule did not specify which State agencies, other than MPOs, transit agencies are expected to coordinate with.

Several commenters asked which accountability measures will be used to ensure that coordination is occurring "to the maximum extent practicable." One commenter asked what recourse an MPO would have if the State or transit operator chooses not to coordinate on target setting, claiming there is not a "practicable" way to do so. The commenter argued that the rule must recognize that target setting across multiple functions and dimensions would require an extremely robust degree of coordination and suggested removing that phrase.

One commenter stated that the proposed rule does not identify the responsibilities of the State in the planning process. Another commenter asked whether States and MPOs would be required to keep confidential any information related to safety performance targets.

One commenter stated that it is unclear how the development of performance targets at the State and MPO levels will impact individual transit agency targets in the future, particularly when FTA may develop safety performance targets under a separate NPRM. This commenter also said it is unclear how the State and MPO safety performance targets would impact individual transit agency safety plans, as these are to be determined at the local level by each individual transit agency.

Response: FTA appreciates the comments that it received in support of its proposed safety performance target provisions. FTA emphasizes that these requirements are rooted in the statutory provisions of 49 U.S.C. 5329(d)(1)(E), which requires each operator of a public transportation system subject to this rule to include in its PTASP "performance targets based on [FTA's] safety performance criteria and state of good repair standards." Moreover, the statutory provisions of 49 U.S.C. 5303(h)(2)(B) and 49 U.S.C. 5304(d)(2)(B) further require that "[s]election of performance targets by a metropolitan planning organization shall be coordinated, to the maximum extent practicable, with providers of public transportation to ensure consistency with sections . . . 5329(d)" and "[s]election of performance targets by a State shall be coordinated with the relevant metropolitan planning organizations to ensure consistency to

the maximum extent practicable." Since these activities are required by law, FTA will not merely encourage these practices through guidance, as some commenters requested. FTA will require these practices as a legal matter. Moreover, FTA emphasizes that the PTASP rule only governs the activities of operators of public transportation systems. The recent FTA/FHWA joint planning rule 23 CFR part 450 governs the planning activities of transit agencies, States, and MPOs. FTA refers readers to the Final Rule dated May 27, 2016, for further guidance on the roles and responsibilities of States and MPOs in the planning process (see <https://www.gpo.gov/fdsys/pkg/FR-2016-05-27/pdf/2016-11964.pdf>).

In response to the question as to whether a transit agency only would be required to make its safety performance targets available to a State and an MPO, or whether it also would be required to make the supporting performance data pertaining to those targets available to a State and an MPO, FTA defers to the State and local processes developed by States and MPOs. FTA only requires that transit agencies coordinate with States and MPOs to the maximum extent practicable to assist those States and MPOs with the selection of Statewide and regional safety performance targets. At a minimum, FTA requires each operator of a public transportation agency to make its safety performance targets available to States and MPOs.

To ensure that a transit agency complies with these requirements, FTA intends to utilize its existing Triennial Reviews and State Management Reviews. FTA intends to ensure that MPOs comply with the joint planning rule through the existing MPO certification process.

Finally, FTA notes that it is not developing safety performance targets for the industry—it is developing safety performance measures by which each operator of a public transportation system, and each State and MPO, must set targets. These targets are intended to guide transit agencies, States, and MPOs with the prioritization of transportation investments. The goal is for the prioritization of capital investments that help meet safety performance targets and state of good repair targets.

I. Safety Management Systems

1. Safety Management Policy: General Comments

Comments: Numerous commenters expressed general support for the proposed Safety Management Policy provisions of 49 CFR 673.23.

Response: FTA appreciates the support from the transit industry on Safety Management Systems, and specifically the Safety Management Policy provisions of 49 CFR 673.23.

1.1. Safety Management Policy Statement

Comments: Several commenters encouraged FTA to allow for maximum flexibility in safety management policy statements and urged FTA to allow deviation in policy adoption whenever consistent with the overarching principles of SMS.

A few commenters expressed concern regarding the inclusion of safety performance targets in the safety management policy statement. One commenter suggested that it is inappropriate to include specific safety performance targets in an overarching safety management policy statement and suggested deleting the requirement from the rule. This commenter also suggested that FTA replace the term SMS with PTASP where references to safety performance targets are made. Another commenter urged FTA to clarify that the intent of including safety performance targets in the safety management policy statement is not to require annual updates of the target values, but rather, the measures that the targets address.

Response: FTA agrees with the commenters who suggested that the inclusion of safety performance targets in the safety management policy statement is unnecessary, and FTA has updated the rule text, accordingly. The location of this requirement under the "Safety Management Policy" section of this rule is redundant, given the fact that FTA is requiring each transit agency to establish safety performance targets through the "General Requirements" section of this rule at 49 CFR 673.11(a)(3). If a transit agency wishes to include its safety performance targets in its safety management policy, it may do so, although it may identify those targets in another section of its safety plan. The rule text in 49 CFR 673.23 now reads, "A transit agency must establish its organizational accountabilities and responsibilities and have a written statement of safety management policy that includes the agency's safety objectives."

To clarify, during a transit agency's annual review and update of its safety plan (which is required under 49 CFR 673.11(a)(5)), a transit agency may need to update its safety performance targets based on the data and safety conditions at that time, but a transit agency may not necessarily need to alter its target values each year. A transit agency only

needs to examine them and decide, for itself, whether it should amend them.

1.2. Employee Reporting Program

Comments: Numerous commenters expressed support for FTA's proposed employee reporting program. Several commenters urged FTA to provide more detail on the requirements for employee reporting programs. Two commenters suggested that FTA encourage transit agencies to establish "close call" reporting programs. Another commenter requested guidance from FTA on how reports from employee reporting programs would be protected from disclosure.

One commenter supported non-punitive employee reporting, but stated that disciplinary actions for employee safety behaviors are the subject of collective bargaining at the majority of transit systems. As such, the commenter stated that collective bargaining agreements may affect disciplinary actions in employee reporting programs.

Response: FTA appreciates the support for employee reporting programs and believes it is an essential part of a transit agency's SMS. Pursuant to 49 CFR 673.23(b), FTA is requiring each transit agency to "establish a process that allows employees to report safety conditions to senior management," and FTA is providing significant latitude and flexibility to transit agencies to determine their own processes for the reporting of safety conditions. These reporting processes could include hotlines, web-based reporting systems, form-based reporting systems, or direct reporting to management, but ultimately, each transit agency must decide the process and procedures that will work best within that individual agency.

"Close call" reporting systems are a type of employee reporting, and FTA strongly supports the establishment of close call reporting systems, although these systems are not required.

Currently, FTA does not have statutory protections in place to protect safety information from public disclosure, as is the case with FRA and the System Safety Programs required of commuter and intercity passenger railroads under 49 CFR part 270 (see <http://www.fra.dot.gov/eLib/Details/L18294>). FTA requested these protections through the "Grow America Act". Following this request, in Section 3021 of the FAST Act, Congress authorized a study "on evidentiary protection for public transportation safety program information." The results of this study will help inform the need to develop statutory and regulatory protections for safety data.

Finally, FTA acknowledges that disciplinary actions for employee safety behaviors may be the subject of collective bargaining agreements throughout the country. Consequently, many transit agencies may need to work with their labor unions to establish employee safety reporting programs that fit the needs of management and a transit agency's operational and maintenance staff.

1.3. Safety Accountabilities and Responsibilities

Comments: Two commenters expressed concern over the requirement that each transit agency employ an Accountable Executive and either a Chief Safety Officer or an SMS Executive. These commenters argued that this requirement could be overly burdensome for rural, specialized, tribal, or small transit systems where the administrative staff could be limited to only a single executive. One commenter suggested that FTA add language in the final rule that requires small transit agencies to hire necessary safety personnel. Another commenter urged FTA to clarify whether the Chief Safety Officer must be a direct employee of the transit agency or whether the Chief Safety Officer may be a position held by a part-time employee.

A few commenters provided input on the role of the Chief Safety Officer and other SMS executives. One commenter urged FTA to clarify the role of the Accountable Executive in relation to the Chief Safety Officer and the transit agency's Chief Executive Officer. The commenter argued that the proposed rule would require the Accountable Executive to implement and maintain SMS, but that responsibility should belong to the Chief Safety Officer. One commenter suggested that FTA identify the link between the transit agency's Chief Safety Officer or SMS Executive and the operations and asset management departments, which is integral for a successful SMS.

Response: FTA appreciates the comments that it received regarding the Accountable Executive and the Chief Safety Officer (or SMS Executive), however, FTA is requiring that each transit agency identify individuals to fill these positions in its system. FTA clarified in the NPRM for this rule, and it is clarifying again here, that at many smaller transit agencies, roles and responsibilities may be more fluid and shared. Nevertheless, even in circumstances where responsibilities are either shared or delegated, each transit agency must identify a single primary decision-maker, or "Accountable Executive," who is ultimately

responsible for controlling the human and financial resources necessary to maintain and implement the transit agency's safety plan and transit asset management plan.

FTA acknowledges that small transit agencies may not have many executive staff, and therefore, FTA is allowing small Section 5307 recipients and subrecipients to identify a Chief Safety Officer, or "SMS Executive," that may serve other functions, such as operations, maintenance, and grant administration. For these transit agencies, the Chief Safety Officer may be a full-time employee of the transit system who has responsibility for duties other than safety, a part-time employee of the transit system, or a contracted employee. To illustrate, in a small bus agency, the general manager or operations manager may be the same individual as the Chief Safety Officer or SMS Executive.

Given the increased safety risks and complex operations associated with rail transit systems, FTA is requiring each rail transit agency to identify a single full-time Chief Safety Officer solely dedicated to safety. These Chief Safety Officers cannot have responsibilities other than safety. Similarly, FTA expects bus transit systems that operate more than 100 vehicles in peak revenue service to have a dedicated Chief Safety Officer, given the increased safety risks in those systems, although, this is not a requirement.

The role of the Accountable Executive in relation to the Chief Safety Officer and transit agency's CEO may vary from system to system. In many cases, as a transit agency's CEO or president or general manager, that individual likely will serve as the Accountable Executive. The Accountable Executive and the Chief Safety Officer are responsible for implementing and maintaining a transit agency's SMS, although at smaller transit agencies, this individual may be the same person. Ultimately, as noted above, the Accountable Executive must be the individual with the authority to dedicate the human and financial resources to maintain and implement a transit agency's safety plan and transit asset management plan. The Accountable Executive should oversee, and the Chief Safety Officer should have a strong working relationship with, the operations and asset management departments at a transit agency in order for SMS to be successful and effective.

2. Safety Risk Management

2.1. Safety Risk Management: General Comments

Comments: Two commenters supported the general inclusion of a safety risk management process in a safety plan as detailed in the NPRM, but expressed concern about the level of data collection and assessment activities required. The commenters recommended that FTA provide best practices and technical assistance to assist States and transit agencies with the preparation and execution of safety risk management processes. Similarly, a commenter expressed concerns over the data requirements of the proposed rule, noting that the commenter's organization employs hazard identification and tracking logs, but the organization now would have to incorporate into its SMS the data obtained through these systems. The commenter asked FTA to clarify if it would need to apply a safety risk management process for paratransit services, and this commenter asked where transit asset management fits into the safety risk management process.

While stating that safety risk management is an essential component of SMS, a commenter asserted that the proposed provisions at 49 CFR 673.25 do not specify that hazard analysis, risk assessment, or safety certification is required for new and major capital projects. Additionally, the commenter suggested that the rule fails to address configuration management or risk assessments to system alterations, and it does not require transit agencies to consider the results of asset condition assessments while performing safety hazard identification activities. This commenter also asserted that the proposed rule suggests, but would not require, that the results of asset condition assessments and SMS analysis be considered in the determination of whether an asset meets the SGR standards under FTA's Transit Asset Management rule at 49 CFR part 625.

One commenter asked what the phrases "new operations of service to the public" and "new operations or maintenance procedures" mean, as used in the section-by-section analysis of the proposed 49 CFR 673.25(a). Additionally, the commenter stated that the definition of safety risk management is unclear.

Two commenters encouraged FTA to allow flexibility in the hazard identification and risk management processes. One of these commenters stated that transit agencies should be encouraged to incorporate existing

hazard identification and risk management processes, and evaluate any new processes that may be more effective. The other commenter asked whether a transit agency must develop its own safety risk management process, or whether FTA will establish a nationwide model.

One commenter remarked that there are organizational pressures exerted on the safety staff and other personnel who participate in the safety risk management process to rate safety risk as low as possible. This commenter expressed a hope that with the full implementation of SMS in an organization, these types of organizational pressures would dissipate under a positive safety culture, but cautioned that the development of a positive safety culture could take five to six years, or even longer, in many organizations.

Response: FTA appreciates the support from the industry on the proposed safety risk management process. FTA intends this process to be flexible, and it avoided prescriptive requirements in this rule. For example, the level of data collection and assessment activities will vary from agency to agency. For some transit agencies, data collection and analysis processes could be conducted using computer software programs; at other transit agencies, especially at smaller transit agencies, the data collection and analysis processes could involve a transit agency's management team, staff, and bus operators meeting in a room and discussing the most significant safety hazards and evaluating any associated risks. FTA has produced a safety plan template with this final rule, and it should assist transit agencies with the development of Safety Risk Management processes and considerations. To be clear, this rule applies to any transit service not regulated by another Federal agency, including general public and ADA complementary paratransit service, so each transit service provider will need to develop a safety plan which includes a Safety Risk Management process.

Also, each transit agency must apply its Safety Risk Management processes—and all other SMS processes—to all elements of its operations, including the design, construction, and operation of major capital projects, New Starts and Small Starts projects, and any other extension or expansion of transit service. These requirements extend to any "new operations or maintenance procedures," meaning, any new operations or maintenance processes for railcars, buses, track, facilities, or other service or infrastructure undertaken by

a transit agency. FTA is providing a great deal of flexibility here and is allowing systems to determine the hazards and risks for which it will prioritize and mitigate from an individual agency level. A transit agency also must apply its Safety Risk Management process to its existing operations and maintenance procedures, and all other aspects of its system. Pursuant to 49 CFR 673.5, FTA is defining the term “Safety Risk Management” to mean “a process within a transit agency’s Public Transportation Agency Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.” FTA outlines the scope of necessary procedures within Safety Risk Management 49 CFR 673.25.

With respect to condition assessments, FTA expects each transit agency to consider the results of its condition assessments undertaken pursuant to its Transit Asset Management plan when it conducts SMS activities. For example, if an asset does not meet a transit agency’s state of good repair targets, then the transit agency may conduct Safety Risk Management activities and analysis to determine whether the asset presents a safety hazard and any safety risks. The transit agency could mitigate any risks and prioritize investments in its capital plan, accordingly. In an effort to provide flexibility and scalability, FTA defers to each transit agency to determine for itself its own processes and procedures for these activities.

FTA agrees with commenters who suggested that transit agencies should be encouraged to incorporate existing hazard identification and risk management processes, and utilize any new processes that may provide a more effective means of identifying and addressing safety hazards and safety risks. FTA is providing a safety plan template, technical assistance, and guidance to assist transit agencies with the development and implementation of Safety Risk Management, and it is not applying a one-size-fits-all model for the industry since safety hazards and safety risks vary significantly nationwide.

One of the goals of this rule is create stronger and more positive safety cultures within transit agencies, and FTA expects that a transit agency’s personnel would not feel pressure to rate all safety risks as low as possible. To the extent this sentiment exists within a transit agency, FTA anticipates that these types of practices would dissipate as a transit agency implements its SMS over time. FTA agrees that it may take a few months to even a few years to fully implement a mature SMS,

and FTA will provide guidance and technical assistance to the industry, as necessary.

2.2. Safety Hazard Identification and Analysis

Comments: One commenter suggested that FTA clarify the distinction between safety hazard analysis and safety risk evaluation. This commenter asserted that FTA should articulate this distinction because the concepts of evaluation and analysis are used interchangeably in common language. Another commenter asked FTA to define the term “consequence.”

A commenter encouraged FTA to establish standard processes for hazard identification and provided FTA with the hazard analytical methods and safety risk determination techniques adapted from the U.S. Department of Defense’s Military Standard 882 series of standards as a model for national standardization. Similarly, one commenter suggested that FTA specify that transit agencies must utilize data and information from oversight authorities, including FTA, when conducting hazard identification and risk analysis.

Response: In an effort to provide clarity to the Safety Risk Management process, FTA has amended the terminology used in the final rule. A transit agency must develop a Safety Risk Management process that is comprised of three steps: (1) Safety hazard identification, (2) safety risk assessment, and (3) safety risk mitigation. A transit agency must first identify potential hazards throughout its system, and then it must analyze these hazards to determine whether they present safety risks and safety consequences. After a transit agency identifies and analyzes potential hazards and consequences, the agency must undertake activities to assess and prioritize the safety risk associated with the potential consequences of the identified safety hazards, in accordance with 49 CFR 673.25(c). This process includes an evaluation wherein the transit agency assigns a level of probability and severity to the consequences, and then develops mitigation, as necessary and appropriate. FTA encourages transit agencies to utilize computer software programs for safety risk assessment and mitigation, although smaller transit operators may not need them.

FTA has taken efforts to avoid requiring prescriptive processes for hazard identification and risk analysis. FTA encourages transit agencies to review the U.S. Department of Defense’s Military Standard 882 (available at

<http://www.system-safety.org/Documents/MIL-STD-882E.pdf>) and utilize the hazard analytical methods and safety risk determination techniques, to the extent appropriate, but FTA is not mandating that transit agencies adopt any particular method of process for hazard identification and risk analysis—FTA is providing transit agencies with flexibility given the large range of sizes and types of operators nationwide. Finally, FTA will not specify the type of data and information that oversight authorities must share with transit agencies. Oversight authorities and transit agencies will need to make these decisions for themselves.

3. Safety Assurance

3.1. Safety Assurance: Safety Performance Monitoring and Measurement

Comments: Pursuant to the proposed provisions at 49 CFR 673.27(b)(2), each operator of a public transportation system would be required to monitor its operations to identify any potential safety hazards not previously identified through the Safety Risk Management process outlined in proposed 49 CFR 673.27. One commenter suggested that FTA delete this requirement because, presumably, transit agencies already would have established activities to identify potential safety hazards as part of their Safety Risk Management processes. One commenter suggested deleting the word “any” in the requirement because the word suggests that safety risk mitigations may not exist and/or the transit agency’s Safety Risk Management Process is broken. One commenter asked what type of hazards might not be identified in the Safety Risk Management process and asked whether the proposed requirement indicates a flaw in the Safety Risk Management process.

A couple of commenters requested clarification of the term “safety event” as used in proposed 49 CFR 673.27(b)(4). Specifically, a transit agency asked if a “safety event” in this provision is the same as “Event” as defined in the proposed rule. If the terms are the same, then the commenter asked whether a transit agency would have to develop a process for investigating “Accidents,” “Incidents,” and “Occurrences.” Additionally, the commenter asked to whom it should report a “safety event,” if anyone.

Two commenters asserted that this aspect of SMS appears one-size-fits-all, perhaps appropriate for a large agency operating a rail system but burdensome for small-urban, rural, specialized, and

tribal transit agencies. Several commenters recommended that FTA should establish minimal monitoring requirements for Section 5310, Section 5311, and small Section 5307 recipients. These requirements should be scalable and reflect the size and scope of these organizations.

Response: FTA appreciates the comments that it received regarding the Safety Assurance processes proposed in the NPRM. FTA agrees with the commenter who suggested that the requirement for transit agencies to continually monitor their operations to identify any potential safety hazards that it might not have captured when undertaking its Safety Risk Management process is a redundant requirement. FTA has eliminated this requirement for all transit operators in the final rule.

Under the proposed provisions for Safety Assurance at 49 CFR 673.27(b)(4), a transit agency would be required to establish a process to: “Investigate safety events to identify causal factors.” FTA proposed the following definition for the word, “event,” as used throughout the rule: “Accident, Incident, or Occurrence.” Therefore, each transit agency must develop procedures for investigating Accidents, Incidents, and Occurrences.

As discussed throughout this rulemaking, SMS is scalable, and FTA is providing transit agencies with great latitude and flexibility in developing procedures for investigating Events. For example, a small bus operator may develop a simple process for investigating the cause of a bus accident. The process may involve an on-site examination of the vehicle and the scene, a review of any video recordings from cameras mounted inside or outside of the bus, an interview with the bus operator and witnesses at the scene, and a toxicology test for the bus operator. A large rail operator may need to develop a more robust process for investigating the cause of a rail car accident, involving communications between safety and operating divisions of the transit agency, a shutdown of track operations, the deployment of designated safety inspectors and engineers, a comprehensive investigative report, etc. FTA is not prescribing any particular process for investigating safety events, but it notes that, as part of the larger safety management process, it is critical for transit agencies to identify and understand the causes of the Accidents, Incidents, and Occurrences in their systems so that the circumstances leading to the Events can be mitigated and prevented in the future.

FTA notes that its reporting requirements for safety events are outlined in the National Transit Database Reporting Manuals (see <https://www.transit.dot.gov/ntd>). Rail transit agencies should follow the notification and reporting requirements of the new SSO rule at 49 CFR part 674, including Appendix A to that rule. FTA is not requiring any reporting through this PTASP rule.

Finally, FTA agrees with the commenters who recommended that FTA should establish minimal monitoring requirements for smaller transit operators. Consequently, in today’s final rule, FTA has eliminated many of the Safety Assurance requirements for all small public transportation providers. Small public transportation providers only would need to develop procedures for safety performance monitoring and measurement; they would not need to develop procedures for management of change and continuous improvement. FTA believes that these revisions reduce the administrative, financial, and regulatory burdens for small transit providers significantly and help them transition to the new part 673. Rail fixed guideway public transportation systems, and FTA recipients and subrecipients that operate more than 100 vehicles in peak revenue service, would be required to develop safety plans that include all of the processes under Safety Assurance, namely, safety performance monitoring and measurement, management of change, and continuous improvement.

3.2. Safety Assurance: Management of Change

Comments: One commenter emphasized the importance of the proposed provisions at 49 CFR 673.27(c) involving the management of change and assessing changes that may introduce new hazards or impact a transit agency’s safety performance. This commenter suggested moving these requirements from the Safety Assurance provisions of the rule to the Safety Risk Management provisions of the rule, indicating that this relocation would elevate the importance of the requirement. One commenter requested clarification regarding which changes might impact a transit agency’s safety performance.

Another commenter encouraged FTA to include Management of Change within the SMS context, stating that safety within the scope of capital projects, acquisitions, procurements, and system changes only fully can be measured and verified through system safety engineering practices and

principles. This commenter argued that Management of Change within the context of SMS should include effective safety management procedures and processes to ensure that plans, policies, procedures, and practices effectively are measured and incorporated into an overall Management of Change program. One commenter expressed confusion over the provision for transit agencies to map updates of their safety plans to Safety Assurance instead of Safety Management Policy.

Response: The Safety Assurance element of SMS involves the continual monitoring of a transit agency’s safety performance. Safety Assurance activities serve as a check on the Safety Risk Management of a transit agency. The procedures are designed to ensure that safety risk mitigations are effective, to collect safety performance data that will help a transit agency predict future safety events and mitigate or eliminate them, and to analyze the potential safety risks of any new practices or procedures adopted by a transit agency. For these reasons, the “Management of Change” activities are housed within Safety Assurance. Each transit agency must establish a process for identifying and assessing changes that may introduce new hazards or impact the transit agency’s safety performance, and if the transit agency determines that a change may impact its safety performance, then the transit agency must evaluate the proposed change through its Safety Risk Management process. FTA disagrees with the commenter who suggested that moving these procedures from Safety Assurance to Safety Risk Management will elevate their importance—ultimately, these all are requirements for safety plans. FTA is providing each transit agency with great latitude and flexibility in developing these procedures and identifying the types of changes in its system that could impact safety performance. These changes may include changes to the design of a new public transportation system, service changes to the existing public transportation system, new operational or maintenance procedures, new organizational changes, and changes to internal standard operating procedures, such as changes to procurement or safety management processes. Each of the SMS procedures are equally important and are designed to work together as a system for managing safety risks in a transit agency.

In response to the commenter who encouraged FTA to include Management of Change within the SMS context, FTA makes clear that all of the activities within Safety Assurance—Safety Performance Monitoring,

Management of Change, and Continuous Improvement—are core components of SMS.

Finally, as noted above, under today's final rule small public transportation providers are not subject to the management of change requirements under Safety Assurance. These requirements only apply to rail fixed guideway public transportation systems and FTA recipients and subrecipients that operate more than one hundred vehicles in peak revenue service.

3.3. Safety Assurance: Continuous Improvement

Comments: One commenter sought clarification on the term “continuous improvement,” and another commenter recommended replacing the term “continuous” in proposed 49 CFR 673.27(d) with “continual” because “continuous” suggests no room to backslide. Additionally, the commenter suggested replacing the phrase, “If a transit agency identifies any deficiencies . . . ,” in proposed 49 CFR 673.27(d)(2) with the phrase, “When a transit agency . . . ,” to maintain consistency with the spirit of SMS.

One commenter stated that transit agencies have developed practices for a variety of safety oversight programs to assess and ensure continuous improvement of safety performance. The commenter encouraged FTA to allow transit agencies to continue the development and execution of effective system safety oversight functions, such as safety audits, observations, inspections, assessments, and data analysis, in order to strengthen this component and work towards fully achieving the SMS model.

Response: FTA notes the suggested changes to the verbiage in 49 CFR 673.27(d), but these suggestions are stylistic in nature, and offer no substantive amendments to the regulatory text.

FTA appreciates the commenter who noted the various safety oversight programs that transit agencies have developed over the years to manage safety risk. FTA is providing transit agencies with great latitude and flexibility in developing procedures for managing safety risk, and through the requirements outlined in today's rule, transit agencies should be developing procedures for conducting safety observations, inspections, assessments, and data analysis. FTA expects that the continual efforts tied to safety implementation will improve a transit system's safety performance by reducing, mitigating, and preventing safety outcomes.

Finally, as noted above, under today's final rule small public transportation providers are not subject to continuous improvement requirements under Safety Assurance. These requirements only apply to rail fixed guideway public transportation systems and FTA recipients and subrecipients that operate more than one hundred vehicles in peak revenue service.

4. Safety Promotion

Comments: Several commenters supported the establishment of a comprehensive safety training program, including refresher training, through the Safety Promotion element of SMS. Several commenters provided input on or asked questions about the types of employees who would be subject to training. A few commenters expressed concern with the phrase “directly responsible for the management of safety,” asserting that this language is vague and could be interpreted inconsistently. One commenter stated that FTA should replace this phrase with the terminology in FTA's proposed Public Transportation Safety Certification Training Program rule at 49 CFR 672.13, which requires transit agencies to “designate its personnel who are directly responsible for safety oversight and ensure that they comply with the applicable training requirements.” Another commenter expressed concern that this phrase could be misinterpreted by transit agencies to imply that only management or safety department employees would be subject to a comprehensive safety training program. The commenter suggested that safety training should include all levels of employees at a transit agency and recommended that FTA change this language to cover all employees and contractors. One commenter, however, stated that transit agencies should not be required to train contractors. Another commenter suggested that the terminology used to describe categories of employees is not consistent with the terminology used in 49 CFR part 674, without qualification. Another commenter stated the rule should specify that the training program should apply to the Accountable Executive.

Several commenters recommended that FTA not apply the training requirements to Section 5310 and Section 5311 operators, arguing that the development and implementation of a training program would be a financial and administrative burden. These commenters suggested that FTA should only mandate driver safety training for these operators. Another commenter indicated that live, face-to-face training

is preferred, but noted that this type of training is difficult to schedule and suggested that FTA provide online training and host workshops for the industry.

Several commenters requested additional clarification regarding the proposed training provisions. One commenter asked if FTA would “grandfather” in existing agency safety training programs. Another commenter asked what constitutes a “comprehensive safety training program” and whether FTA foresees any minimum requirements for this program. Another commenter asked whether FTA would provide further guidance on the specific types of safety training that it would require. One commenter believed that FTA's intent is to create a single, comprehensive training program, but references to training throughout the rule make that unclear. One commenter suggested that Safety Promotion could include certifications and evaluations, including a driver report card and/or a professional transit driver program.

Response: FTA appreciates the comments that it received supporting the safety training program. FTA emphasizes that this program is a statutory requirement under 49 U.S.C. 5329(d)(1)(G), which requires each operator of a public transportation system to establish “a comprehensive staff training program for the operations personnel and personnel directly responsible for safety” and includes “completion of a safety training program” and “continuing safety education and training.”

Given the unique operating environments and operating systems of each transit agency, FTA is providing great latitude and flexibility in complying with these provisions. Each transit agency should determine for themselves the classes of employees who are directly responsible for safety in that unique system. These employees could include vehicle operators, maintenance staff, dispatchers, the Chief Safety Officer, the Accountable Executive, and other agency staff and management who have direct responsibility for safety. The training program should cover all levels of employees and contractors, and FTA disagrees with the commenter who suggested that these provisions should not apply to contractors. In many systems, contractors have direct responsibility for safety, particularly in circumstances where a transit agency contracts for service, and it is critical that these individuals have training in safety.

In response to the commenters who recommended that FTA not apply the training requirements to Section 5310 and Section 5311 operators, FTA notes that it is deferring regulatory action regarding the applicability of this rule to these recipients and subrecipients until a later time. FTA is providing the industry with template safety plans and training courses, including online training courses, to assist small and large transit agencies with the development of training programs.

In response to the question regarding whether FTA would “grandfather” in existing safety training programs, FTA does not find a need to do so. Certainly, transit agencies can use existing safety training programs, or augment those programs, so long as they meet the requirements in this rule. FTA is not issuing any prescriptive requirements regarding these training programs because it does not believe that a one-size-fits all approach is appropriate. FTA agrees with the commenter who suggested that Safety Promotion could include certifications and evaluations, including a driver report card and/or a professional transit driver program, although FTA is not requiring this type of documentation. Ultimately, each transit agency must determine what is best for its system. Finally, FTA agrees with the commenters who stated that the language in this section could be “misinterpreted by transit agencies to imply that only management or safety department employees would be subject to a comprehensive safety training program” and does intend to create confusion between today’s rule and the Safety Certification Training Program rule. Therefore, FTA is updating the language in 49 U.S.C. 673.29 to state: “A transit agency must establish and implement a comprehensive safety training program for all agency employees and contractors directly responsible for safety in the agency’s public transportation system.”

5. Scalability of SMS

Comments: Many commenters requested guidance and technical assistance on how SMS could be scaled for small transit providers. One commenter urged FTA to keep guidance and templates at a high level so that they can be tailored to fit the unique needs and circumstances of the broad range of transit agencies subject to the PTASP rule.

Several commenters stated that an appropriately scaled safety plan is particularly important in a zero fatality environment, and FTA should clarify that the transit agency, or the State, is responsible for deciding how to scale

the plan. These commenters suggested that FTA revise 49 CFR 673.21 by replacing “appropriately scaled” with “appropriately scaled by the provider, or if applicable, the State.”

One commenter urged FTA to emphasize in the final rule that SMS provides flexibility and adaptability, and it urged FTA to avoid developing prescriptive and restrictive standards for transit agencies that may create major program gaps and limitations. Similarly, another commenter stated that FTA should allow for local choice in implementing SMS plans and programs, asserting that local flexibility would lead to greater and more comprehensive safety plans across individual systems.

Several commenters suggested that the rule lacks detail, and they indicated that FTA should add more detail to the various processes and procedures required, and that FTA should develop templates and associated technical assistance manuals where the requirements could be presented differently based on size, mode, and safety record. One commenter appreciated FTA’s efforts to create a rule that considers each transit agency’s uniqueness; however, this commenter concluded that the final rule should include identifiable and clearly stipulated requirements which can then be tailored to the individual characteristics of a transit agency.

Response: FTA appreciates the comments that it received regarding the need for technical assistance, guidance, and templates for safety plans. Concurrent with this final rule, FTA is issuing a safety plan template for the industry. FTA is not requiring transit agencies to use the template, but rather, FTA is releasing it as a guide to assist States and transit agencies with the development of their safety plans. Ultimately, each operator of a public transportation system must decide for itself the processes and procedures within the SMS framework that are most appropriate for its unique operating environment. A small bus operator may have simpler processes and procedures than a large rail operator. In situations where a State is drafting a safety plan on behalf of a small public transportation provider, the State and the small public transportation provider should work together and collaborate on the development of processes and procedures that are most appropriate for the operator.

FTA appreciates the comments noting the flexibility and adaptability of SMS, which FTA has emphasized throughout this rulemaking. FTA has taken great efforts to avoid the development of prescriptive and restrictive standards for

transit agencies that may create major program gaps and limitations.

Finally, FTA believes that the requirements in the rule satisfy the minimum requirements of the statute at 49 U.S.C. 5329(d), and if the requirements were any more prescriptive, transit agencies would not have the flexibility that they need to tailor their safety plans to their unique operating environments. If this were the case, the safety plans would be more difficult to develop, and ultimately, less useful in mitigating and preventing safety events. FTA believes that today’s rule strikes an appropriate balance in providing a general framework for safety plans and for allowing flexibility and scalability for each individual transit agency.

6. SMS and Safety Culture

Comments: A few commenters emphasized the need for communication between management and agency staff, and they noted the need for a healthy safety culture. One commenter supported the requirement that transit agencies use SMS principles to help achieve a high level of safety, and noted that, to achieve a high level of safety, management at transit agencies must listen to and incorporate the input from their frontline workers and their unions who have daily, firsthand experiences and in-depth knowledge of the transit systems. One commenter acknowledged that training and communication are key components of an effective SMS, but also noted that listening to employees, seeking their feedback, and ensuring a positive culture of safety in their work are also important components of SMS. Another commenter stated that local unions may present administrative challenges in adopting a positive and healthy safety culture.

Response: FTA appreciates the comments that it received regarding the need for a positive and healthy safety culture, and each of the requirements of this rule is designed to help ensure a positive safety culture at each transit agency. FTA wholeheartedly agrees that communication between management and staff, including labor unions, is critical in achieving a positive and healthy safety environment and in reducing safety events. One of the key requirements in today’s rule is an employee reporting program, which will allow the frontline staff who have in-depth knowledge of the transit system to report unsafe conditions to management without fear of reprisal. FTA believes that these programs will help support a positive safety culture within transit organizations.

J. Safety Plan Documentation and Recordkeeping

1. Safety Plan Documentation

Comments: Two commenters recommended that transit agencies should keep their safety plan documents for more than three years. One of these commenters recommended that transit agencies be required to retain documentation for a minimum of fifteen years, or at least five triennial review cycles. Another commenter asserted that the data contained in the safety plan documentation would be valuable in determining historical trends in a transit agency's safety performance over time, so extending the minimum retention period would allow for more robust historical assessments.

Response: FTA recognizes the value associated with having access to years of data to assist with assessing historical trends. However, such a requirement must be balanced against the costs associated with maintaining such data over an extended timeframe as suggested by the commenter. With that in mind, FTA believes its proposal that transit agencies maintain documents required by this part for a minimum of three years is reasonable relative to cost and effort, and also aligns well with the three year period for Triennial Reviews and State Management Reviews. This requirement would not bar those transit agencies desiring to maintain documents beyond three years from doing so, and FTA would encourage this practice. Accordingly, the proposed three year minimum requirement is included in the final rule.

2. Safety Plan Records

Comments: Several commenters asked which records should be maintained related to training. One commenter asserted that employee training records under the Public Transportation Safety Certification Training Program are already stored in FTA's training portal. Another commenter stated that its agency maintains a Learning Management System to schedule and track training, and this commenter questioned whether this existing system is sufficient or whether the agency will need to keep additional records. One commenter urged FTA to require transit agencies to maintain additional records beyond what is required in the proposed rule.

One commenter requested clarification on whether the requirements to keep training records apply to locally operated transit systems. One commenter stated that it will maintain records on the SMS

requirements for transit agencies that utilize a safety plan drafted by a State.

Response: FTA notes that the training required under the Public Transportation Safety Certification Training Program at 49 CFR part 672 is required of those who are "directly responsible for safety oversight" of the public transit system. FTA has developed a web portal to maintain the training records for those subject to the requirements of that rule. Today's final PTASP rule requires the development of a comprehensive staff training program for operations personnel and personnel who are "directly responsible for safety." Thus, there are two different types of safety training requirements, applicable to different employees of a transit system.

The requirements of today's final rule include the completion of a safety training program and continuing safety education and training. Such training may or may not also include training requirements in accordance with the Public Transportation Safety Certification Training Program Rule at 49 CFR part 672. FTA emphasizes that each transit agency will have discretion and flexibility with regard to the requirements of the safety training program under this part. FTA encourages transit agencies to maintain training records to the maximum extent practicable, but in today's final rule, FTA is not requiring transit agencies to maintain these records and it has removed Section 673.33 "Safety Plan Records" in its entirety for all transit agencies. Specifically, transit agencies are not required to maintain records of safety risk mitigations, results from safety performance assessments, and employee training. FTA believes that this revision from the NPRM to the final rule responds to the industry's concerns regarding recordkeeping and it significantly will reduce the administrative and financial burdens for all transit operators.

3. Other Comments on Documentation and Recordkeeping

Commenters: Numerous commenters stated that transit agencies need data protection for the information in their safety plans. The commenters argued that SMS, by its nature, requires full and open review, evaluation, and prioritization of risk, and the possibility that these safety reviews could be released through the Freedom of Information Act (FOIA), State sunshine laws, or obtained through judicial proceedings serve as a barrier to well-documented and robust self-examination. The commenters encouraged FTA to state its intent to

protect agency analyses to the full extent possible and pursue full authority to exempt safety analyses from discovery and use in judicial proceedings. One commenter suggested that FTA incorporate a confidentiality provision into the rule similar to the provisions in the old SSO rule at 49 CFR part 659.

One commenter suggested that the rule should acknowledge disclosure laws differ between States and that the rule should be written so that transit agencies are not required to disclose records to plaintiffs or allegedly injured parties if a State law does not require them to do so.

Response: When FTA first promulgated its SSO rule in 1995, FTA recognized that rail transit agencies often face litigation arising from accidents, and that the release of accident investigation reports can compromise both the defense of litigation and the ability of agencies to obtain comprehensive, confidential analyses of accidents. Thus, the former SSO rule at 49 CFR 659.11 provided that a state "may withhold an investigation report that may have been prepared or adopted by the oversight agency from being admitted as evidence or used in a civil action for damages." Courts are left to determine whether to admit investigation reports into evidence for litigation, in accordance with the relevant State law and the courts' rules of evidence.

Unlike NTSB accident reports, which cannot be admitted into evidence or used in civil litigation in a suit for damages arising from an accident, there is no such protection for data under FTA's safety rules (see 49 U.S.C. 1154(b) regarding NTSB investigations). Rather, States may enact statutes regarding the admissibility into evidence of accident investigation reports or safety data and analysis conducted in compliance with FTA requirements. FTA emphasizes that any protections must be based on State, not Federal, law and rules of evidence.

With regard to safety records in the possession of FTA, FTA will maintain the confidentiality of accident investigations and incident reports to the maximum extent permitted under Federal law, including the various exemptions under FOIA. Documents submitted to FTA are subject to FOIA and are generally releasable to the public upon request. However, unlike other Federal safety regulatory agencies such as FRA and FAA, Congress has yet to provide FTA with statutory authority to otherwise exempt safety-related information from disclosure. Section 3021 of the FAST Act authorized FTA to undertake a study to determine

whether data protection is necessary. FTA notes that its confidential treatment of information would not preempt State law; therefore, transit agencies still would be required to comply with their State's laws regarding the treatment of such information and should exercise their use of this provision accordingly.

4. Database Systems

Comments: One commenter expressed concern over integrating existing database systems and requested clarification from FTA on how to do so. The commenter urged FTA to clarify which data categories FTA expects to add to existing databases to capture information, and provide additional information on how it will support additional data management systems that agencies will need to acquire as a result of the rule.

Response: Each transit agency will have to determine for itself how it will integrate databases. FTA supports the use of data management systems if a transit agency determines that these systems are necessary to manage safety risks. However, FTA does not foresee transit agencies having to integrate or create new databases, necessarily, in order to comply with the requirements of 49 CFR part 673.

5. Staffing and Resources as a Result of Documentation and Recordkeeping

Comments: Two commenters expressed concern that the documentation and recordkeeping requirements in the proposed rule will produce a need for additional staffing and stretch already limited resources. The commenters stated that recordkeeping and documentation must be scalable.

Response: FTA understands that agencies will need to expend resources to comply with the documentation requirements. FTA has sought to minimize the rule's paperwork burdens and agrees that such requirements for documentation and recordkeeping must be scalable. To this end, FTA has eliminated many of its proposed recordkeeping requirements in their entirety. Specifically, transit agencies are not required to maintain records of safety risk mitigations, results from safety performance assessments, and employee training. FTA believes that this revision from the NPRM to the final rule responds to the industry's concerns regarding recordkeeping and it significantly will reduce the administrative and financial burdens for all transit operators. FTA reiterates that service providers within the public transportation industry can vary greatly

based on size, complexity, and operating characteristics. Transit agencies need safety processes, activities, and tools that scale to the size, complexity, and uniqueness of their systems, and SMS provides such an approach. Therefore, FTA believes that the documentation that is kept for a smaller bus agency may be less voluminous and less complex than those of large rail or multi-modal transit agencies. Moreover, FTA is issuing a safety plan template concurrent with the issuance of this final rule. This template will reduce the burden on transit agencies in developing the documentation necessary (that is, the safety plan) to comply with this rule.

K. Funding

Comments: Several commenters asserted that the proposed rule results in additional costs relating to, among other provisions, reviews, training, software or software upgrades, and the scalability and implementation of SMS. The commenters expressed concern that these additional costs may impact their limited available resources and expressed concern that no additional resources would be provided to support the costs of achieving compliance. Several commenters remarked that this rulemaking seems like an unfunded mandate. These commenters also asked whether there would be additional Federal resources provided to implement the new safety plans. Another commenter asserted that costs related to oversight responsibilities should be eligible for reimbursement by States.

Response: FTA recognizes there are costs associated with implementing the requirements of this rule; however, this rule is a requirement of 49 U.S.C. 5329(d). FTA recognizes the need for increased investments in transit, but Congress determines the specific levels of funding available to FTA recipients. To this extent, FTA disagrees with those commenters who suggested that these requirements are an unfunded mandate. States and operators of public transportation systems may use Federal funding provided through the existing Section 5303, Section 5304, Section 5307, Section 5309, Section 5310, Section 5337, and Section 5339 programs to comply with the requirements in this rule, that is, developing and implementing their safety plans. Costs related to oversight by SSOAs are eligible for Federal reimbursement through the State Safety Oversight Grant Program created by 49 U.S.C. 5329.

In an effort to further reduce the administrative, financial, and regulatory

burdens on recipients, FTA will provide technical assistance in the form of templates and guidance documents to assist with the development of safety plans. FTA also is providing training courses to assist the industry with compliance with this rule. FTA has removed Section 673.33 "Safety Plan Records" from the final rule in response to comments from the industry and to reduce costs for individual transit systems. FTA is deferring action regarding the applicability of this rule to the smaller recipients and subrecipients that only receive Section 5310 and/or Section 5311 funds so that it can evaluate additional information and safety data to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

L. Staffing

Comments: Several commenters expressed concerns about the limited staff of many transit agencies and asserted that compliance with the proposed rule, notably the administrative requirements, would require agencies to hire more staff, including contractors or expert consultants, thus increasing costs. One commenter expressed that medium-sized transit agencies may have difficulty absorbing the costs that may be necessary to hire more than one individual without additional funding. One commenter expressed concern that placing increasing requirements on State Department of Transportation staff could create unintended consequences, such as a reduction in work quality or causing staff to forego other critical work.

Response: FTA understands the concerns expressed by some commenters about the staffing resources needed to comply with the rule. Irrespective of the Federal funding stream, FTA continues to believe the scalability and flexibility in safety plan development will not unduly burden any particular transit agency. Given the scalability of SMS, transit agencies may have to reorganize existing staffing resources instead of hiring additional ones. Moreover, to reduce staffing burdens on transit agencies and States, FTA is issuing a safety plan template concurrent with this final rule. In accordance with 49 U.S.C. 5329(d), FTA also is requiring that States draft and certify plans on behalf of small public transportation providers which will further reduce the burden on smaller agencies. FTA is deferring action regarding the applicability of this rule to smaller recipients and subrecipients that only receive Section 5310 and/or

Section 5311 funds so that it can evaluate additional information and safety data to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

M. Enforcement and Oversight

1. Triennial Reviews and State Management Reviews

Comments: A few commenters preferred FTA's review of safety plans as part of the existing Triennial Review and State Management Review oversight processes, rather than annual reviews. One commenter asked FTA to provide more clarity on the State Management Review process. One commenter suggested that FTA could utilize findings from these oversight reviews for purposes of informing the transit industry on safety trends and best practices.

A few commenters expressed concern that FTA may conduct oversight and enforcement of this rule outside of the traditional Triennial Review and State Management Review processes, but FTA did not explain how this additional oversight may impact transit agencies and SSOAs. The commenters recommended that FTA issue guidance explaining this additional oversight so that States, SSOAs, and transit agencies can effectively anticipate and respond to this process, and so that FTA may administer it consistently nationwide. Commenters suggested that FTA should detail procedures for additional reviews or audits outside the normal review schedule, including an advanced notice process and an identification of roles for the SSOAs.

One commenter asked whether and to what extent reviewers could reject performance targets during the Triennial Review process. Another commenter asked about the consequences of a transit agency's failure to meet its safety goals.

Response: As a preliminary matter, pursuant to the statutory provisions of 49 U.S.C. 5329(d)(1)(D), each operator of a public transportation system is required to conduct an annual review and update of its safety plan. This annual review and update is a process to be undertaken by each transit agency independent of the triennial oversight process conducted by FTA. FTA will issue future guidance on any changes to the Triennial Review and State Management Review processes, including the role of an SSOA, to the extent necessary. FTA will not use the National Public Transportation Safety Plan to inform the industry how it will

conduct the Triennial Review or State Management Review processes.

FTA will conduct additional oversight and enforcement of this rule outside of the Triennial Review and State Management Review processes as necessary and appropriate. FTA notes that its new Public Transportation Safety Program rule at 49 CFR part 670 outlines its authority to conduct investigations, inspections, audits, and examinations on transit systems. FTA will make oversight and enforcement determinations on a case-by-case basis.

Finally, FTA Triennial and State Management reviewers will not "reject" a transit agency's safety performance targets; however, they will ensure that each transit agency has identified safety performance targets based on the safety performance measures established in the National Public Transportation Safety Plan. To the extent that a transit agency does not meet its safety goals, then using its safety plan as guide, the transit agency must determine for itself which efforts it must undertake to do so.

2. State Oversight

Comments: One commenter stated that a State may reasonably be required to provide oversight in drafting a safety plan, but for some States with multiple responsibilities and multiple recipients and subrecipients of Section 5310 and Section 5311 funds, the additional responsibility of oversight of small Section 5307 operators could be daunting. One commenter remarked that incorporating oversight of public transit systems into the existing SSO program would require additional trained personnel.

Response: As discussed above, FTA is not requiring States to provide oversight of safety plans. States only are required to draft and certify the safety plans on behalf of small Section 5307 operators (unless the operator decides to draft and certify its own safety plan). FTA is responsible for providing oversight and enforcement of all safety plans, and it will utilize the existing Triennial Review and State Management Review processes to do so (with the exception of SSOAs, which have primary safety oversight and enforcement responsibility over rail transit systems). To ease the burden on States, FTA is issuing a safety plan template with this final rule. Also, as discussed above, there is no Federal legal authority for an SSOA to provide safety oversight of a bus system, and this rule does not contemplate an SSOA taking on that role.

3. Other Comments

Comments: One commenter encouraged FTA to provide standard thresholds that it would use to determine the need for a safety audit, this way, FTA would not appear to be arbitrary or inconsistent. This commenter also recommended that FTA provide each transit agency with the opportunity to answer questions and provide additional information to assist safety oversight reviewers.

One commenter asked if FTA would analyze the public's role in collisions rather than concentrating its oversight on transit agencies, arguing that, without addressing the public's interaction with the transit system, transit agencies may risk Federal funding if they do not meet their safety performance targets. Additionally, the commenter asked if FTA would have funding available for purposes of education (internal and external to include educating the public on safety), engineering (highway and vehicle designs), and enforcement if a transit agency fails to meet its safety performance targets.

Response: Through MAP-21 and the FAST Act, Congress provided FTA with significant authority to conduct oversight, inspections, investigations, audits, examinations, and testing, as well as enforcement actions. (49 U.S.C. 5329(f)–(g)). FTA has issued a new regulation at 49 CFR part 670 entitled the "Public Transportation Safety Program" rule. FTA directs readers to that rulemaking for issues related to safety audits conducted by FTA.

FTA has identified NTD reporting thresholds for an "Incident," and those thresholds can be found in Appendix A to FTA's new SSO rule at 49 CFR part 674 (<https://www.gpo.gov/fdsys/pkg/FR-2016-03-16/pdf/2016-05489.pdf>). These thresholds do not limit FTA's authority to conduct a safety audit in the case of an Incident.

FTA notes that the statutory framework of 49 U.S.C. 5329(d) authorizes FTA to regulate operators of public transportation systems, not the riding public. Nevertheless, through the SMS framework, each transit operator is required to develop processes and procedures for addressing safety risks in all aspects of their systems, and therefore, they must consider the public's role and interaction with their systems when identifying hazards and evaluating risks.

Finally, as discussed throughout this final rule, FTA does not have control over its annual funding levels and appropriations. However, FTA supports the use of Federal funding for purposes

of education, engineering, and enforcement activities, and these types of activities may fall within the scope of eligibility for various funding programs under 49 U.S.C. Chapter 53.

N. NTD Reporting

Comments: One commenter recommended that FTA continue collecting additional safety reporting data through existing programs such as the NTD, which is currently used by transit agencies to report safety incidents.

Another commenter remarked that 49 CFR part 673 does not discuss reporting to FTA through NTD. Additionally, the commenter asked if FTA intends to substantially change the NTD reporting requirements upon the effective date of the proposed PTASP rule.

Response: During this rulemaking, FTA issued a “Notice of Request for Comments on Updates to National Transit Database Safety Information Collection” (<https://www.gpo.gov/fdsys/pkg/FR-2014-08-21/pdf/2014-19787.pdf>). FTA issued a “Supplemental Notice and Response to Comments on National Transit Database” (<https://www.gpo.gov/fdsys/pkg/FR-2015-11-18/pdf/2015-29384.pdf>). FTA issued final reporting requirements on July 26, 2016, and they are available here: <https://www.gpo.gov/fdsys/pkg/FR-2016-07-26/pdf/2016-17075.pdf>. Through today’s final rule, FTA is not requiring any reporting of any information to any entity.

O. Security

Comments: Several commenters expressed concerns that the proposed rule did not address security, including terrorism, trespassing, vandalism, assaults, robberies, and cyber threats on transit systems. One commenter suggested that FTA address security and safety of the general public in this rule.

One commenter stated that the TSA is unable to establish cybersecurity requirements for transit control systems due to lack of funding and expertise. This commenter warned that the U.S. Department of Transportation’s focus on transportation safety must include an emphasis on transportation control system security to guarantee the safety of associated transportation systems.

One commenter stated that FTA should provide direction regarding security and terrorism preparedness, noting that these preparations should be coordinated with TSA.

Response: As a preliminary matter, TSA has the prerogative and responsibility for all rulemakings on security in public transportation. Specifically, under the Implementing

the Recommendations of the 9/11 Commission Act of 2007 (Pub. L. 110–53), the September 2004 Memorandum of Agreement between DOT and DHS, and the September 2005 modal annex between FTA and TSA, DHS is tasked with the responsibility for carrying out a national strategy for public transportation security to minimize security threats and to maximize the ability of public transportation agencies to mitigate damage from terrorist attacks and other major incidents. While this legislation and these agreements do not preclude transit agencies from implementing measures securing their assets, FTA is not requiring agencies to do so through this final rule. FTA recognizes, of course, that some of the steps that a transit agency takes to ensure the personal safety and security of its riders and employees will overlap with steps it takes to secure its system from a terrorist attack; for example, the steps an agency takes may be part of a threat and vulnerability assessment. FTA notes that a transit agency’s expenses for safety and security will continue to be eligible for Federal reimbursement under 49 U.S.C. Chapter 53.

P. SSPP–PTASP Crosswalk

Comments: Although not a part of the PTASP NPRM, several commenters provided input on FTA’s “Crosswalk Matrix: 49 CFR part 659.19 System Safety Program Plan Requirements with Proposed Requirements for Public Transportation Agency Safety Plans,” which it uploaded onto the docket for this rule. FTA intended this document to provide additional guidance to rail transit systems as to how the 21 elements of an SSPP would fit within the new regulatory requirements for a PTASP.

Several commenters expressed concerns that the crosswalk lumps some SSPP elements into a few categories for PTASPs, and these commenters asserted that the six most complicated SSPP elements are listed under multiple pillars of SMS. A few commenters asserted that some of the 21 elements of SSPPs fit into other pillars of SMS. One commenter encouraged FTA to work with rail transit systems to better align this matrix and promote a better understanding of SMS. One commenter suggested that performance targets should be listed under Safety Assurance, rather than Safety Management Policy. Another commenter provided several detailed suggestions for revised mapping of the SSPP elements with SMS.

Response: FTA agrees that the new PTASP places the former elements of

SSPPs into fewer categories, and this is a result of a new statutory framework under 49 U.S.C. 5329. The statutory provisions of 49 U.S.C. 5329(d) provide specific requirements for PTASPs, and through the design of the new PTASP rule, FTA’s intent is to ensure that rail transit systems will not become less safe than they were under the former SSO rule at 49 CFR part 659. Additional, more comprehensive guidance regarding the relationship between SSPPs and PTASPs is forthcoming, and FTA will post that guidance on its website (see <https://www.transit.dot.gov/regulations-and-guidance/safety/transit-safety-oversight-tso>).

FTA agrees that some of the SSPP elements may be listed under multiple elements of SMS, but FTA believes that this mapping most appropriately connects the PTASP requirements to former SSPP elements. FTA disagrees that safety performance targets should be included under Safety Assurance, rather than Safety Management Policy because safety performance targets guide the safety management decisions, investment decisions, and policy decisions of a transit agency, all critical tenets of Safety Management Policy. Notwithstanding this connection between the former SSPPs and PTASPs, FTA only is requiring transit agencies to set safety performance targets as part of the “General Requirements” section of this final rule (49 CFR 673.11(a)(3)); to avoid redundancy, FTA is not also establishing this requirement in the “Safety Management Policy” section, although, transit agencies may include safety performance targets in their Safety Management Policies if they so choose.

Q. Safety Performance Measures

Comments: Several commenters urged FTA to revise the performance measures proposed in the National Public Transportation Safety Plan. Multiple commenters urged FTA to delete the proposed “reliability” performance criterion for the following reasons: Transit agencies currently do not report reliability data to NTD; the reliability performance measure is redundant of the TAM rule; reliability is a maintenance-related measure, not a safety measure; reliability is not easily quantified; and reliability could vary considerably between transit agencies.

One commenter sought further guidance regarding FTA’s four proposed safety performance measures. This commenter suggested that without additional detail, transit agencies would not be able to determine the standards by which FTA and SSOAs would measure and evaluate the

appropriateness of the safety performance targets established by the agencies.

Response: FTA appreciates the comments that it received regarding safety performance measures; however, FTA notes that today's rule does not establish safety performance measures—FTA's National Public Transportation Safety Plan establishes the measures. FTA is addressing comments regarding the safety performance measures in the notice and comment process for the National Public Transportation Safety Plan.

R. Technical Assistance and Guidance

Comments: Numerous commenters supported FTA's proposal to issue a safety plan template and to provide technical assistance to industry on the development and implementation of safety plans, particularly to address the scalability of SMS to different transit modes and system sizes.

Some commenters stated that FTA should allow transit agencies to attach an appendix to the safety plan template, which would allow a State to avoid drafting multiple unique plans and capture a few unique issues. Several commenters stated that FTA clearly should allow a State to draft a template statewide safety plan or a series of individual safety plans tailored for each unique transit agency. One commenter stated that a transit agency should have the ability to tailor guidance and templates to its own needs, as long as it satisfies the substantive requirements of the final PTASP rule. Another commenter stated that it was looking forward to receiving implementation and gap analysis checklists.

Several commenters noted that there is no mandated timeframe for when FTA will provide technical assistance tools and urged FTA to provide them in a timely manner. Several commenters urged FTA to make PTASP templates available in advance of any implementation deadline; some commenters urged FTA to make PTASP templates available concurrently with this final rule. One commenter suggested that, if FTA is unable to provide PTASP templates on the day that the final rule is published, then FTA should change the implementation deadline to be one year from the date that FTA issues PTASP templates. Another commenter stated that FTA should refrain from issuing a final rule until FTA develops guidance and PTASP templates. One commenter recommended that FTA provide technical assistance tools to States upon request.

Several commenters requested other forms of technical assistance, including an FTA-sponsored website featuring national-level safety performance measurement data, online training, safety workshops, examples of industry best practices, and lessons learned in implementing SMS.

Response: FTA appreciates the support from commenters regarding its development of a safety plan template and other guidance and technical assistance. FTA recognizes the administrative and financial burdens that this rule may impose on the industry, and FTA intends to reduce these burdens through templates, guidance, and technical assistance. Ultimately, the safety plan template, guidance, and technical assistance will help reduce, mitigate, and eliminate hazards and risks and will help make public transportation safer. For these reasons, today, FTA is issuing a template for safety plans concurrent with the issuance of this rule. The safety plan template is generic, minimalistic, and addresses each of the requirements of today's final rule. States and transit agencies can tailor the template to meet the needs of the numerous unique operating environments across the nation.

FTA is providing deference to States in the development of plans on behalf of operators of public transportation. A State may draft a single statewide safety plan, it may draft a unique safety plan for each individual transit operator, it may develop a generic statewide safety plan with a more tailored appendix outlining various processes and procedures for each unique transit operator, or it may develop another method for complying with the rule, so long as the statewide plan or the individualized plans satisfy each of the elements of this rule and contain each of the required processes and procedures for SMS. Transit agencies are free to tailor guidance and templates to meet their own needs, so long as their safety plans satisfy the requirements of this rule. If a State drafts a statewide safety plan, then each individual operator that it covers should keep its plan on file, and the plan should include the relevant and unique information for that particular operator, such as the names of the Accountable Executive and Chief Safety Officer and the operator's safety performance targets.

FTA notes that it has been developing a website through which it has been providing technical assistance, including information related to safety performance, training, examples of industry best practices, and lessons

learned in implementing SMS. The website is located at the following link: <https://www.transit.dot.gov/regulations-and-guidance/safety/transit-safety-oversight-tso>. FTA has been uploading information onto this website, including guidance and other forms of technical assistance, as it becomes available. FTA encourages the transit industry to utilize the tools on this website with its development and implementation of successful safety practices, and it also encourages the industry to provide feedback on this website, as it evolves, through the "Contact Us" tool at the following link: <https://ftawebprod.fta.dot.gov/ContactUsTool/Public/NewRequest.aspx>.

Finally, as mentioned above, in an effort to assist the industry with meeting the requirements of this rule, FTA is making the effective date one year after its publication date. As a result, transit agencies will have a total of two years from the publication date to certify that they have safety plans meeting the requirements of 49 CFR part 673.

S. Coordination With Other Entities

Comments: Two commenters expressed concern with the potential for inconsistency and duplication between FTA and FRA safety regulations. One commenter urged FTA to coordinate its NTD with FRA's Accident/Incident Report Generator.NET (AIRGNET) to establish consistent terminology, reporting requirements, audit requirements, training requirements, and safety plan requirements.

One commenter recommended that FTA adopt safety standards and methodologies developed by the U.S. Department of Defense, including system safety analytical methods to assess hazards and consequences and system safety engineering principles and techniques to develop and design mitigation. Two commenters encouraged FTA to establish an advisory committee of transit operators to assist with the development of policies and procedures for smaller operators.

Response: FTA makes clear through today's rule that transit agencies that operate a rail fixed guideway public transportation system subject to regulation by FRA do not have to develop safety plans for that mode of service. 49 CFR 673.11(f). FTA does not intend to issue safety regulations that conflict or are inconsistent with FRA's safety regulations, and to that end, FTA has coordinated and will continue to coordinate with FRA on the development and implementation of this rule. FTA also has taken great efforts to ensure that terminology,

definitions, reporting requirements, training requirements, and regulatory enforcement efforts are consistent with other Federal safety and reporting regulations to the maximum extent possible.

FTA appreciates the suggestion that it should adopt safety standards and methodologies developed by the U.S. Department of Defense, including system safety analytical methods to assess hazards and consequences and system safety engineering principles and techniques to develop and design mitigations; FTA is adopting the SMS approach to addressing safety risk, which is consistent with the approach taken by other modes within the U.S. Department of Transportation.

Finally, as FTA develops and issues guidance and best practices for safety, FTA intends to consult with the transit industry, including the Transit Advisory Committee for Safety, to the maximum extent practicable.

T. Nexus Between the PTASP Rule and Other FTA Requirements

Comments: Numerous commenters suggested that FTA clarify the nexus between the PTASP rule and other related FTA requirements, specifically, the National Public Transportation Safety Plan, the SSO rule, the Safety Certification Training Program rule, the Bus Testing rule, and the Transit Asset Management rule. These commenters recommended that FTA clearly define the link between the PTASP rule and other FTA requirements, especially the Transit Asset Management rule, to be consistent to avoid conflicting regulations. One commenter recommended that, to foster a strong culture of safety, FTA should extend data protection to asset management analyses.

One commenter urged FTA to reinforce the link between the PTASP rule and the SSO rule, arguing that FTA should work to strengthen and streamline the mitigation, reporting, and notification processes.

Response: FTA appreciates the comments that it received regarding the connection between the PTASP rule and other related FTA regulations. With respect to the National Public Transportation Safety Plan, FTA emphasizes that the Plan establishes safety performance measures to which each operator of a public transportation system must set performance targets in their safety plans, as required in the PTASP rule.

In the SSO rule, FTA requires each SSOA to develop a program standard which, among other things, establishes minimum safety standards for the safety

of all rail fixed guideway public transportation systems within its jurisdiction. FTA also requires each SSOA to approve the PTASP of every rail fixed guideway public transportation system within its jurisdiction. Each SSOA should review those safety plans to ensure that they are compliant with the PTASP rule, the National Public Transportation Safety Plan, and its own program standard. FTA notes that the PTASP rule does not add any additional notification or reporting requirements; those requirements are outlined in the SSO rule and the NTD Reporting Manuals.

In the Safety Certification Training Program rule, FTA establishes minimum training requirements for transit agency employees and contractors who are directly responsible for safety oversight of rail fixed guideway public transportation systems that receive FTA funds. In the PTASP rule, FTA requires each operator of a public transportation system to establish a comprehensive safety training program for all employees and contractors directly responsible for safety. In this section of the safety plan, a rail transit system also may include its training program for employees and contractors who are directly responsible for safety oversight.

In the Bus Testing rule, FTA requires recipients of FTA funds to test buses to ensure that they meet minimum performance standards, a scoring system, and a pass/fail threshold if they are using FTA funds to procure the buses. This rule exists separate and apart from the PTASP rule, but transit agencies may incorporate by reference into their safety plans any processes and procedures that they utilize for bus testing pursuant to the Bus Testing rule.

Finally, in the Transit Asset Management rule, FTA requires transit agencies to conduct asset inventories and then perform condition assessments on their assets. Those condition assessments should inform the SMS activities that a transit agency undertakes pursuant to its safety plan. To illustrate how these rules work together, if a transit agency finds through a condition assessment that an asset is not meeting its state of good repair standards, then the transit agency may conduct safety hazard identification and safety risk assessment analysis on that asset. The transit agency may mitigate any safety risks, as necessary, and it may reprioritize its capital plan in accordance with the FTA and FHWA Planning rule at 23 CFR part 450. FTA notes that it addressed any comments related to asset management in the final Transit Asset Management rule.

U. Americans With Disabilities Act Issues

Comments: One commenter stated that the proposed rule should not conflict with the Americans with Disabilities Act laws and regulations, and vice-versa. The commenter urged FTA to clarify how it will treat safety issues and incidents that may conflict with ADA requirements, remarking that agencies should not be subject to inspections, audits, examinations, investigations, directives, or other possible sanctions for adhering to ADA requirements.

Response: FTA does not intend the PTASP rule to conflict with the ADA and its implementing regulations, which are designed to prevent and eliminate discrimination. Nevertheless, to the extent that a transit agency is undertaking action to comply with the ADA—such as the construction of capital projects to make facilities ADA-compliant; the installation of accessible features on vehicles, platforms, and other transit facilities; and the provision of paratransit service—FTA expects that action to be undertaken safely and in accordance with this final rule and a transit agency's safety plan.

V. Other Comments on the Rule

Comments: One commenter suggested that all transit agencies should have safety plans only for maintenance and training, and that States should review safety plans only if a transit agency has safety issues. One commenter encouraged FTA to incorporate occupational health issues into the rule, focusing on driver assault, restroom breaks, and fatigue management. Another commenter encouraged FTA to join a "Journey to Safety Excellence—a cycle of improvement that aims for a continuous reduction of risk with a goal of zero harm," stating that integrating the principles of the "Journey to Safety Excellence" into workplace safety strategies can make a great difference in saving lives and preventing injuries. One commenter remarked that zero is the only goal that transit agencies should establish in their performance targets.

A commenter expressed disapproval for the guidelines FRA developed for rail vehicle crashworthiness, citing the Union International des Chemins de Fers (UIC), an international rail regulatory body, as an alternative example. This commenter urged FTA to use UIC as an example and expressed hope that FTA can serve as a role model for FRA.

Response: FTA disagrees with the commenter who suggested that all

transit agencies should have safety plans only for maintenance and training, and that States should review safety plans only if a transit agency has safety issues. FTA's authorizing statute at 49 U.S.C. 5329(d)(1)(B) mandates that each operator of a public transportation system establish "methods for identifying and evaluating safety risks throughout all elements of the public transportation system." This requirement would extend beyond mere maintenance and training, and in this final rule, FTA makes clear that transit agencies should address safety risks in all aspects of their systems, including maintenance, training, operations, construction of new facilities, rehabilitation of existing facilities, etc. Moreover, the statutory provisions of 49 U.S.C. 5329(d) require States to "draft" and "certify" safety plans on behalf of small Section 5307 operators. States cannot merely review plans if one of these transit agencies has "safety issues."

FTA appreciates the comment that it received regarding occupational health issues. To the extent that occupational health issues may be safety hazards and present safety risks, transit agencies should be addressing them through the SMS processes outlined in their safety plans. FTA will issue rules regarding operator assault in the future.

Regarding the establishment of "zero" as the only feasible goal in performance targets, FTA only is creating safety performance measures by which transit agencies are to set performance targets. FTA is not mandating any particular goal or target; it is deferring to each transit agency, MPO, and State and to set targets for each of their unique systems and geographical areas.

Finally, FTA notes that this final PTASP rule does not establish guidelines for rail vehicle crashworthiness. Please see the National Public Transportation Safety Plan, available on FTA's website, for more information regarding safety performance standards for public transportation vehicles.

W. Regulatory Impact Analyses

1. Costs

Comments: One commenter concluded that FTA underestimated the costs associated with the implementation of the rule. Similarly, a transit agency estimated cost increases to ensure compliance with the rule.

Several commenters provided specific cost estimates related to the proposed requirements. One commenter remarked that upgrading its surveillance system on buses would cost approximately \$2

million and that it installed driver barriers in 30 new buses, at a cost of \$4,202 per barrier, totaling \$126,060. This commenter stated that the additional recordkeeping could require the purchase of new equipment and tracking software and the hiring and training of additional staff, which would result in costs of at least \$4 million. This commenter asserted that staffing at the administrative level would cost about \$85,000 annually and contractor personnel would cost about \$75,000 annually. This commenter asserted that training for administrative staff would cost about \$30,000 per person, and training for contractor personnel would cost about \$10,000 per person. One commenter estimated that it would cost a State \$200,000 annually to adequately perform any oversight responsibilities. One commenter estimated that its initial investment could reach at least \$1 million for a risk management information system, training, and personnel. One commenter stated that it could not estimate the cost of coordination with MPOs on the establishment of performance targets.

Response: FTA appreciates the comments on the costs of the proposed rule. It is a challenge to develop cost estimates for the rule that can be representative of any one agency given the differences in agency size, modes, location, and level of maturity of safety programs. The regulatory analysis acknowledges that mitigation costs of identified risks are not included in the estimated cost of the proposed rule. The cost of onboard surveillance systems and driver barriers are mitigation costs. Typically, a transit agency makes these types of investment decisions with the understanding that there will be benefits of the mitigation that exceed the costs of the mitigation. Today's rule does not recommend any specific mitigation, and does not require agencies to implement mitigations that have greater costs than benefits.

The annual personnel costs of recordkeeping cited by the commenter are considerably higher than the estimated cost in the proposed rule. FTA's cost estimate for this particular type of agency is \$20,000 for staff; \$15,000 for information technology; and \$4,000 for training, excluding travel costs. FTA cannot estimate costs for specific agencies, since FTA does not know how these costs would vary by size within each category. The larger the agency, the greater the amount of data and records that need to be maintained, with the possibility of significant economies of scale for certain recordkeeping tasks, but increased complexity in others, possibly requiring

more sophisticated systems than those of the smaller agencies. It is possible that a large transit agency may need one additional full time staff and a contractor (at a total cost of \$160,000 per year) to maintain records. Most likely, these individuals would be performing other duties. It also is possible that the initial set up costs may be higher for those who may not have the expertise in this area. FTA does not anticipate that these costs will be continual. Therefore, while FTA accepts that the cost estimates in the NPRM may be low for some agencies, FTA does not believe that the costs would be as high as suggested by the commenter and continuous into the future.

The commenter's estimated cost of \$200,000 for "oversight" is significantly higher than FTA's estimated total State cost estimate of \$18,000. FTA emphasizes it is not requiring States to conduct safety oversight through this rule; FTA is only requiring States to draft and certify safety plans on behalf of particular operators of public transportation systems. Moreover, with today's rule, FTA is providing a safety plan template which significantly will reduce costs to States and operators, particularly for the smaller operators. Therefore, FTA believes that the commenter overestimated the costs significantly.

The commenter's \$1 million estimate for a risk management information system and associated staff may not be unreasonable. FTA estimates annual costs in the range of \$15,000 to \$20,000 for information technology systems for rail transit agencies and for large bus operators that receive Section 5307 funds. FTA estimates additional staff costs for risk assessment and assurance activities of approximately \$60,000 per year for large Section 5307 operators. These costs would total \$1 million over a span of thirteen years, at which time information technology systems may need to be updated. It is possible that the costs would be higher during the initial years and significantly reduced in subsequent years. Also, it is possible that the information technology system will be used for multiple tasks, some of which may not be related to this rule.

2. Benefits

Comments: One commenter questioned what benefit, if any, would be achieved from the rule if FTA is unable to provide evidence to show that the implementation of the rule would increase safety and reduce transit incidents. The commenter asserted that it seems unreasonable to require an "economically significant" expenditure of limited transit agency funds when

funds should be used for state of good repair and transit asset management needs. Another commenter concluded that FTA is premature in estimating economic benefits through the Regulatory Impact Analysis before this rulemaking is effective and implemented.

One commenter stated that a positive return on investment (ROI) may not be possible without adequate resources, and this commenter asserted that the NPRM does not specify whether an ROI would exceed a break-even point. The commenter asked to review actual results of implementing SMS to help justify the anticipated level of investment, suggesting that SMS should be piloted in a few transit agencies before being implemented nationally.

Response: As discussed in other sections of this rule and as discussed in more detail below, today's regulatory provisions are required by statute under 49 U.S.C. 5329(d), and FTA is implementing SMS in the least prescriptive way possible.

Safety Management Policy is the foundation of the organization's SMS. The safety management policy statement clearly states the organization's safety objectives and sets forth the policies, procedures, and organizational structures necessary to accomplish the safety objectives. It clearly delineates management and employee responsibilities for safety throughout the organization. It also ensures that management is actively engaged in the oversight of the organization's safety performance by requiring regular review of the safety policy by a designated Accountable Executive (general manager, president, or other person with similar authority). Within the context of the Public Transportation Agency Safety Plan, an organization's safety objectives will be articulated through the setting of performance targets based on, at a minimum, the safety performance measures established in the National Public Transportation Safety Plan. See 49 U.S.C. 5329(d)(1)(E).

Pursuant to the statutory requirements of 49 U.S.C. 5329(d)(1)(B) and (C), each agency's Public Transportation Agency Safety Plan must include "methods for identifying and evaluating safety risks throughout all elements of the public transportation system," and "strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions." Each of these requirements is consistent with the second component of SMS—Safety Risk Management—which requires the development of processes and activities to help the organization better identify

hazards associated with its operational systems. Once identified, a transit agency must evaluate the safety risk associated with the potential consequences of these hazards, and then institute mitigations, as necessary, to control the consequences or minimize the safety risk.

The statutory requirements of 49 U.S.C. 5329(d)(1)(B), (C), and (D)—"methods for identifying and evaluating safety risks throughout all elements of the public transportation system," "strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions," and "a process and timeline for conducting an annual review and update of the safety plan"—encompass the requirements of the third component of SMS: Safety Assurance. Safety Assurance requires an organization to monitor its safety performance, and it is designed to ensure that the organization meets or exceeds its safety objectives through the collection, analysis, and assessment of data. Through regular reviews and updates of its safety plan, a transit agency would evaluate changes to its operations that might introduce new safety risks. If a transit agency identifies safety risks through its safety performance assessments, then it must take action to correct any safety deficiencies. All of these efforts are intended to minimize the exposure of the public, personnel, and property to safety hazards and unsafe conditions. To minimize administrative, financial, and regulatory burdens under Safety Assurance, FTA has reduced requirements for small public transportation providers and has developed a minimal set of Safety Assurance provisions under 49 CFR 673.27.

The fourth component of SMS—Safety Promotion—involves the training, awareness, and communication that support safety. The training aspect of SMS is consistent with the statutory requirement of 49 U.S.C. 5329(d)(1)(G) for a comprehensive staff training program for operations personnel and personnel directly responsible for safety.

FTA is intending to implement 49 U.S.C. 5329(d) in the least prescriptive way possible by designing minimalistic regulatory requirements that mirror the relevant statutory provisions. By utilizing SMS in the regulatory framework, transit operators of varying sizes, complexities, and operating characteristics can build safety plans that are flexible and scalable to meet their unique safety needs. Through its scalability, SMS helps reduce the costs and burdens associated with developing

and implementing safety plans. Also, as noted above, FTA eliminated several significant Safety Assurance requirements for small public transportation providers in this final rule.

While FTA is unable to provide definitive evidence that the implementation of this rule would increase safety by reducing incidence of safety events, FTA fully anticipates that safety benefits will be realized if this rule is implemented. By adopting a systematic approach to safety through the development of the safety plan and the practice of SMS, transit agencies are expected to reduce the risk and probability of safety incidents. FTA expects that a proactive approach to managing safety risks is more effective than a reactive approach. The SMS approach to safety, which involves collecting data, predicting and mitigating future safety events, training, accountability, and open communication will reduce safety events and improve safety outcomes in the future. Indeed, state of good repair investments could prevent and mitigate future safety events.

FTA currently is conducting an SMS pilot program at a large multi-modal transit agency and is planning to implement two additional pilot programs for bus agencies to better understand how a transit agency would implement SMS. The results of these pilot programs will help inform FTA's efforts to provide guidance to the industry on SMS implementation. FTA notes that the benefits of SMS implementation may take years to be realized, and in turn, taking time for the benefits of SMS to be fully estimated and quantified.

In light of various public comments, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds. FTA is deferring action pending further evaluation of additional information and safety data related to these operators to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

Six years after the compliance date for this rule, FTA plans to prepare a report evaluating the benefits and effectiveness of the regulatory framework provided by this rule. In this report, FTA plans to utilize the results of the pilot program and information gathered from oversight reviews, which will include an evaluation of the flexibility and scalability of the SMS framework in developing and implementing safety

plans. The results in this report will be made available for public comment to help inform any future amendments that may be needed to the regulatory framework that improves the PTASP process and furthers the goal of public transportation safety.

3. Regulatory Flexibility Act

Comments: Several commenters provided input on the rule's impact to small entities. Several commenters asserted that small to medium sized transit agencies face budget constraints and expressed concern that these agencies may need to hire additional staff to comply with the rule or reduce transit service.

Several commenters expressed concern that FTA crafted the NPRM with only rail transit systems in mind. One commenter stated that the excellent safety record of rural transit systems warrants a limited approach to Federal safety regulation regarding rural bus systems, which would enable operators to focus scarce resources on safely delivering transit services, not on regulatory compliance. The commenter warned that if FTA does not tailor the rule to small transit systems, then many small bus operators would have to shift funds and personnel from the actual delivery of service to compliance with safety rules. The commenter asserted that MAP-21 reduced the portion of Section 5311 funds available for program administration from 15 percent to 10 percent. The commenter noted that, in Senate Report 3638, the Senate Committee on Banking, Housing, and Urban Affairs indicated its intent that FTA take a "measured approach," and not a "one size fits all" approach, to safety.

One commenter stated that FTA's Regulatory Flexibility Act analysis is somewhat misleading, particularly where tribal governments are concerned. Due to the modest amount of funding available to tribes, the commenter concluded that the cost associated with developing a safety plan for tribal governments is much higher than FTA's estimate of 0.5 to 1.5 percent; the commenter asserted that the costs are closer to 5.5 to 15.5 percent.

Response: FTA has taken significant efforts to reduce the burden on small transit agencies. For small Section 5307 operators, FTA is requiring States to draft and certify their safety plans. FTA designed the requirements of today's rule, particularly the SMS requirements, to be scalable, flexible, and not prescriptive for small transit operators. Moreover, FTA developed a safety plan template for small operators to assist them with the development of their

plans. FTA is offering live and online training to small transit operators, and it is offering any technical assistance that might be needed. FTA notes that many small transit agencies already have processes and procedures in place that comply with the requirements of today's rule, and given the safety record of many smaller operators, significant mitigation may not be necessary. FTA emphasizes that the statutory requirements of 49 U.S.C. 5329 make the rule applicable to any operator of a public transportation system, and small operators are not excluded from the rule.

To accommodate small public transportation providers and to reduce their administrative, financial, and regulatory burdens, FTA made significant changes to its proposed regulatory framework in the NPRM. FTA eliminated a Safety Assurance requirement for all transit agencies to monitor their operations to identify hazards not identified through their Safety Risk Management processes. Also, FTA eliminated an entire section of recordkeeping requirements related to safety risk mitigation, safety performance assessments, and employee safety training. FTA further tailored the rule for small operators and reduced their requirements under Safety Assurance. Small public transportation providers only need to develop processes for safety performance monitoring and measurement; they do not need to develop processes for management of change and continuous improvement. Through the elimination of these requirements for small public transportation providers, and through this tailored approach, FTA believes that it has reduced their burdens significantly.

Finally, FTA notes that in light of various public comments, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds. FTA is deferring action pending further evaluation of information and safety data related to these operators to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

X. Tribal Issues

1. Applicability of the Rule to Tribes

Comments: Several commenters suggested that some tribes operate modest public transportation systems and receive Federal financial assistance through either the discretionary or formula tribal transit programs under 49

U.S.C. 5311. One commenter stated that some tribes receive funds as subrecipients of States under 49 U.S.C. 5311, and therefore, FTA should exclude those subrecipients from this rule. The commenter also requested FTA to clarify the applicability of this rule to tribes. Finally, this commenter recommends that FTA's final rule exempt tribes from the definition of "recipient" under the proposed provisions of 49 CFR 673.1 until FTA has undertaken additional consultation with tribes and develops a template safety plan.

Response: FTA appreciates the commenter who stated that tribes operate modest public transportation systems, and in response, FTA has designed this rule to be as flexible and scalable as possible for smaller operators. In light of various public comments, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds, including tribal transit operators. FTA is deferring action pending further evaluation of additional information and safety data related to these operators to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

FTA has undertaken consultation with tribes throughout this rulemaking, and these efforts are described in more detail below.

2. The State's Role in Tribal Safety Plans

Comments: A few commenters recommended that FTA require tribes to develop their own safety plans, even if they are a State's subrecipients under 49 U.S.C. 5311, unless a State voluntarily agrees to draft and certify a safety plan for a tribal subrecipient. Some commenters expressed concerns that a State's preparation of safety plans for tribes could interfere with tribal sovereignty. One commenter suggested that a State's interaction with a tribe in relation to a safety plan is unwarranted and inconsistent with the laws and treaties that govern the status and protections for tribes. The commenter asserted that the Tribal Transit Program funded under 49 U.S.C. 5311(c) is not a subset of the Section 5311 program; it is a separate and direct tribal program and the rules associated with its administration should be structured accordingly. Several commenters stated that there often are positive relationships between States and tribes, but FTA should not treat tribes as subcomponents of State transit systems given the independent status of tribes.

One commenter expressed concern that FTA would be less willing to provide technical assistance to tribes if States draft and certify their safety plans.

Response: FTA recognizes the administrative and financial burdens that this rule may impose upon smaller transit operators, such as tribes. In an effort to relieve this burden, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds, including tribal transit operators. FTA is deferring action pending further evaluation of information and safety data to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

3. Financial Impact on Tribes

Comments: Several commenters stated that the proposed rule would result in administrative costs to tribes, such as costs for additional staff time and resources. One commenter stated that, like many other smaller transit agencies, tribal transit managers may have many different roles and shared duties, so the requirement for an Accountable Executive may be problematic because the staff are not structured in the way the proposed rule seems to envision. The commenter said that compliance with the rule may require consultants or new staff to handle the extra reporting paperwork and separation of positions, which would be difficult with limited resources. This commenter recommended that FTA should incorporate the following language somewhere into its rule: “at agencies where such delineations exist between administrative positions.”

Several commenters noted that some tribes receive limited funding. One commenter stated that the average annual apportionment for tribal transit agencies is almost \$220,000 and the average annual discretionary award is about \$77,000, and some of 100 tribes participating in the Tribal Transit Program have apportionments as low as \$4,000 annually. Several commenters argued that, for a tribe whose only source of Federal funding for its Tribal Transit Program is a \$25,000 grant, the compliance costs associated with this rule (such as personnel time and the possible need for outside consultants) could easily consume the entire grant. The commenter stated that, although States divide more than \$8.6 billion in Federal transit grants for Federal Fiscal Year 2016, tribes receive only \$30 million under the Tribal Transit

Program and an extra \$5 million for the discretionary Tribal Transit Program under 49 U.S.C. 5311.

Response: FTA acknowledges that many smaller transit operators, including tribes, may experience substantial costs in complying with this rule. In light of the potential financial burden on smaller operators, including tribes, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds. FTA is deferring action pending further evaluation of information and safety data related to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

4. Tribal Consultation

Comments: Several commenters expressed concern regarding FTA’s consultation with tribes. Several commenters alleged that FTA conducted no consultation with tribes, including meetings, conference calls, or webinars. Several commenters suggested that FTA conduct additional consultation with tribes, particularly given their smaller sizes.

Several commenters disagreed with FTA’s preliminary determination that the rule would not have a substantial direct effect on tribes or impose substantial direct compliance costs on tribes, which is the criteria that would trigger tribal consultation under Executive Order 13175 and the U.S. Department of Transportation’s tribal consultation policy. One commenter stated that the rule would have direct effects on tribes by adding regulatory requirements on them, thus changing the relationship between tribes and the Federal government with respect to the inspection, investigation, audits, examinations, and testing of transit infrastructure and rolling stock. This commenter expressed concern that courts have emphasized the need for advance consultation with tribes on rulemaking efforts that may impact them, and cited *Wyoming v. Department of the Interior* in which the U.S. District Court for the District of Wyoming issued a preliminary injunction against Bureau of Land Management’s hydraulic fracturing regulations because the agency failed to adequately consult with tribes.

Another commenter stated that the promulgation of this rule may conflict with the Tribal Self-Governance Program created by the FAST Act, and asserted that the Tribal Self-Governance Program requires a negotiated rulemaking committee to develop rules

and regulations for all modes of funding and U.S. Department of Transportation programs, led by the U.S. Department of Transportation’s Deputy Assistant Secretary for Tribal Government Affairs.

One commenter suggested that, instead of requiring States to draft and certify safety plans on behalf of tribes, FTA should work with tribes to develop a model safety plan specifically for tribes.

Response: As a preliminary matter, FTA notes that it conducted extensive outreach with tribes throughout this rulemaking. Specifically, on February 12, 2016, FTA conducted public outreach for tribes and hosted a Tribal Technical Assistance Workshop wherein FTA presented its proposed rule and responded to numerous technical questions from tribes. FTA subsequently delivered the same presentation during a webinar series open to all members of the public on February 24, March 1, March 2, and March 3. On March 7, FTA delivered the same presentation at an outreach session hosted by the National Rural Transit Assistance Program, which also was open to all members of the public. During each of these public outreach sessions and the public webinar series, FTA received and responded to numerous technical questions regarding the NPRM. FTA recorded the presentations, including the question and answer sessions, and made available the following documents on the public docket for this rulemaking (Docket FTA–2015–0021): (1) FTA’s PowerPoint Presentation from the public outreach sessions and public webinar series (<https://www.regulations.gov/document?D=FTA-2015-0021-0012>); (2) a written transcript of FTA’s public webinar of March 1, 2016 (<https://www.regulations.gov/document?D=FTA-2015-0021-0010>); (3) a consolidated list of every Question and FTA Answer from the public outreach sessions and public webinar series (<https://www.regulations.gov/document?D=FTA-2015-0021-0041>); and (4) the results of polling questions from FTA’s public outreach sessions (<https://www.regulations.gov/document?D=FTA-2015-0021-0011>). FTA also uploaded onto YouTube an audiovisual recording of its webinar from March 1, 2016. The video is available at the following link: <https://www.youtube.com/watch?v=FBj5HRatwGA&feature=youtu.be>.

FTA also notes that, in advance of publishing an NPRM, FTA sought comment from the transit industry, including tribes, on a wide range of topics pertaining to safety and asset management through an ANPRM. In the

NPRM, FTA asked specific questions about how today's rule should apply to tribal recipients and subrecipients of Section 5311 funds.

In light of the comments that FTA received from tribes throughout the rulemaking process, FTA is deferring regulatory action regarding applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds, including tribal transit operators. FTA is deferring action pending further evaluation of additional information and safety data to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

IV. Section-by-Section Analysis

Subpart A—General

673.1 Applicability

This section explains that this regulation applies to all States, local governmental authorities, and other operators of public transportation systems that are recipients and subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53. At this time, the regulation does not apply to an operator of a public transportation system that only receives Federal financial assistance under 49 U.S.C. 5310, 49 U.S.C. 5311, or both 49 U.S.C. 5310 and 49 U.S.C. 5311. In accordance with 49 U.S.C. 5329(d), a Public Transportation Agency Safety Plan is required of all operators of public transportation systems, whereas in the past, a "system safety program plan" only was required of rail fixed guideway public transportation systems, in accordance with the former regulatory provisions at 49 CFR 659.17. Each operator of a public transportation system must comply with today's rule within one calendar year of this rule's effective date.

673.3 Policy

This section explains that FTA is utilizing the principles and methods of SMS as the basis for this regulation and all other regulations and policies FTA has issued and will issue under the authority of 49 U.S.C. 5329, to the extent practicable and consistent with law and other applicable requirements (such as those for regulatory review). FTA's standards for SMS are flexible and scalable and may be tailored to the size and operating complexity of the transit operator.

673.5 Definitions

This section sets forth a number of definitions, many of which are based on the principles and methods of SMS.

Most notably, readers should refer to "Accountable Executive," "Hazard," "Operator of a Public Transportation System," "Safety Assurance," "Safety Management System," "Safety Management Policy," "Safety Promotion," "Safety Risk Management," and "Small Public Transportation Provider." In recent years, SMS has emerged as the preferable practice for enhancing safety in all modes of transportation, and the Secretary of Transportation instructed each of the Department's operating administrations to develop rules, plans, and programs to apply SMS to their grant recipients and regulated communities. Many of the SMS-related definitions in § 673.5 are similar to those set forth in FAA's SMS regulation, entitled "Safety Management Systems for Domestic, Flag, and Supplemental Operations Certificate Holders," 14 CFR parts 5 and 119, 80 FR 1308, Jan. 8, 2015.

Additionally, a set of frequently asked questions about SMS are available on FTA's website at http://www.fta.dot.gov/tso_15177.html. FTA is incorporating these same definitions for SMS in its related rulemakings for the Public Transportation Safety Program and the Public Transportation Safety Certification Training Program, and FTA is incorporating these same definitions into the National Public Transportation Safety Plan.

FTA includes a definition for "Accountable Executive" that identifies the person at a transit agency that has the responsibility and accountability for the implementation of SMS and control and direction of the Public Transportation Agency Safety Plan and the Transit Asset Management Plan. FTA includes definitions for "Safety Risk Management," "Risk," "Safety Assurance," and "Safety Management Policy," all key terms to the implementation of SMS.

This section also defines a number of terms used repeatedly throughout the other safety programs authorized by 49 U.S.C. 5329. Some of these terms are included in FTA's new State Safety Oversight Rule at 49 CFR part 674, which was issued prior to today's final rule. FTA intends to have the same definitions for all terms utilized in its safety programs. Readers should refer, specifically, to the definitions of "Accident," "Event," "Hazard," "Incident," "Investigation," "Occurrence," "Transit Agency," and "Rail Transit Agency." FTA has updated its definitions of "Accountable Executive," "Safety Risk Assessment," "Safety Risk Management," and "Transit Asset Management Plan" to make them consistent with definitions

of these terms utilized in the SSO rule and the Transit Asset Management rule which were issued prior to today's final rule. FTA also added a definition of "Rail Fixed Guideway Public Transportation System," which it defined in its SSO rule.

Pursuant to 49 U.S.C. 5329(d)(3)(B), FTA must issue a rule that designates which 49 U.S.C. 5307 small public transportation providers may have States draft Public Transportation Agency Safety Plans on their behalf. This section defines "Small Public Transportation Provider" (in accordance with 49 U.S.C. 5329(d)(3)(B)) as "a recipient or subrecipient of Federal financial assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operate a rail fixed guideway public transportation system."

FTA includes definitions for the terms "National Public Transportation Safety Plan," "Transit Asset Management Plan," and "Equivalent Authority," all of which are consistent with the use of those terms in the statutes and FTA's related rulemakings on safety and transit asset management.

Subpart B—Public Transportation Agency Safety Plans

673.11 General Requirements

This section outlines the minimum elements to be included in a Public Transportation Agency Safety Plan. Pursuant to 49 U.S.C. 5329(d)(1), this section requires each operator of public transportation subject to this rule to develop and certify that it has a Public Transportation Agency Safety Plan consistent with this part. In accordance with 49 U.S.C. 5329(d)(3)(B), § 673.11(d) requires each State to draft the Public Transportation Agency Safety Plan for small transportation providers as defined in today's final rule. A State is not required to develop a Public Transportation Agency Safety Plan for a small public transportation provider if that agency notifies the State that it will develop its own plan.

In accordance with 49 U.S.C. 5329(d)(1)(A), § 673.11(a)(1) requires that each Public Transportation Agency Safety Plan, and any updates thereto, must be signed by the transit agency's designated Accountable Executive and approved by the transit agency's Board of Directors, or an Equivalent Authority. In today's final rule, the accountability for the contents of a Public Transportation Agency Safety Plan is formally elevated to the Accountable Executive and Board of Directors.

In accordance with 49 U.S.C. 5329(d)(1)(B), (C), (D), (E), (F), and (G), a transit agency must establish: Methods for identifying and evaluating safety risks throughout all elements of its public transportation system; strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions; a process and timeline for conducting an annual review and update of its safety plan; safety performance targets; a Chief Safety Officer who reports directly to the general manager, president, or equivalent officer; and a comprehensive staff training program for the operations personnel and personnel directly responsible for safety. These statutory requirements fit into the four key pillars of SMS: Safety Management Policy, Safety Risk Management, Safety Assurance, and Safety Promotion. Consequently, FTA is requiring each transit agency to develop and implement an SMS under § 673.11(a)(2); this SMS will satisfy the statutory requirements of 49 U.S.C. 5329(d)(1)(B), (C), (D), (E), (F), and (G). FTA recognizes that a Public Transportation Agency Safety Plan for a large, multi-modal, complex public transportation system most likely will be more complex than that of a very small bus operator. The scalability of SMS will allow transit agencies to develop safety plans that will meet the unique needs of their operating environments. FTA established a minimal set of Safety Assurance requirements for small public transportation providers to minimize their administrative, financial, and regulatory burdens.

In accordance with 49 U.S.C. 5329(d)(1)(E), § 673.11(a)(3) requires that each Public Transportation Agency Safety Plan must include safety performance targets based on the safety performance measures established by FTA in the National Public Transportation Safety Plan. In the National Public Transportation Safety Plan, FTA is adopting four initial safety performance measures: (1) Fatalities, (2) Injuries, (3) Safety Events, and (4) System Reliability. These safety performance measures are intended to reduce safety events, fatalities, and injuries. These measures are broad so that they will be relevant to all public transportation modes, and they are intended to focus transit agencies on the development of specific and measurable targets, as well as the actions each agency would implement to improve their own safety outcomes. Through the SMS process, FTA expects transit agencies to develop their own performance indicators and regularly

monitor the performance of their systems to ensure that they are meeting their targets and improving safety outcomes. FTA expects transit agencies to evaluate their safety performances and determine whether they should change their safety performance targets at least annually when the transit agencies are reviewing and updating their Public Transportation Agency Safety Plans. A State or transit agency must make its safety performance targets available to States and Metropolitan Planning Organizations (MPO) to aid States and MPOs in the selection of their own performance targets.

Pursuant to § 673.11(a)(4), each Public Transportation Agency Safety Plan must address any standards or requirements, as applicable, set forth in FTA's Public Transportation Safety Program and FTA's National Public Transportation Safety Plan.

In accordance with 49 U.S.C. 5329(d)(1)(D), § 673.11(a)(5) requires that each transit agency must establish a process and timeline for conducting an annual review and update of its Public Transportation Agency Safety Plan.

Pursuant to § 673.11(a)(6), each rail transit agency must include, or incorporate by reference, in its Public Transportation Agency Safety Plan an emergency preparedness and response plan. Each emergency preparedness and response plan should address, at a minimum: The assignment of employee responsibilities, as necessary and appropriate, during an emergency; the integration of responses to all hazards, as appropriate; and processes for coordination with Federal, State, regional, and local officials with roles and responsibilities for emergency preparedness and response in the transit agency's service area. FTA understands that a transit agency may have developed an emergency preparedness and response plan that addresses these minimum requirements in accordance with regulations from other Federal and State agencies. Historically, FTA has required rail fixed guideway public transportation systems to have emergency preparedness plans through the former State Safety Oversight rule at 49 CFR 659.19(k). FTA intends to require rail transit systems to continue to implement the twenty-one elements of their SSPPs as required under the former provisions of 49 CFR part 659; FTA has repackaged the elements of SSPPs into the four elements of SMS required in today's rule. FTA is establishing the requirement for emergency preparedness and response plans in today's rule under § 673.11(a)(6), and the elements of SMS

in Subpart C cover remaining requirements. FTA has developed a crosswalk between each of the twenty-one elements of system safety program plans and each of the elements of SMS. FTA added this crosswalk to the docket and made the crosswalk available on its website as a guidance document at <http://fta.dot.gov/tso.html>. Additional, more comprehensive guidance regarding the relationship between SSPPs and PTASPs is forthcoming, and FTA will post that guidance on its website (see <https://www.transit.dot.gov/regulations-and-guidance/safety/transit-safety-oversight-tso>).

FTA notes that there are safety models that include emergency preparedness as a key element. For example, FAA requires certain air carriers to have emergency preparedness plans. See 14 CFR 5.27. Additionally, FRA recently issued a final System Safety Program rule under 49 CFR part 270 which requires railroads to have emergency preparedness plans (see <http://www.fra.dot.gov/eLib/Details/L18294>). Recent safety-related events have demonstrated the need for emergency preparedness plans in improving safety outcomes nationally.

In addition to the above general requirements, FTA expects a transit agency to comply with all other applicable Federal, State, and local requirements, laws, regulations, and codes as they may relate to safety.

Pursuant to § 673.11(b), a transit agency may develop one Public Transportation Agency Safety Plan for all modes of transit service, or it may develop separate Public Transportation Agency Safety Plans for each mode of service not subject to safety regulation by another Federal entity. If a transit agency has a safety plan for its commuter rail service, passenger ferry service, or aviation service, then the transit agency may not use that plan for purposes of satisfying 49 CFR part 673; the transit agency must develop a separate Public Transportation Agency Safety Plan consistent with this part.

Pursuant to § 673.11(c), each transit agency must maintain its Public Transportation Agency Safety Plan in accordance with the recordkeeping requirements of Subpart D.

Pursuant to § 673.11(d), each State must draft and certify a Public Transportation Agency Safety Plan on behalf of any small public transportation provider located inside of that particular State. A State is not required to draft a Public Transportation Agency Safety Plan if a small public transportation provider notifies the State that it will draft its own plan. In either instance, the transit agency must

ultimately implement and carry out its safety plan.

If a State drafts and certifies a Public Transportation Agency Safety Plan on behalf of a transit agency, and the transit agency later opts to draft and certify its own Public Transportation Agency Safety Plan, then the transit agency must notify the State, and the transit agency would have one year from the date of the notification to draft and certify a Public Transportation Agency Safety Plan that is compliant with this part.

Pursuant to § 673.11(e), any rail fixed guideway public transportation system that had an SSPP, in accordance with the former SSO rule at 49 CFR part 659 as of October 1, 2012, may keep that plan in effect until one year after the effective date of this final rule.

Pursuant to § 673.11(f), agencies that operate passenger ferries regulated by USCG or rail fixed guideway public transportation service regulated by FRA are not required to develop safety plans for those modes of service.

673.13 Certification of Compliance

In accordance with 49 U.S.C. 5329(d)(1), § 673.13(a) provides that not later than one year after the effective date of the final rule, each transit agency must certify its compliance with the requirements of this part. For small public transportation providers, a State must certify compliance unless the provider opts to draft and certify its own safety plan. In those cases where a State certifies compliance for a small public transportation provider, this certification also must occur within one year after the effective date of this final rule.

In addition to certification, and consistent with the new SSO rule at 49 CFR part 674, each SSOA must review and approve each Public Transportation Agency Safety Plan for every rail transit system within its jurisdiction. In accordance with 49 U.S.C. 5329(e)(4)(iv), an SSOA must have the authority to review, approve, oversee, and enforce the implementation of the Public Transportation Agency Safety Plans of transit agencies operating rail fixed guideway public transportation systems.

Section 673.13(b) requires that each transit agency or State certify compliance with part 673 on an annual basis.

673.15 Coordination With Metropolitan, Statewide, and Non-Metropolitan Planning Processes

In accordance with 49 U.S.C. 5303(h)(2)(B) and 5304(d)(2)(B), each State and transit agency must make its

safety performance targets available to States and Metropolitan Planning Organizations to aid in the planning process. Section 673.15(b) requires, to the maximum extent practicable, a State or transit agency to coordinate with States and Metropolitan Planning Organizations in the selection of State and MPO safety performance targets.

Subpart C—Safety Management Systems

673.21 General Requirements

This section outlines the SMS elements that each transit agency must establish in its Public Transportation Agency Safety Plan. Under today's final, each transit agency must implement an SMS, and each transit agency should scale the SMS to the size, scope, and complexity of the transit agency's operations. Each transit agency must establish processes and procedures which include the four main pillars of SMS: (1) Safety Management Policy; (2) Safety Risk Management; (3) Safety Assurance; and (4) Safety Promotion. FTA expects that the scope and detail for each activity will vary based on the size and complexity of the system. FTA anticipates that activities, and documentation of those activities, for a small bus transit agency will be substantially less than those of a large multi-modal system. FTA has developed a minimal set of requirements under Safety Assurance for all small public transportation providers. To help clarify SMS development and implementation, FTA is issuing guidance and a safety plan template to the industry concurrent with today's final rule, and FTA designed these documents to accommodate the variance in transit system mode, size, and complexity.

673.23 Safety Management Policy

Pursuant to § 673.23(a), a transit agency must establish the organizational accountabilities and responsibilities necessary for implementing SMS and capture these under the first component of SMS, Safety Management Policy. The success of a transit agency's SMS is dependent upon the commitment of the entire organization and begins with the highest levels of transit agency management. The level of detail for organizational accountabilities and responsibilities should be commensurate with the size and complexity of the transit agency.

The Safety Management Policy statement must contain the transit agency's safety objectives. These objectives should include a broad description of the agency's overarching

safety goals, which would be based upon that agency's unique needs.

Pursuant to § 673.23(b), a transit agency must include in its Safety Management Policy statement a process that allows employees to report safety conditions to senior management. This process must provide protections for employees who report safety conditions to senior management and a description of behaviors that are unacceptable and that would not be exempt from disciplinary actions. These procedures are critical for ensuring safety. A reporting program allows employees who identify safety hazards and risks in the day-to-day duties to directly notify senior personnel, without fear of reprisal, so that the hazards and risks can be mitigated or eliminated. NTSB has emphasized the need for transit agencies to have non-punitive employee safety reporting programs,³ and this need was discussed at length in NTSB's Investigative Hearing on the WMATA Smoke and Electrical Arcing Incident in Washington, DC on June 23 and 24, 2015.⁴

Pursuant to § 673.23(c), the Safety Management Policy statement must be communicated throughout the transit agency, including the Board of Directors (or equivalent authority), and each transit agency must make its Safety Management Policy statement readily available to all of its employees and contractors.

Pursuant to § 673.23(d), each transit agency must establish its accountabilities, responsibilities, and organizational structure necessary to meet its safety objectives, particularly as they relate to the development and management of the transit agency's SMS. The level of detail in this section of the safety plan should be commensurate with the size and complexity of a transit agency's operations. At a minimum, a transit agency must identify an Accountable Executive, a Chief Safety Officer or SMS Executive, and agency leadership, executive management, and key staff who would be responsible for the implementation of a transit agency's safety plan.

³ NTSB issued Safety Recommendation R-10/02 for the WMATA Metrorail train collision accident on June 22, 2009, found at: <http://www.ntsb.gov/investigations/AccidentReports/Reports/RAR1002.pdf>. Through this report, NTSB recommends that "FTA facilitate the development of non-punitive safety reporting programs at all transit agencies [in order] to collect reports from employees in all divisions within their agencies."

⁴ See the NTSB's hearing materials at http://www.ntsb.gov/news/events/Pages/2015_WMATA_Washington_DC_IHG_Agenda.aspx. and <http://dms.ntsb.gov/pubdms/search/document.cfm?docID=432379&docketID=57383&mkey=90596>.

673.25 Safety Risk Management

Pursuant to § 673.25(a), each transit agency must establish and implement its process for managing safety risk, including the following three steps: (1) Safety hazard identification, (2) safety risk assessment, and (3) safety risk mitigation, for all elements of its public transportation system, including changes to its public transportation system that may impact safety performance. At a minimum, FTA expects each transit agency to apply its safety risk management process to its existing operations and maintenance procedures, the design of a new public transportation system and other capital projects, changes to its existing public transportation system, new operations of service to the public, new operations or maintenance procedures, organizational changes, and changes to operations or maintenance procedures. Additionally, FTA expects each transit agency to develop measures to ensure that safety principles, requirements, and representatives are included in the transit agency's procurement process.⁵

Pursuant to § 673.25(b)(1), each transit agency must establish a process for safety hazard identification, including the identification of the sources, both proactive and reactive, for identifying hazards and their associated consequences. Activities for hazard identification could include formalized processes where a transit agency identifies hazards throughout its entire system, logs them into a database, performs risk analyses, and identifies mitigation measures. These activities also could include safety focus groups, reviews of safety reporting trends, and for smaller bus systems, it could mean holding a meeting with a few bus drivers, discussing hazards on the system, deciding which ones pose the greatest risk, and then developing mitigation.

A transit agency must apply its process for safety hazard identification to all elements of its system, including but not limited to its operational activities, system expansions, and state of good repair activities. FTA encourages transit agencies to take into account bicycle and pedestrian safety concerns, along with other factors, as agencies are conducting Safety Risk Management.⁶ A transit agency should consider the results of its asset

condition assessments when performing safety hazard identification activities within its SMS. The results of the condition assessments, and subsequent SMS analysis, will inform a transit agency's determination as to whether an asset meets the state of good repair standards under 49 CFR part 625.

Pursuant to § 673.25(b)(2), each transit agency must include, as a source for safety hazard identification, data and information provided by an oversight authority and FTA.

Safety hazard identification activities should be commensurate with the size of the transit agency's operations. For example, the number of identified hazards for a small rural bus system may be less than the number of hazards identified for a large multi-modal system.

Pursuant to § 673.25(c), each transit agency must establish procedures for assessing and prioritizing safety risks related to the potential consequences of hazards identified and analyzed in § 673.25(b). Each transit agency must assess safety risks in terms of probability (the likelihood of the hazard producing the potential consequences) and severity (the damage, or the potential consequences of a hazard, that may be caused if the hazard is not eliminated or its consequences are not successfully mitigated).

Pursuant to § 673.25(d), each transit agency also must establish criteria for the development of safety risk mitigations that are necessary based on the results of the agency's safety risk assessments. For example, a transit agency may decide that the criteria for developing safety risk mitigations could be the identification of a safety risk, benefit-cost analysis, a system level change (such as the addition of new technology on a vehicle), a change to operational procedures, or the expansion of service. To further illustrate these examples, a transit agency may color code different levels of safety risk ("red" as high, "yellow" as medium, and "green" as minor) and develop different types of safety risk mitigations to correspond to those levels.

673.27 Safety Assurance

Pursuant to § 673.27(a), each transit agency must develop and implement a process for Safety Assurance. Rail fixed guideway public transportation systems and recipients and subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that operate more than one hundred vehicles in peak revenue service must develop processes for (1) safety performance monitoring and measurement, (2) management of

change, and (3) continuous improvement. Small public transportation providers only need to develop a process for safety performance monitoring and measurement. Each transit agency's safety assurance activities should be scaled to the size and complexity of its operations. Through these activities, each transit agency should accurately determine whether it is meeting its safety objectives and safety performance targets, as well as the extent to which it is effectively implementing its SMS. Each transit agency must conduct an annual review of the effectiveness of its safety risk mitigations.

Pursuant to § 673.27(b), each transit agency must identify the data and information that it will collect from its operations, maintenance, and public transportation services so that it may monitor the agency's safety performance as well as the effectiveness of its SMS. Each transit agency must monitor its operations and maintenance protocols and procedures, and any safety risk mitigations, to ensure that it is implementing them as planned.

Each transit agency must investigate safety events (as defined in this final rule) and any reports of non-compliance with applicable regulations, standards, and legal authority. Finally, each transit agency must continually monitor information reported to it through any internal safety reporting programs, including the employee safety reporting program.

Pursuant to § 673.27(c), rail fixed guideway public transportation systems and recipients and subrecipients that are subject to this rule and operate more than one hundred vehicles in peak revenue service must manage changes in their systems. These transit agencies must develop processes for identifying and assessing changes that may introduce new hazards or impact safety performance. If a transit agency determines that a change might impact safety, then the transit agency would need to evaluate the change using Safety Risk Management activities established under § 673.25. These changes would include changes to operations or maintenance procedures, changes to service, the design and construction of major capital projects (such as New Starts and Small Starts projects and associated certifications), organizational changes, and any other changes to a transit agency's system that may impact safety performance. Each rail transit agency should include a description of the safety certification process that it uses to ensure that safety concerns and hazards are adequately addressed prior to the initiation of passenger operations

⁵ See FTA's former State Safety Oversight rule at 49 CFR 659.19(u).

⁶ The United States Department of Transportation is administering a bicycle and pedestrian safety initiative, and FTA encourages transit agencies to consider that initiative when developing their safety plans (see <https://www.transportation.gov/safer-people-safer-streets>).

for News Starts and other major capital projects to extend, rehabilitate, or modify an existing system, or to replace vehicles and equipment.

Pursuant to § 673.27(d), rail fixed guideway public transportation systems and recipients and subrecipients that are subject to this rule and operate more than one hundred vehicles in peak revenue service must regularly assess their safety performance. If a transit agency identifies any deficiencies during a safety performance assessment, then it must develop and carry out, under the direction of the Accountable Executive, a plan to address the identified safety deficiencies. FTA expect each transit agency to conduct a safety performance assessment at least annually, and the safety performance assessment can be completed in conjunction with the annual review and update to its overall safety plan as required by 49 U.S.C. 5329(d)(1)(D) and 49 CFR 673.11(a)(5).

673.29 Safety Promotion

This section requires each transit agency to establish competencies and training for all agency employees directly responsible for safety, and to establish and maintain the means for communicating safety performance and SMS information. Pursuant to § 673.29(a), each transit agency must establish a comprehensive safety training program. Through the safety training program, each transit agency must require each employee, as applicable, to complete training to enable the individual to meet his or her role and responsibilities for safety, and to complete refresher training, as necessary, to stay current with the agency's safety practices and procedures.

Pursuant to § 673.29(b), each transit agency must ensure that all employees are aware of any policies, activities, and procedures that are related to their safety-related roles and responsibilities. Safety communications may include information on hazards and safety risks that are relevant to the employee's role and responsibilities; explain reasons that a transit agency introduces or changes policies, activities, or procedures; and explain to an employee when actions are taken in response to reports submitted by the employee through the employee safety reporting program. FTA expects that each transit agency would define the means and mechanisms for effective safety communication based on its organization, structure, and size of operations.

Subpart D—Safety Plan Documentation and Recordkeeping

673.31 Safety Plan Documentation

This section requires each transit agency to keep records of its documents that are developed in accordance with this part. FTA expects a transit agency to maintain documents that set forth its Public Transportation Agency Safety Plan, including those related to the implementation of its SMS such as the results from SMS processes and activities. For the purpose of reviews, investigations, audits, or other purposes, this section requires each transit agency to make these documents available to FTA, SSOAs in the case of rail transit systems, and other Federal agencies as appropriate. A transit agency must maintain these documents for a minimum of three years.

V. Regulatory Analyses and Notices

Executive Order 12866 (Regulatory Planning and Review), Executive Order 13563 (Improving Regulation and Regulatory Review), and USDOT Regulatory Policies and Procedures

Executive Orders 12866 and 13563 direct agencies to propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); tailor its regulations to impose the least burden on society; assess all costs and benefits of available regulatory alternatives; and, if regulation is necessary, to select regulatory approaches that maximizes net benefits—including potential economic, environmental, public health, and safety effects, distributive impacts, and equity. Executive Order 13563 also emphasizes the importance of harmonizing rules and promoting flexibility.

FTA drafted this final rule in accordance with the principles set forth in Executive Orders 12866 and 13563. FTA has determined that this final rule is a significant regulatory action due to significant public interest in the area of transit safety. However, this rule is not estimated to be “economically significant” within the meaning of Executive Order 12866.

As discussed in greater detail below, FTA was able to estimate some, but not all, of the rule's costs. FTA was able to estimate the costs for transit agencies to develop and implement Public Transportation Agency Safety Plans which are approximately \$41 million in the first year, and \$30 million in each subsequent year, with annualized costs of \$31 million discounted at 7 percent. These costs result from developing and

certifying safety plans, documenting the SMS approach, implementing SMS, and associated recordkeeping. FTA was not able to estimate the costs of actions that transit agencies would be required to take to mitigate risk as a result of implementing this rule, such as vehicle modifications, additional training, technology investments, or changes to operating procedures and practices.

FTA has placed in the docket a final Regulatory Impact Analysis (RIA) that analyzes the benefits and costs of the regulatory changes in accordance with Executive Orders 12866 and 13563, and United States Department of Transportation (USDOT) policy.

Through this final rule, FTA requires all operators of public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53 to develop and implement Public Transportation Safety Plans in accordance with 49 U.S.C. 5329, using the SMS approach. As discussed above, FTA is deferring regulatory action at this time regarding recipients of FTA financial assistance under 49 U.S.C. 5310 and/or 49 U.S.C. 5311.

SMS is a flexible, scalable approach to safety that has been widely adopted across multiple modes of transportation in both the public and private sectors and overlaps significantly with the requirements included in 49 U.S.C. 5329. It employs a systematic, data-driven approach in which risks to safety are identified, then controlled or mitigated to acceptable levels. SMS brings business-like methods and principles to safety, similar to the ways in which an organization manages its finances, through safety plans, with targets and performance indicators, and continuous monitoring of safety performance throughout an organization.

In addition to responding to the specific statutory mandate, this final rule responds to National Transportation Safety Board (NTSB) recommendations regarding an expansion of SMS to reduce the risks of transit crashes. From 2004 to 2016, NTSB reported on eleven transit accidents that, collectively, resulted in 16 fatalities, 386 injuries, and over \$30 million in property damages. Although transit systems have historically been among the safest means of surface transportation, the transit industry is facing increased pressures at a time when ridership has grown, infrastructure is aging, and large numbers of the workforce are retiring. During that same 2004–2016 time period, transit agencies reported over 290,000 incidents and other events,

more than 2,600 fatalities, and over 301,000 injuries to the NTD.

This RIA provides quantitative estimates of the expected compliance costs associated with the rule. Costs for transit agencies were estimated based on the staff labor hours, information technology systems, and travel costs associated with implementing the requirements of the proposed rule, with adjustments for agency size and for agencies' existing level of maturity with SMS approaches. FTA estimated three main cost areas: (1) Developing and certifying safety plans; (2) implementing and documenting the SMS approach; and (3) associated recordkeeping. Staff time was monetized using data on wage rates and benefits in the transit industry. Over the 20-year analysis period, total costs are estimated at \$324 million in present value (using a 7% discount rate), or the equivalent of \$31 million per year.

As previously noted, FTA was unable to estimate the cost of actions that agencies would take to mitigate or eliminate safety problems identified through implementation of their safety plans. FTA is unaware of information sources or methods to predict with sufficient confidence the number or type of safety problems agencies will identify through implementation of their safety plans, or the number, type, and cost of actions that agencies will take to address such problems. For similar reasons, FTA also is unable to quantify the rule's benefits. FTA sought information from the public through the NPRM for this rulemaking that would assist FTA with analyzing the benefits and costs of actions by agencies to mitigate or eliminate safety problems such as the number, types, benefits, and costs of such actions, but FTA did not receive adequate data from the public to assist with this effort.

FTA calculated potential safety benefits that could be realized by bus and rail modes if safety management practices outlined in the rule are followed to identify and implement investment strategies to reduce safety risk. FTA monetized benefits using

information on transit crash costs, including direct costs and USDOT-standard statistical values for fatality and injury prevention. Although many other sectors report reductions in safety incidents after adopting SMS, it is not possible to transfer that experience to the transit industry due to the differences in organizational structures and practices.

FTA was unable to quantify the rule's benefits. To estimate safety benefits, one would need information regarding the causes of safety events and the factors that may cause future events. This information is generally unavailable in the public transportation sector, given the infrequency and diversity of the type of safety events that occur. In addition, one would need information about the safety problems that agencies are likely to find through implementation of their safety plans and the actions agencies are likely to take to address those problems. Instead of quantifying benefits, FTA estimated the potential safety benefits if additional unquantified mitigation investments occur. The potential safety benefits are an estimate of the cost of bus and rail safety events over a future 20-year period. FTA extrapolated the estimate based on the cost of bus and rail incidents that occurred from 2010 to 2016, assuming no growth in the number of incidents in the future.

The benefits of SMS primarily will result from mitigating actions. As previously stated, FTA could not account for the benefits and costs of such actions in this analysis. FTA has not estimated the benefits of implementing SMS without mitigating actions, but expects such benefits are unlikely to be large. Estimated costs for the Public Transportation Agency Safety Plans include certain activities that likely will yield safety improvements, such as improved communication, identification of hazards, and greater employee awareness. It is plausible that these changes alone could produce reductions in safety events that surpass estimated costs.

Under the performance management framework established by MAP-21, States, MPOs, and transit providers must establish targets in key national performance areas to document expectations for future performance. Pursuant to 49 U.S.C. 5303(h)(2)(B)(ii) and 5304(d)(2)(B)(ii), States and MPOs must coordinate the selection of their performance targets, to the maximum extent practicable, with performance targets set by transit providers under 49 U.S.C. 5326 (transit asset management) and 49 U.S.C. 5329 (safety), to ensure consistency.

In the joint FTA and FHWA Planning Rule, both agencies indicate that their performance-related rules would implement the basic elements of a performance management framework, including the establishment of measures and associated target setting. Because the performance-related rules implement these elements and the difficulty in estimating costs of target setting associated with unknown measures, the joint FTA and FHWA Planning Rule did not assess these costs. Rather, FTA and FHWA proposed that the costs associated with target setting at every level would be captured in each agency's respective "performance management" rules. For example, in its second performance management rule NPRM, FHWA assumes that the incremental costs to States and MPOs for establishing performance targets reflect the incremental wage costs for an operations manager and a statistician to analyze performance-related data.

The RIA accompanying the joint FTA and FHWA Planning Rule captures the costs of the effort by States, MPOs, and transit providers to coordinate in the setting of State and MPO transit performance targets for state of good repair and safety. FTA believes that the cost to MPOs and States to set transit performance targets is included within the costs of coordination. FTA requested comments on this issue through this rulemaking, and it received none.

A summary of the potential benefits and costs of this rule is provided in Table 2 below.

TABLE 2—SUMMARY OF THE COSTS AND THE POTENTIAL BENEFITS IF ADDITIONAL UNQUANTIFIED MITIGATION INVESTMENTS OCCUR

	Current dollar value	7% Discounted value	3% Discounted value
Bus Events (20-Year Estimate)	\$78,698,984,508	\$38,413,831,624	\$56,680,780,091
Rail Events (20-Year Estimate)	45,019,196,393	21,974,360,164	32,423,838,587
Total Potential Benefits (20-Year Estimate)	123,718,180,901	60,388,191,787	89,104,618,678
Qualitative Benefits	<ul style="list-style-type: none"> • Reduced safety incidents with mitigation actions. • Reduced delays in operations. 		

TABLE 2—SUMMARY OF THE COSTS AND THE POTENTIAL BENEFITS IF ADDITIONAL UNQUANTIFIED MITIGATION INVESTMENTS OCCUR—Continued

	Current dollar value	7% Discounted value	3% Discounted value
Estimated Costs (20-Year Estimate)	602,485,710	323,732,747	450,749,898
Unquantified Costs	<ul style="list-style-type: none"> Investments associated with mitigating safety risks (such as additional training, vehicle modification, operational changes, maintenance, and information dissemination). 		
Estimated Cost (Annualized)		30,558,081	30,297,473

Executive Order 13771 (Reducing Regulation and Controlling Regulatory Costs)

Executive Order 13771 applies to any action considered “significant” under Executive Order 12866 that imposes total costs greater than zero. Actions subject to Executive Order 13771 must be offset by the elimination of existing costs associated with at least two prior regulations. This final rule is an action under Executive Order 13771 because it is considered a “significant regulatory action” under Executive Order 12866.

Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act (Pub. L. 96–354, 5 U.S.C. 601–612), FTA has evaluated the effects of this rule on small entities and has determined that this rule will not have a significant economic impact on a substantial number of small entities.

The rule will affect approximately 625 small entities, most of which are small government entities and small non-profit organizations that operate public transportation systems in small-urbanized areas. Compliance costs will vary according to agency size and complexity, the extent of current SMS practices, and the extent of current asset management practices. Costs are illustrated by an example calculation for a small operator (less than one hundred non-rail vehicles in maximum revenue service) of a public transportation system that receives Formula Grants for Urbanized Areas under 49 U.S.C. 5307, for which compliance costs are approximately \$20,600 per agency (this estimate excludes the cost of mitigating actions). For the sake of comparison, while transit agency operations budgets vary significantly, the average for small Section 5307 agencies is around \$6.3 million per year. Thus, the estimated costs of the rule are around 0.3% of agency budgets for small Section 5307 agencies. FTA is minimizing the costs for smaller operators of public transportation systems by requiring the States in which they are located to draft and certify Public Transportation Agency Safety Plans on their behalf,

unless the operator chooses to develop and certify its own plan. Additionally, to lower the costs for smaller operators of public transportation systems, FTA is adopting the SMS approach to safety, which is scalable for the specific needs of a particular transit agency. To further reduce the burdens of this final rule, FTA tailored it by eliminating a series of Safety Assurance requirements specifically for small public transportation providers. As discussed in other sections of this document, small public transportation providers only need to develop Safety Assurance procedures for performance monitoring and measurement; they would not need to develop Safety Assurances procedures for management of change and continuous improvement. FTA also eliminated certain Safety Assurance and recordkeeping requirements for all transit operators, including small public transportation providers, to minimize the rule’s costs. Concurrent with today’s final rule, FTA is issuing a safety plan template with instructions and considerations to assist transit agencies with the development of their plans and to help reduce the overall costs associated with that effort.

Overall, while the rule may affect a substantial number of small entities, these impacts would not be significant due to the low magnitude of the costs. Moreover, FTA has designed the rule to allow flexibility for small entities. FTA is providing additional analysis of the Regulatory Flexibility Act’s application to this rule in Regulatory Impact Analysis posted to the docket.

Unfunded Mandates Reform Act of 1995

This rule will not impose unfunded mandates as defined by the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, March 22, 1995, 109 Stat. 48; codified at 2 U.S.C. 1501 *et seq.*).

Pursuant to 2 U.S.C. 1501(8), one of the purposes of the Unfunded Mandates Reform Act is to consider “the effect of . . . Federal statutes and regulations that impose Federal intergovernmental mandates.” The term “Federal intergovernmental mandate” is defined

at 2 U.S.C. 658(5)(A)(i) to mean “any provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, except . . . a condition of Federal assistance.”

Given the fact that FTA’s authorizing statute at 49 U.S.C. 5329(d) makes the development and implementation of Public Transportation Agency Safety Plans a condition of FTA Federal financial assistance, and given that FTA is proposing to require transit agencies to annually certify that they have safety plans consistent with this rule as a condition of that Federal financial assistance, this rule will not impose unfunded mandates.

Executive Order 13132 (Federalism)

This final rule has been analyzed in accordance with the principles and criteria established by Executive Order 13132, and FTA has determined that this rule will not have sufficient Federalism implications to warrant the preparation of a Federalism assessment. FTA has also determined that this rule will not preempt any State law or State regulation or affect the States’ abilities to discharge traditional State governmental functions.

Executive Order 12372 (Intergovernmental Review)

The regulations effectuating Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this rule.

Paperwork Reduction Act (PRA)

In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. *et seq.*) (PRA), and the White House Office of Management and Budget’s (OMB) implementing regulation at 5 CFR 1320.8(d), FTA is seeking approval from OMB for the Information Collection Request abstracted below. FTA acknowledges that this rule entails the collection of information to implement the Public Transportation Agency Safety Plan requirements of 49 U.S.C. 5329(d). Specifically, an operator of a public

transportation system must do the following: (1) Develop and certify a Public Transportation Agency Safety Plan; (2) implement and document the SMS approach; and (3) associated recordkeeping. As discussed above, FTA is deferring regulatory action at this time regarding recipients of FTA financial assistance under 49 U.S.C. 5310 and/or 49 U.S.C. 5311.

FTA sought public comments to evaluate whether the proposed collection of information is necessary for the proper performance of FTA's functions, including whether the information will have practical utility; whether the estimation of the burden of the proposed information collection is accurate, including the validity of the methodologies and assumptions used; ways in which the quality, utility, and clarity of the information can be enhanced; and whether the burden can be minimized, including through the use of automated collection techniques or other forms of information technology. FTA received no public comments on these issues.

Readers should note that the information collection would be specific to each operator of a public transportation system in an effort to facilitate and record the operator's safety responsibilities and activities. The paperwork burden for each operator

of a public transportation system will be proportionate to the size and complexity of its operations. For example, an operator of a rail fixed guideway system and a bus system may need to generate more documentation than an operator of a bus system only.

Also, readers should note that FTA has required rail fixed guideway public transportation systems to develop System Safety Program Plans and System Security Plans in accordance with the former regulatory requirements at 49 CFR part 659. FTA has collected information from States and State Safety Oversight Agencies regarding these plans, and FTA anticipates that operators of rail fixed guideway systems will utilize some of this documentation for purposes of developing Public Transportation Agency Safety Plans. Please see FTA's currently approved collection, 2132-0558, available at <http://www.reginfo.gov/public/do/PRAMain>.

Type of Collection: Operators of public transportation systems.

Type of Review: OMB Clearance. New Information Collection Request.

Summary of the Collection: The information collection includes (1) The development and certification of a Public Transportation Agency Safety Plan; (2) the implementation and documentation of the SMS approach; and (3) associated recordkeeping.

Need for and Expected Use of the Information to be Collected: Collection of information for this program is necessary to ensure that operators of public transportation systems are performing their safety responsibilities and activities required by law at 49 U.S.C. 5329(d). Without the creation of Public Transportation Agency Safety Plans, FTA would be unable to determine each State's compliance with 49 U.S.C. 5329(d).

Respondents: Respondents include operators of public transportation as defined under 49 U.S.C. 5302(14). FTA is deferring regulatory action at this time on recipients of FTA financial assistance under 49 U.S.C. 5310 and/or 49 U.S.C. 5311. The total number of respondents is 336. This figure includes 242 respondents that are States, direct recipients, rail fixed guideway systems that receive Urbanized Area Formula Program funds under 49 U.S.C. 5307, or large bus systems that receive Urbanized Area Formula Program funds under 49 U.S.C. 5307. This figure also includes 94 respondents that receive Urbanized Area Formula Program funds under 49 U.S.C. 5307, operate one hundred or fewer vehicles in revenue service, and do not operate rail fixed guideway service that may draft and certify their own safety plans.

Frequency: Annual.

ESTIMATED TOTAL ANNUAL BURDEN HOURS ON RESPONDENTS

	Total responses	Burden hours per response	Total annual burden
Rail:			
Development/Certification	60	48	2,862
Implement/Document	60	1,114	66,869
Recordkeeping	60	43	2,562
Large 5307:			
Development/Certification	127	48	6,123
Implement/Document	127	760	96,581
Recordkeeping	127	42	5,298
Small 5307:			
Development/Certification	94	19	1,773
Implement/Document	625	270	168,622
Recordkeeping	625	38	23,647
States/Direct Recipients:			
Development/Certification	55	40	2,206
Implement/Document	55	0	0
Recordkeeping	55	0	0
Grand Total	336	2,422	376,543

FTA calculated costs using the same methodology that it used for the Regulatory Impact Analysis. FTA summarized the PRA costs in the table

below. The total PRA cost of the rule is approximately \$33 million per year averaged over the first three years, which is an average of \$98,791 per

respondent per year, or \$38,256 per response per year.

PRA costs	Year 1	Year 2	Year 3	Total
Rail:				
Development/Certification	\$733,863	\$86,858	\$86,858	\$907,579

PRA costs	Year 1	Year 2	Year 3	Total
Implement/Document	9,366,439	6,651,817	6,651,817	22,670,072
Recordkeeping	1,179,917	1,179,917	1,179,917	3,539,750
Large 5307:				
Development/Certification	1,624,085	137,866	137,866	1,899,818
Implement/Document	9,235,788	6,593,697	6,593,697	22,423,182
Recordkeeping	1,830,066	1,830,066	1,830,066	5,490,199
Small 5307:				
Development/Certification	436,058	48,929	48,929	533,917
Implement/Document	12,166,099	9,118,251	9,118,251	30,402,601
Recordkeeping	3,565,974	3,565,974	3,565,974	10,697,922
States/Direct Recipients:				
Development/Certification	425,782	20,045	20,045	465,871
Implement/Document	0	0	0	0
Recordkeeping	183,333	183,333	183,333	550,000

National Environmental Policy Act

The National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), requires Federal agencies to analyze the potential environmental effects of their proposed actions either through a Categorical Exclusion, an Environmental Assessment, or an Environmental Impact Statement. This rule is categorically excluded under FTA’s NEPA implementing regulations at 23 CFR 771.118(c)(4), which covers planning and administrative activities that do not involve or lead directly to construction, such as the promulgation of rules, regulations, directives, and program guidance. FTA has determined that no unusual circumstances exist and that this Categorical Exclusion is applicable.

Executive Order 12898 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations)

Executive Order 12898 directs every Federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on minority populations and low-income populations. The DOT’s environmental justice initiatives accomplish this goal by involving the potentially affected public in developing transportation projects that fit harmoniously within their communities without sacrificing safety or mobility. FTA has developed a program circular addressing environmental justice in transit projects, Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients*. The Circular is designed to provide a framework to assist recipients as they integrate principles of environmental justice into their transit decision-making process. The Circular contains recommendations for State DOTs, MPOs, and transit providers on (1) how to fully engage environmental justice populations in

the transportation decision-making process; (2) how to determine whether environmental justice populations would be subjected to disproportionately high and adverse human health or environmental effects of a public transportation project, policy, or activity; and (3) how to avoid, minimize, or mitigate these effects. This rule will not cause adverse environmental impacts, and as a result, minority populations and low-income populations will not be disproportionately impacted.

Executive Order 12630 (Taking of Private Property)

This rule will not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Executive Order 12988 (Civil Justice Reform)

This rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Executive Order 13045 (Protection of Children)

FTA has analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. FTA certifies that this rule will not cause an environmental risk to health or safety that may disproportionately affect children.

Executive Order 13175 (Tribal Consultation)

FTA has analyzed this rule under Executive Order 13175 (Nov. 6, 2000), and has determined that it will not have substantial direct effects on one or more Indian tribes; will not impose substantial direct compliance costs on Indian tribal governments; and will not

preempt tribal laws. Therefore, a tribal summary impact statement is not required.

Notwithstanding the above, FTA notes that it conducted extensive outreach with tribes throughout this rulemaking. Specifically, on February 12, 2016, FTA conducted public outreach for tribes and hosted a Tribal Technical Assistance Workshop wherein FTA presented its proposed rule and responded to numerous technical questions from tribes. FTA subsequently delivered the same presentation during a webinar series open to all members of the public on February 24, March 1, March 2, and March 3. On March 7, FTA delivered the same presentation at an outreach session hosted by the National Rural Transit Assistance Program, which also was open to all members of the public. During each of these public outreach sessions and the public webinar series, FTA received and responded to numerous technical questions regarding the NPRM. FTA recorded the presentations, including the question and answer sessions, and made available the following documents on the public docket for this rulemaking (Docket FTA–2015–0021): (1) FTA’s PowerPoint Presentation from the public outreach sessions and public webinar series (<https://www.regulations.gov/document?D=FTA-2015-0021-0012>); (2) a written transcript of FTA’s public webinar of March 1, 2016 (<https://www.regulations.gov/document?D=FTA-2015-0021-0010>); (3) a consolidated list of every Question and FTA Answer from the public outreach sessions and public webinar series (<https://www.regulations.gov/document?D=FTA-2015-0021-0041>); and (4) the results of polling questions from FTA’s public outreach sessions (<https://www.regulations.gov/document?D=FTA-2015-0021-0011>). FTA also uploaded onto YouTube an audiovisual recording of its webinar

from March 1, 2016. The video is available at the following link: <https://www.youtube.com/watch?v=FBj5HRa twGA&feature=youtu.be>.

FTA also notes that, in advance of publishing an NPRM, FTA sought comment from the transit industry, including tribes, on a wide range of topics pertaining to safety and asset management through an ANPRM. In the NPRM, FTA asked specific questions about how today's rule should apply to tribal recipients and subrecipients of Section 5311 funds.

In light of the comments that FTA received from tribes in response to the NPRM, and in an effort to further reduce the burdens of this final rule, FTA is deferring regulatory action regarding the applicability of this rule to operators of public transportation systems that only receive Section 5310 and/or Section 5311 funds, including tribal transit operators. FTA is deferring action pending further evaluation of information and safety data to determine the appropriate level of regulatory burden necessary to address the safety risk presented by these operators.

Executive Order 13211 (Energy Effects)

FTA has analyzed this rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). FTA has determined that this rule is not a significant energy action under that Executive Order because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Therefore, a Statement of Energy Effects is not required.

Privacy Act

Any individual is able to search the electronic form of all comments received on any FTA docket by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, or other entity). You may review USDOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477).

Statutory/Legal Authority for This Rulemaking

FTA is issuing this final rule under the authority of section 20021 of MAP-21, which requires public transportation agencies to develop and implement comprehensive safety plans. This authority was reauthorized under the FAST Act. The authority is codified at 49 U.S.C. 5329(d).

Regulation Identification Number

A RIN is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN set forth in the heading of this document can be used to cross-reference this action with the Unified Agenda.

List of Subjects in 49 CFR Part 673

Mass transportation, Safety.

K. Jane Williams,
Acting Administrator.

■ For the reasons set forth in the preamble, and under the authority of 49 U.S.C. 5329(d) and 5334, and the delegations of authority at 49 CFR 1.91, FTA hereby amends Chapter VI of Title 49, Code of Federal Regulations by adding part 673 to read as follows:

PART 673—PUBLIC TRANSPORTATION AGENCY SAFETY PLANS

Subpart A—General

- 673.1 Applicability.
- 673.3 Policy.
- 673.5 Definitions.

Subpart B—Safety Plans

- 673.11 General requirements.
- 673.13 Certification of compliance.
- 673.15 Coordination with metropolitan, statewide, and non-metropolitan planning processes.

Subpart C—Safety Management Systems

- 673.21 General requirements.
- 673.23 Safety management policy.
- 673.25 Safety risk management.
- 673.27 Safety assurance.
- 673.29 Safety promotion.

Subpart D—Safety Plan Documentation and Recordkeeping

- 673.31 Safety plan documentation.

Authority: 49 U.S.C. 5329(d) and 5334; 49 CFR 1.91.

Subpart A—General

§ 673.1 Applicability.

(a) This part applies to any State, local governmental authority, and any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53.

(b) This part does not apply to an operator of a public transportation system that only receives Federal financial assistance under 49 U.S.C. 5310, 49 U.S.C. 5311, or both 49 U.S.C. 5310 and 49 U.S.C. 5311.

§ 673.3 Policy.

The Federal Transit Administration (FTA) has adopted the principles and

methods of Safety Management Systems (SMS) as the basis for enhancing the safety of public transportation in the United States. FTA will follow the principles and methods of SMS in its development of rules, regulations, policies, guidance, best practices, and technical assistance administered under the authority of 49 U.S.C. 5329. This part sets standards for the Public Transportation Agency Safety Plan, which will be responsive to FTA's Public Transportation Safety Program, and reflect the specific safety objectives, standards, and priorities of each transit agency. Each Public Transportation Agency Safety Plan will incorporate SMS principles and methods tailored to the size, complexity, and scope of the public transportation system and the environment in which it operates.

§ 673.5 Definitions.

As used in this part:

Accident means an Event that involves any of the following: A loss of life; a report of a serious injury to a person; a collision of public transportation vehicles; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.

Accountable Executive means a single, identifiable person who has ultimate responsibility for carrying out the Public Transportation Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. 5326.

Chief Safety Officer means an adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer. A Chief Safety Officer may not serve in other operational or maintenance capacities, unless the Chief Safety Officer is employed by a transit agency that is a small public transportation provider as defined in this part, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

Equivalent Authority means an entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a

recipient or subrecipient's Public Transportation Agency Safety Plan.

Event means any Accident, Incident, or Occurrence.

FTA means the Federal Transit Administration, an operating administration within the United States Department of Transportation.

Hazard means any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment.

Incident means an event that involves any of the following: A personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency.

Investigation means the process of determining the causal and contributing factors of an accident, incident, or hazard, for the purpose of preventing recurrence and mitigating risk.

National Public Transportation Safety Plan means the plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53.

Occurrence means an Event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a transit agency.

Operator of a public transportation system means a provider of public transportation as defined under 49 U.S.C. 5302(14).

Performance measure means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

Performance target means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Public Transportation Agency Safety Plan means the documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and this part.

Rail fixed guideway public transportation system means any fixed guideway system that uses rail, is operated for public transportation, is within the jurisdiction of a State, and is not subject to the jurisdiction of the Federal Railroad Administration, or any such system in engineering or construction. Rail fixed guideway public transportation systems include but are not limited to rapid rail, heavy rail, light rail, monorail, trolley,

inclined plane, funicular, and automated guideway.

Rail transit agency means any entity that provides services on a rail fixed guideway public transportation system.

Risk means the composite of predicted severity and likelihood of the potential effect of a hazard.

Risk mitigation means a method or methods to eliminate or reduce the effects of hazards.

Safety Assurance means processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation, and to ensure that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information.

Safety Management Policy means a transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees in regard to safety.

Safety Management System (SMS) means the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards.

Safety Management System (SMS) Executive means a Chief Safety Officer or an equivalent.

Safety performance target means a Performance Target related to safety management activities.

Safety Promotion means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.

Safety risk assessment means the formal activity whereby a transit agency determines Safety Risk Management priorities by establishing the significance or value of its safety risks.

Safety Risk Management means a process within a transit agency's Public Transportation Agency Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.

Serious injury means any injury which:

- (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received;
- (2) Results in a fracture of any bone (except simple fractures of fingers, toes, or noses);
- (3) Causes severe hemorrhages, nerve, muscle, or tendon damage;
- (4) Involves any internal organ; or
- (5) Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

Small public transportation provider means a recipient or subrecipient of Federal financial assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operate a rail fixed guideway public transportation system.

State means a State of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.

State of good repair means the condition in which a capital asset is able to operate at a full level of performance.

State Safety Oversight Agency means an agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth in 49 CFR part 674.

Transit agency means an operator of a public transportation system.

Transit Asset Management Plan means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation, as required by 49 U.S.C. 5326 and 49 CFR part 625.

Subpart B—Safety Plans

§ 673.11 General requirements.

(a) A transit agency must, within one calendar year after July 19, 2019, establish a Public Transportation Agency Safety Plan that meets the requirements of this part and, at a minimum, consists of the following elements:

(1) The Public Transportation Agency Safety Plan, and subsequent updates, must be signed by the Accountable Executive and approved by the agency's Board of Directors, or an Equivalent Authority.

(2) The Public Transportation Agency Safety Plan must document the processes and activities related to Safety Management System (SMS) implementation, as required under subpart C of this part.

(3) The Public Transportation Agency Safety Plan must include performance targets based on the safety performance measures established under the National Public Transportation Safety Plan.

(4) The Public Transportation Agency Safety Plan must address all applicable requirements and standards as set forth in FTA's Public Transportation Safety Program and the National Public Transportation Safety Plan. Compliance

with the minimum safety performance standards authorized under 49 U.S.C. 5329(b)(2)(C) is not required until standards have been established through the public notice and comment process.

(5) Each transit agency must establish a process and timeline for conducting an annual review and update of the Public Transportation Agency Safety Plan.

(6) A rail transit agency must include or incorporate by reference in its Public Transportation Agency Safety Plan an emergency preparedness and response plan or procedures that addresses, at a minimum, the assignment of employee responsibilities during an emergency; and coordination with Federal, State, regional, and local officials with roles and responsibilities for emergency preparedness and response in the transit agency's service area.

(b) A transit agency may develop one Public Transportation Agency Safety Plan for all modes of service, or may develop a Public Transportation Agency Safety Plan for each mode of service not subject to safety regulation by another Federal entity.

(c) A transit agency must maintain its Public Transportation Agency Safety Plan in accordance with the recordkeeping requirements in subpart D of this part.

(d) A State must draft and certify a Public Transportation Agency Safety Plan on behalf of any small public transportation provider that is located in that State. A State is not required to draft a Public Transportation Agency Safety Plan for a small public transportation provider if that agency notifies the State that it will draft its own plan. In each instance, the transit agency must carry out the plan. If a State drafts and certifies a Public Transportation Agency Safety Plan on behalf of a transit agency, and the transit agency later opts to draft and certify its own Public Transportation Agency Safety Plan, then the transit agency must notify the State. The transit agency has one year from the date of the notification to draft and certify a Public Transportation Agency Safety Plan that is compliant with this part. The Public Transportation Agency Safety Plan drafted by the State will remain in effect until the transit agency drafts its own Public Transportation Agency Safety Plan.

(e) Any rail fixed guideway public transportation system that had a System Safety Program Plan compliant with 49 CFR part 659 as of October 1, 2012, may keep that plan in effect until one year after July 19, 2019.

(f) Agencies that operate passenger ferries regulated by the United States

Coast Guard (USCG) or rail fixed guideway public transportation service regulated by the Federal Railroad Administration (FRA) are not required to develop agency safety plans for those modes of service.

§ 673.13 Certification of compliance.

(a) Each transit agency, or State as authorized in § 673.11(d), must certify that it has established a Public Transportation Agency Safety Plan meeting the requirements of this part one year after July 19, 2019. A State Safety Oversight Agency must review and approve a Public Transportation Agency Safety Plan developed by rail fixed guideway system, as authorized in 49 U.S.C. 5329(e) and its implementing regulations at 49 CFR part 674.

(b) On an annual basis, a transit agency, direct recipient, or State must certify its compliance with this part.

§ 673.15 Coordination with metropolitan, statewide, and non-metropolitan planning processes.

(a) A State or transit agency must make its safety performance targets available to States and Metropolitan Planning Organizations to aid in the planning process.

(b) To the maximum extent practicable, a State or transit agency must coordinate with States and Metropolitan Planning Organizations in the selection of State and MPO safety performance targets.

Subpart C—Safety Management Systems

§ 673.21 General requirements.

Each transit agency must establish and implement a Safety Management System under this part. A transit agency Safety Management System must be appropriately scaled to the size, scope and complexity of the transit agency and include the following elements:

- (a) Safety Management Policy as described in § 673.23;
- (b) Safety Risk Management as described in § 673.25;
- (c) Safety Assurance as described in § 673.27; and
- (d) Safety Promotion as described in § 673.29.

§ 673.23 Safety management policy.

(a) A transit agency must establish its organizational accountabilities and responsibilities and have a written statement of safety management policy that includes the agency's safety objectives.

(b) A transit agency must establish and implement a process that allows employees to report safety conditions to senior management, protections for

employees who report safety conditions to senior management, and a description of employee behaviors that may result in disciplinary action.

(c) The safety management policy must be communicated throughout the agency's organization.

(d) The transit agency must establish the necessary authorities, accountabilities, and responsibilities for the management of safety amongst the following individuals within its organization, as they relate to the development and management of the transit agency's Safety Management System (SMS):

(1) *Accountable Executive.* The transit agency must identify an Accountable Executive. The Accountable Executive is accountable for ensuring that the agency's SMS is effectively implemented, throughout the agency's public transportation system. The Accountable Executive is accountable for ensuring action is taken, as necessary, to address standard performance in the agency's SMS. The Accountable Executive may delegate specific responsibilities, but the ultimate accountability for the transit agency's safety performance cannot be delegated and always rests with the Accountable Executive.

(2) *Chief Safety Officer or Safety Management System (SMS) Executive.* The Accountable Executive must designate a Chief Safety Officer or SMS Executive who has the authority and responsibility for day-to-day implementation and operation of an agency's SMS. The Chief Safety Officer or SMS Executive must hold a direct line of reporting to the Accountable Executive. A transit agency may allow the Accountable Executive to also serve as the Chief Safety Officer or SMS Executive.

(3) *Agency leadership and executive management.* A transit agency must identify those members of its leadership or executive management, other than an Accountable Executive, Chief Safety Officer, or SMS Executive, who have authorities or responsibilities for day-to-day implementation and operation of an agency's SMS.

(4) *Key staff.* A transit agency may designate key staff, groups of staff, or committees to support the Accountable Executive, Chief Safety Officer, or SMS Executive in developing, implementing, and operating the agency's SMS.

§ 673.25 Safety risk management.

(a) *Safety Risk Management process.* A transit agency must develop and implement a Safety Risk Management process for all elements of its public transportation system. The Safety Risk

Management process must be comprised of the following activities: Safety hazard identification, safety risk assessment, and safety risk mitigation.

(b) *Safety hazard identification.* (1) A transit agency must establish methods or processes to identify hazards and consequences of the hazards.

(2) A transit agency must consider, as a source for hazard identification, data and information provided by an oversight authority and the FTA.

(c) *Safety risk assessment.* (1) A transit agency must establish methods or processes to assess the safety risks associated with identified safety hazards.

(2) A safety risk assessment includes an assessment of the likelihood and severity of the consequences of the hazards, including existing mitigations, and prioritization of the hazards based on the safety risk.

(d) *Safety risk mitigation.* A transit agency must establish methods or processes to identify mitigations or strategies necessary as a result of the agency's safety risk assessment to reduce the likelihood and severity of the consequences.

§ 673.27 Safety assurance.

(a) *Safety assurance process.* A transit agency must develop and implement a safety assurance process, consistent with this subpart. A rail fixed guideway public transportation system, and a recipient or subrecipient of Federal financial assistance under 49 U.S.C. Chapter 53 that operates more than one hundred vehicles in peak revenue service, must include in its safety assurance process each of the requirements in paragraphs (b), (c), and (d) of this section. A small public transportation provider only must

include in its safety assurance process the requirements in paragraph (b) of this section.

(b) *Safety performance monitoring and measurement.* A transit agency must establish activities to:

(1) Monitor its system for compliance with, and sufficiency of, the agency's procedures for operations and maintenance;

(2) Monitor its operations to identify any safety risk mitigations that may be ineffective, inappropriate, or were not implemented as intended;

(3) Conduct investigations of safety events to identify causal factors; and

(4) Monitor information reported through any internal safety reporting programs.

(c) *Management of change.* (1) A transit agency must establish a process for identifying and assessing changes that may introduce new hazards or impact the transit agency's safety performance.

(2) If a transit agency determines that a change may impact its safety performance, then the transit agency must evaluate the proposed change through its Safety Risk Management process.

(d) *Continuous improvement.* (1) A transit agency must establish a process to assess its safety performance.

(2) If a transit agency identifies any deficiencies as part of its safety performance assessment, then the transit agency must develop and carry out, under the direction of the Accountable Executive, a plan to address the identified safety deficiencies.

§ 673.29 Safety promotion.

(a) *Competencies and training.* A transit agency must establish and implement a comprehensive safety

training program for all agency employees and contractors directly responsible for safety in the agency's public transportation system. The training program must include refresher training, as necessary.

(b) *Safety communication.* A transit agency must communicate safety and safety performance information throughout the agency's organization that, at a minimum, conveys information on hazards and safety risks relevant to employees' roles and responsibilities and informs employees of safety actions taken in response to reports submitted through an employee safety reporting program.

Subpart D—Safety Plan Documentation and Recordkeeping

§ 673.31 Safety plan documentation.

At all times, a transit agency must maintain documents that set forth its Public Transportation Agency Safety Plan, including those related to the implementation of its Safety Management System (SMS), and results from SMS processes and activities. A transit agency must maintain documents that are included in whole, or by reference, that describe the programs, policies, and procedures that the agency uses to carry out its Public Transportation Agency Safety Plan. These documents must be made available upon request by the Federal Transit Administration or other Federal entity, or a State Safety Oversight Agency having jurisdiction. A transit agency must maintain these documents for a minimum of three years after they are created.

[FR Doc. 2018-15167 Filed 7-18-18; 8:45 am]

BILLING CODE P

Laredo Transit Management, Inc.
El Metro Transit
Public Transportation Agency Safety Plan

Version 1

Adopted May 4, 2020

In compliance with 49 CFR Part 673

Developed in conjunction with the
Texas Department of Transportation

TABLE OF CONTENTS

1. Executive Summary	4
A. Plan Adoption – 673.11(a)(1).....	5
B. Certification of Compliance – 673.13(a)(b).....	5
2. Transit Agency Information – 673.23(d)	6
A. Authorities & Responsibilities – 673.23(d)	9
3. Safety Policies and Procedures	10
A. Policy Statement – 673.23(a).....	10
I. Employee Safety Reporting Program – 673.23(b)	10
II. Communicating the Policy Throughout the Agency – 673.23(c)	12
B. PTASP Development and Coordination with TxDOT – 673.11(d)	12
C. PTASP Annual Review – 673.11(a)(5).....	13
D. PTASP Maintenance – 673.11(a)(2)(c)	15
E. PTASP Documentation and Recordkeeping – 673.31	15
F. Safety Performance Measures – 673.11(a)(3)	15
G. Safety Performance Target Coordination – 673.15(a)(b)	17
4. Safety Management Systems – 673 subpart C	18
A. Safety Risk Management – 673.25	19
I. Safety Hazard Identification – 673.25(b).....	20
II. Safety Risk Assessment – 673.25(c).....	22
III. Safety Risk Mitigation – 673.25(d).....	24
B. Safety Assurance – 673.27 (a).....	25
I. Safety Performance Monitoring and Measuring – 673.27 (b).....	26
II. Safety Event Investigation – 673.27(B)(3)	27
C. Safety Promotion – 673.29	29
I. Safety Competencies and Training – 673.29(a).....	29
II. Safety Communication – 673.29(b)	31
5. Appendix A	33
A. Glossary of Terms.....	37
B. Additional Acronyms Used.....	41
6. Appendix B	42
A. City Council/Board Minutes or Resolution	42

LIST OF FIGURES

Figure 1: El Metro Organizational Chart	8
Figure 2: Safety Management Systems.....	18
Figure 3: Safety Risk Management Process	19
Figure 4: Draft Risk Register.....	20
Figure 5: Safety Risk Assessment Steps in Populating the Risk Register	23
Figure 6: Safety Risk Assessment Matrix	23
Figure 7: Risk Register Mitigation Component	25

LIST OF TABLES

Table 1: Agency Information.....	7
Table 2: ASP Annual Update Timeline	14
Table 3: ASP Record of Changes	14
Table 4: NSP Safety Performance Measures.....	15
Table 5: Baseline 2019 Safety Performance Measures.....	16
Table 6: Fixed Route (Bus) Safety Performance Targets.....	16
Table 7: Demand Response Safety Performance Targets.....	17
Table 8: PTASP Supporting Documents	33

1. EXECUTIVE SUMMARY

Moving Ahead for Progress in the 21st Century (MAP-21) granted the Federal Transit Administration (FTA) the authority to establish and enforce a comprehensive framework to oversee the safety of public transportation throughout the United States. MAP-21 expanded the regulatory authority of FTA to oversee safety, providing an opportunity to assist transit agencies in moving towards a more holistic, performance-based approach to Safety Management Systems (SMS). This authority was continued through the Fixing America's Surface Transportation Act (FAST Act).

In compliance with MAP-21 and the FAST Act, FTA promulgated a Public Transportation Safety Program on August 11, 2016 that adopted SMS as the foundation for developing and implementing a Safety Program. FTA is committed to developing, implementing, and consistently improving strategies and processes to ensure that transit achieves the highest practicable level of safety. SMS helps organizations improve upon their safety performance by supporting the institutionalization of beliefs, practices, and procedures for identifying, mitigating, and monitoring safety risks.

There are several components of the national safety program, including the National Public Transportation Safety Plan (NSP), that FTA published to provide guidance on managing safety risks and safety hazards. One element of the NSP is the Transit Asset Management (TAM) Plan. Public transportation agencies implemented TAM plans across the industry in 2018. The subject of this document is the Public Transportation Agency Safety Plan (PTASP) rule, 49 CFR Part 673, and guidance provided by FTA.

Safety is a core business function of all public transportation providers and should be systematically applied to every aspect of service delivery. At Laredo Transit Management, Inc. (LTMI), all levels of management, administration and operations are responsible for the safety of their clientele and themselves. To improve public transportation safety to the highest practicable level in the State of Texas and comply with FTA requirements, the Texas Department of Transportation (TxDOT) has developed this Agency Safety Plan (ASP) in collaboration with the City of Laredo and the Laredo Mass Transit Board with fiduciary responsibility for (LTMI).

To ensure that the necessary processes are in place to accomplish both enhanced safety at the local level and the goals of the NSP, the City of Laredo, the Laredo Mass Transit Board and LTMI adopt this ASP and the tenets of SMS including a Safety Management Policy (SMP) and the processes for Safety Risk Management (SRM), Safety Assurance (SA), and Safety Promotion (SP), per 49 U.S.C. 5329(d)(1)(A).¹ While safety has always been a primary function at LTMI, this document lays out a process to fully implement an SMS over the next several years that complies with the PTASP final rule.

¹ Federal Register, Vol. 81, No. 24

A. Plan Adoption – 673.11(a)(1)

This Public Transit Agency Safety Plan is hereby adopted, certified as compliant, and signed by:

Claudia San Miguel, El Metro General Manager

	
ACCOUNTABLE EXECUTIVE SIGNATURE	DATE

Since El Metro is considered a department of the City of Laredo, the main governing body is the Laredo City Council acting as the Laredo Mass Transit Board. Approval of this plan by the City Council/Mass Transit Board occurred on May 4, 2020 and is documented in RESOLUTION No. 2020-RT-06 from the City Council Meeting.

B. Certification of Compliance – 673.13(a)(b)

TxDOT certifies on July 16, 2020, that this Agency Safety Plan is in full compliance with 49 CFR Part 673 and has been adopted and will be implemented by El Metro as evidenced by the plan adoption signature and necessary City Council/Laredo Mass Transit Board approvals under Section 1.A of this plan.

2. TRANSIT AGENCY INFORMATION – 673.23(D)

The City of Laredo began operating public transportation in 1985. LTMI was founded in 2003 and is governed by the City of Laredo Mass Transit Board. The City contracts with First Transit, Inc. to provide management and operating services. Under the contract, First Transit, Inc. provides a General Manager and two Assistant General Managers. The General Manager is approved by the Laredo Mass Transit Board to oversee the administrative functions of LTMI. LTMI is known as El Metro.

El Metro is the public transportation provider for the City of Laredo, Texas and is the largest transit provider in the region. The El Metro main office/transfer center is located at 1301 Farragut St., Laredo, TX 78040.

El Metro operates fixed route services seven days a week across 23 routes within the City of Laredo. Schedules for fixed route service vary by route, with many routes having one schedule for Monday-Friday or Monday-Saturday and another schedule for Saturdays or Sundays/Holidays. In addition, some routes have A and B segments that have differing schedules. El Metro also operates El Lift Paratransit, which provides shared, origin to destination public transportation to people with disabilities who are unable to use El Metro's fixed route buses. El Lift uses the following service schedule:

- Monday, Wednesday, Friday: 5:00 am – 10:30 pm
- Tuesday, Thursday: 5:30 am – 10:30 pm
- Sunday: 8:00 am – 8:30 pm

El Metro Transit is provided by the City of Laredo through the Laredo Mass Transit Board and managed by a private contractor, First Transit, Inc. which provides the General Manager and the management team consisting of the Assistant General Manager of Maintenance & Facilities, the Assistant General and Manager of Administration and Operations. The Maintenance Asset Officer, the Mobility Manager, the Operations Manager, the Transit Procurement Specialist, the Chief Safety Officer (CSO), and Safety and Training Coordinator are part of Laredo Transit Management, Inc.

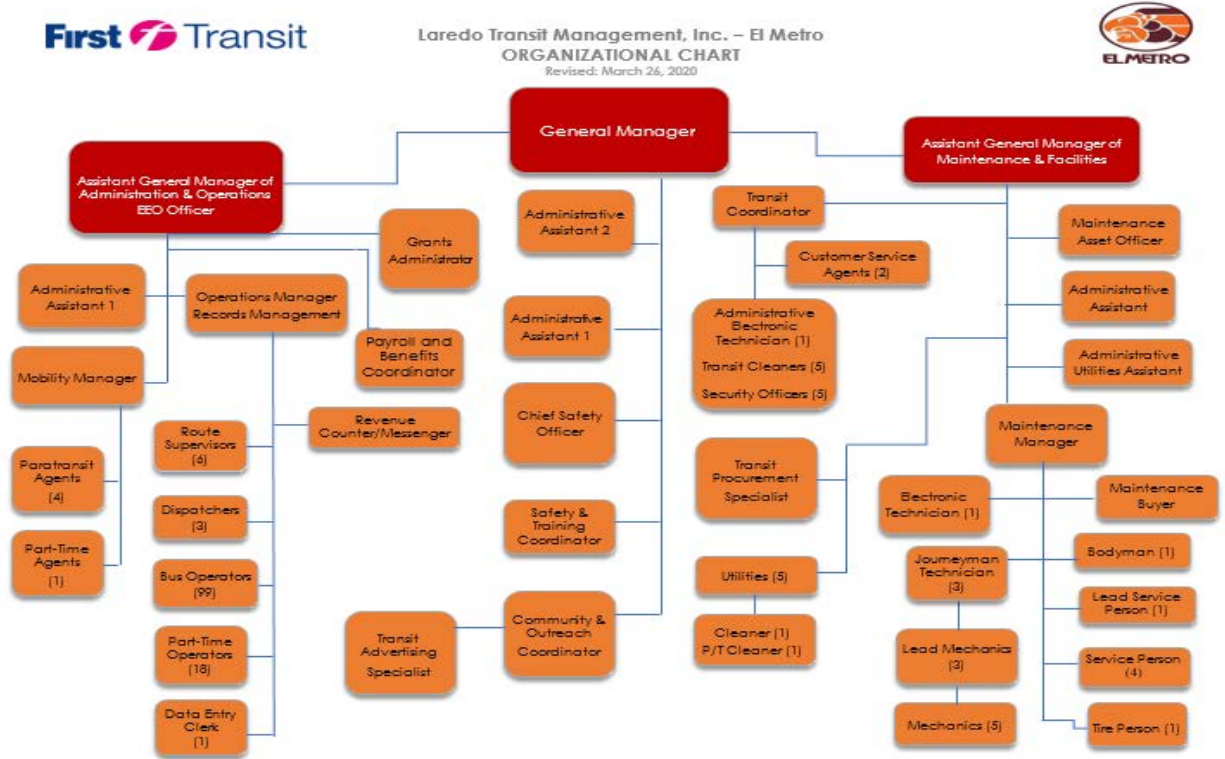
No additional transit service is provided by El Metro on behalf of another transit agency or entity at the time of the development of this plan.

Table 1 contains agency information, while an organizational chart for El Metro is provided in Figure 1.

TABLE 1: AGENCY INFORMATION

Information Type	Information
Full Transit Agency Name	Laredo Transit Management, Inc. (LTMI)
Transit Agency Address	1301 Farragut St, Laredo, TX 78040
Name and Title of Accountable Executive 673.23(d)(1)	Claudia San Miguel, General Manager
Name of Chief Safety Officer or SMS Executive 673.23(d)(2)	Adrian Chavera, Chief Safety Officer
Key Staff	Joe Jackson, AGM of Maintenance & Facilities
Key Staff	Rosa Soto, AGM of Administration & Operations
Key Staff	Joe Lerma, Safety & Training Coordinator
Mode(s) of Service Covered by This Plan 673.11(b)	Fixed Route Bus and Demand Response
List All FTA Funding Types (e.g., 5307, 5310, 5311)	5307, 5310, 5339
Mode(s) of Service Provided by the Transit Agency (Directly operated or contracted service)	Fixed Route Bus and Demand Response
Number of Vehicles Operated	70

FIGURE 1: EL METRO ORGANIZATIONAL CHART



A. Authorities & Responsibilities – 673.23(d)

As stated in 49 CFR Part 673.23(d), El Metro has established the necessary authority, accountabilities, and responsibilities for the management of safety amongst the key individuals within the organization, as those individuals relate to the development and management of our SMS. In general, the following defines the authority and responsibilities associated with our organization.

The **Accountable Executive** has ultimate responsibility for carrying out the SMS of our public transportation agency, and control or direction over the human and capital resources needed to develop and maintain both the ASP, in accordance with 49 U.S.C. 5329(d), and the agency's TAM Plan, in accordance with 49 U.S.C. 5326. The Accountable Executive has authority and responsibility to address substandard performance in the El Metro SMS, per 673.23(d)(1).

Agency leadership and executive management include members of our agency leadership or executive management, other than the Accountable Executive, CSO/SMS Executive, who have authority or responsibility for day-to-day implementation and operation of our agency's SMS.

The **CSO** is an adequately trained individual who has the authority and responsibility as designated by the Accountable Executive for the day-to-day implementation and operation of the El Metro SMS. As such, the CSO is able to report directly to our transit agency's Accountable Executive.

Key staff are staff, groups of staff, or committees to support the Accountable Executive, CSO or SMS Executive in developing, implementing, and operating our agency's SMS.

Front line employees perform the daily tasks and activities where hazards can be readily identified so the identified hazards can be addressed before the hazards become adverse events. These employees are critical to SMS success through each employee's respective role in reporting safety hazards, which is where an effective SMS and a positive safety culture begins.

In addition, over the next year, El Metro Payroll and Benefits Coordinator in collaboration with the CSO will be reviewing and modifying, if necessary, our current job descriptions to ensure the job descriptions comply with 49 CFR Part 673.

3. SAFETY POLICIES AND PROCEDURES

A. Policy Statement – 673.23(a)

El Metro recognizes that the management of safety is a core value of our business. The management team at El Metro has embraced the SMS and is committed to developing, implementing, maintaining, and constantly improving processes to ensure the safety of our employees, customers, and the general public. All levels of management and frontline employees are committed to safety and understand that safety is the primary responsibility of all employees.

El Metro is committed to:

- Communicating the purpose and benefits of the SMS to all staff, the union, managers, supervisors, and employees. This communication will specifically define the duties and responsibilities of each employee throughout the organization and all employees will receive appropriate information and SMS training.
- Providing appropriate management involvement and the necessary resources to establish an effective reporting system that will encourage employees to communicate and report any unsafe work conditions, hazards, or at-risk behavior to the management team.
- Identifying hazardous and unsafe work conditions and analyzing data from the employee reporting system. After thoroughly analyzing provided data, the transit operations division will develop processes and procedures to mitigate safety risk to an acceptable level.
- Ensuring that no action will be taken against employees who disclose safety concerns through the reporting system, unless disclosure indicates an illegal act, gross negligence, or deliberate or willful disregard of regulations or procedures.
- Establishing Safety Performance Targets (SPT) that are realistic, measurable, and data driven.
- Continually improving our safety performance through management processes that ensure appropriate safety management action is taken and is effective.

I. Employee Safety Reporting Program – 673.23(b)

Frontline employees are a significant source of safety data. These employees are typically the first to spot unsafe conditions that arise from unplanned conditions either on the vehicles, in the maintenance shop, or in the field during operations. For this reason, the Employee Safety Reporting Program (ESRP) is a major tenet of the PTASP Rule. Under this rule, agencies must establish and implement a process that allows employees to report safety conditions directly to senior management; provides protections for employees who report safety conditions to senior management; and includes a description of employee behaviors that may result in disciplinary action.

El Metro has an *Employee Safety Reporting Program (ESRP)* (Appendix A, Table 8 shows the document name, file name, and date of adoption) under which the employees are expected to use established procedures to submit comments, information, and assistance where safety and health is concerned. The program requires employees to report hazards, unsafe conditions, and unsafe behaviors to the Safety & Training Coordinator, Chief Safety Officer, the immediate supervisor, any Safety Planning Advisory Committee (SPAC) member or Department Head. Employees have the option of submitting reports confidentially and as such can report concerns without fear of repercussions. The program also calls for employees to meet on a regular basis to discuss safety and health issues. These meetings also provide another avenue for employees to report concerns.

In addition, El Metro has a policy in place in the *General Rules, Regulations and Policies Employee Handbook* (Appendix A) that requires employees who discover a condition which imperils the welfare of passengers, employees, and/or equipment to promptly report the problem to the Maintenance, Supervisor or Dispatcher.

El Metro also has a *Customer Comment/Complaint Procedure and Record Retention Policy* (Appendix A) that ensures riders of the system have an easy and accessible way to provide feedback to the agency. This procedure provides customers with a variety of ways to contact El Metro with comments or complaints and also provides protocols for feedback acknowledgment and customer report retention. In addition, employees can also submit safety concerns, anonymous or not, using the customer comment/complaint form on www.elmetrotransit.com.

Over the next year, El Metro will review and modify, if necessary, both our internal and external reporting procedures and programs to develop them into a full ESRP to ensure that the procedure complies with 49 CFR Part 673. In order to implement, LTMI will conduct Instruction-Led Training for all employees. They will be presented with a PowerPoint presentation and copies of the reporting form. In addition, LTMI will post avenues for reporting, with protections, at each Department's bulletin board. Any changes will be submitted at annual certification. The procedures will also be provided to the union.

In general, the El Metro ESRP will ensure that all employees are encouraged to report safety conditions directly to senior management or their direct supervisor for elevation to senior management. The policy will include any contract employees. The policy will also spell out what protections are afforded employees who report safety related conditions and will describe employee behaviors that are not covered by those protections. The policy will also elaborate on how safety conditions that are reported will be reported back to the initiator(s) – either to the individual or groups of individuals or organization, dependent on the nature of the safety condition.

To bolster the information received from frontline employees, El Metro will also review our current policy for how our agency receives information and safety related data from employees and customers. If necessary, we will develop additional means for receiving, investigating and reporting the results from investigations back to the initiator(s) – either to the person, groups of persons, or distributed agency-wide to ensure that future reporting is encouraged.

II. Communicating the Policy Throughout the Agency – 673.23(c)

El Metro is committed to ensuring the safety of our clientele, personnel and operations. Part of that commitment is developing an SMS and agency wide safety culture that reduces agency risk to the lowest level possible. The first step in developing a full SMS and agency wide safety culture is communicating our LTMI Safety Management Policy (SMP) (Appendix A, Table 8 shows the document name, file name, and date of adoption) throughout our agency. LTMI will provide Instruction-Led Training to all employees so that they can be familiar with our SMP and where they can find it. It will be posted at all Department’s bulletin boards. Any rules or procedures will be provided to the Union.

The SMP and safety objectives are at the forefront of all communications. This communications strategy will include posting the policy in prominent work locations for existing employees and adding the policy statement to the on-boarding material for all new employees. In addition, the policy statement will become part of our agency’s regular safety meetings and other safety communications efforts. The policy will be signed by the Accountable Executive so that all employees know that the policy is supported by management.

Possible methods of communicating the LTMI Safety Management Policy to employees include, but are not limited to, the following:

- New Employee Orientation
- Driver’s Training
- Internal Marketing Strategies
- Instructor-Led Training
- Safety Meetings
- El Metro Toolbox Talk (Safety Bulletin)
- Safety Planning Advisory Committee
- Staff Meetings
- Department Bulletin Boards
- Employee Handbooks

B. PTASP Development and Coordination with TxDOT – 673.11(d)

This PTASP has been developed by TxDOT on behalf of Laredo Urban Transportation Study, which is the Metropolitan Planning Organization (MPO) for the area, and LTMI in accordance with all requirements stated in 49 CFR Part 673 applicable to a small public transportation provider. TxDOT mailed a formal call for participation in a State sponsored PTASP development process to all Texas Section 5307 small bus transit agencies on January 15, 2019 and followed that call with a series of phone calls and additional correspondence. El Metro provided a letter to TxDOT opting into participation on March 15, 2019 and has been an active participant in the development of this plan through sharing existing

documentation and participating in communication and coordination throughout the development of this plan. The El Metro documentation used in the development of this plan is presented in Table 8, in Appendix A.

In support of tracking performance on our Safety Assurance (SA) and Safety Promotion (SP) processes, El Metro conducts a yearly safety culture survey. This survey is intended to help El Metro assess how well we communicate safety and safety performance information throughout our organization by gauging how safety is perceived and embraced by El Metro’s administrators, supervisors, staff and contractors. The survey is designed to help us assess how well we are conveying information on hazards and safety risks relevant to employees’ roles and responsibilities and informing employees of safety actions taken in response to reports submitted through our ESRP. Results from our most recent survey were analyzed and incorporated into the implementation strategies contained in this ASP.

Once the documents were reviewed, an on-site interview was conducted with El Metro to gain a better understanding of the agency and the agency’s personnel. This understanding was necessary to ensure that the ASP was developed to fit El Metro’s size, operational characteristics, and capabilities.

The draft ASP was delivered to LTMI/El Metro in March 2020 for review and comment. Once review was completed and any adjustments made, the final was delivered to LTMI/El Metro for review and adoption.

C. PTASP Annual Review – 673.11(a)(5)

Per 49 U.S.C. 5329(d)(1)(D), this plan includes provisions for annual updates of the SMS. As part of El Metro’s ongoing commitment to fully implementing SMS and engaging our agency employees in developing a robust safety culture, El Metro will review the ASP and all supporting documentation annually. The review will be conducted as a precursor to certifying to FTA that the ASP is fully compliant with 49 CFR Part 673 and accurately reflects the agency’s current implementation status. Certification will be accomplished through El Metro’s annual Certifications and Assurances reporting to FTA.

The annual review will include the ASP and supporting documents (Standard Operating Procedures [SOP], Policies, Manuals, etc.) that are used to fully implement all the processes used to manage safety at El Metro. All changes will be noted (as discussed below) and the Accountable Executive will sign and date the title page of this document and provide documentation of approval by the Laredo Mass Transit Board whether by signature or by reference to resolution.

As processes are changed to fully implement SMS or new processes are developed, El Metro will track those changes for use in the annual review. The annual ASP review will follow the update activities and schedule provided below in Table 2.

TABLE 2: ASP ANNUAL UPDATE TIMELINE

Task	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
Review Agency Operations	→							
Review SMS Documentation <ul style="list-style-type: none"> • Safety Management Policy; • Safety Risk Management; • Safety Assurance; and • Safety Promotion. 		→						
Review Previous Targets and Set or Continue Targets			→					
Report Targets to National Transit Database (NTD), TxDOT, Laredo Urban Transportation Study					→			
Make Any Necessary Adjustments to PTASP						→		
Update Version No., Adopt & Certify Plan Compliance								★

As shown in Table 2, LTMI will hold staff meetings to review Agency Operations from February 1 to March 30. Management, key personnel, and the CSO will review SMS documentation from March 1 to April 30. LTMI will hold a staff meeting to review previous targets and set or continue targets from April 1 to May 30. The Accountable Executive, Grants Administrator, and CSO will report targets to NTD, TxDOT and Laredo Urban Transportation Study from June 1 to June 30. LTMI will hold a staff meeting to discuss any necessary adjustments to the PTASP from July 1 to August 30. From August 30 to September 30, the Accountable Executive will review changes and sign and date the document. The document will be submitted to the Laredo Mass Transit Board (City Council) for approval and adoption. LTMI will coordinate with TxDOT to advise of the updated version of the PTASP and it will be submitted to FTA. Instruction-Led Training will be provided to all employees informing them of any changes.

The following table, Table 3, will be used to record final changes made to the ASP during the annual update. This table will be a permanent record of the changes to the ASP over time.

TABLE 3: ASP RECORD OF CHANGES

Document Version	Section/Pages Changed	Reason for Change	Reviewer Name	Date of Change
Header	Text	Text	Text	Text
Header	Text	Text	Text	Text
Header	Text	Text	Text	Text

The implementation of SMS is an ongoing and iterative process, and, as such, this PTASP is a working document. Therefore, a clear record of changes and adjustments is kept in the PTASP for the benefit of safety plan performance management and to comply with Federal statutes.

D. PTASP Maintenance – 673.11(a)(2)(c)

El Metro will follow the annual review process outlined above and adjust this ASP as necessary to accurately reflect current implementation status. This plan will document the processes and activities related to SMS implementation as required under 49 CFR Part 673 Subpart C and will make necessary updates to this ASP as El Metro continues to develop and refine our SMS implementation.

E. PTASP Documentation and Recordkeeping – 673.31

At all times, El Metro will maintain documents that set forth our ASP, including those documents related to the implementation of El Metro’s SMS and those documents related to the results from SMS processes and activities. El Metro will also maintain documents that are included in whole, or by reference, that describe the programs, policies, and procedures that our agency uses to carry out our ASP and all iterations of those documents. These documents will be made available upon request to the FTA, other Federal entity, or TxDOT. El Metro will maintain these documents for a minimum of three years after the documents are created. These additional supporting documents are cataloged in Appendix A and the list will be kept current as a part of the annual ASP review and update.

F. Safety Performance Measures – 673.11(a)(3)

The PTASP Final Rule, 49 CFR Part 673.11(a)(3), requires that all public transportation providers must develop an ASP to include safety performance targets (SPTs) based on the safety performance measures established under the NSP. The safety performance measures outlined in the NSP were developed to ensure that the measures can be applied to all modes of public transportation and are based on data currently being submitted to the NTD. The safety performance measures included in the NSP are fatalities, injuries, safety events, and system reliability (State of Good Repair as developed and tracked in the TAM Plan).

There are seven (7) SPTs that must be included in each ASP that are based on the four (4) performance measures in the NSP. These SPTs are presented in terms of total numbers reported and rate per 100,000 Vehicle Revenue Miles (VRM). Each of the seven (7) is required to be reported by mode as presented in Table 4.

TABLE 4: NSP SAFETY PERFORMANCE MEASURES

Safety Performance Measure	SPT	
Fatalities	Total Number Reported	Rate Per 100,000 VRM
Injuries	Total Number Reported	Rate Per 100,000 VRM
Safety Events	Total Number Reported	Rate Per 100,000 VRM
System Reliability	Mean distance between major mechanical failure	

Table 5 presents El Metro’s reported baseline numbers for each of the performance measures. El Metro collected the past five (5) years of reported data to develop the rolling averages listed in the table.

TABLE 5: BASELINE 2019 SAFETY PERFORMANCE MEASURES

Mode	Fatalities	Rate of Fatalities per 100,000 VRM	Injuries	Rate of Injuries per 100,000 VRM	Safety Events	Rate of Safety Events per 100,000 VRM	Mean Distance Between Major Mechanical Failure
Fixed Route (Bus)	0	0	3.8	0.22	2	0.12	39,590.7
Demand Response	0	0	0	0	0	0	28208.2

*rate = total number x 100,000 /total vehicle revenue miles traveled

While safety has always been a major component of our agency operation, the adoption of this ASP will result in changes across all aspects of the organization designed to improve safety outcomes. The SPTs set in Table 6 and Table 7 reflect an acknowledgment that SMS implementation will produce new information that will be needed to accurately set meaningful SPTs. We will set our targets, except *Vehicle Revenue Miles*, at the current NTD reported five-year average as we begin the process of fully implementing our SMS and developing our targeted safety improvements. This will ensure that we do no worse than our baseline performance over the last five years. Our Target Vehicle Revenue Miles for Fixed Route was set at 1,719,000, because of some route changes and our Circulator route. The projected increase of vehicle revenue miles is to accommodate these changes. However, the projected increase had an aggressive impact on our *Mean Distance Between Major Mechanical failures* but the number of Major mechanical failures remained the same as our five-year average.

TABLE 6: FIXED ROUTE (BUS) SAFETY PERFORMANCE TARGETS

Mode	Baseline	Target
Fatalities	0	0
Rate of Fatalities per 100,00 VRM	0	0
Injuries	3.8	3.8
Rate of Injuries per 100,000 VRM	0.22	0.22
Safety Events	2	2
Rate of Safety Events per 100,000 VRM	0.12	0.12
Mean Distance Between Major Mechanical Failure	39,590.7	40,163.5

*rate = total number for the year x 100,000 /total vehicle revenue miles traveled

TABLE 7: DEMAND RESPONSE SAFETY PERFORMANCE TARGETS

Mode	Baseline	Target
Fatalities	0	0
Rate of Fatalities per 100,000 VRM	0	0
Injuries	0	0
Rate of Injuries per 100,000 VRM	0	0
Safety Events	0	0
Rate of Safety Events per 100,000 VRM	0	0
Mean Distance Between Major Mechanical Failure	28,208.2	28,152

*rate = total number for the year x 100,000/total vehicle revenue miles traveled

As part of the annual review of the ASP, El Metro will re-evaluate our SPTs and determine whether the SPTs need to be refined. As more data is collected as part of the SRM process discussed in this plan, El Metro may begin developing safety performance indicators to help inform management on safety related investments.

G. Safety Performance Target Coordination – 673.15(a)(b)

El Metro will make our SPTs available to TxDOT and the Laredo Urban Transportation Study to aid in those agencies’ respective regional and long-range planning processes. To the maximum extent practicable, El Metro will coordinate with TxDOT and the MPO in the selection of State and MPO SPTs as documented in the Interagency Memorandum of Understanding (MOU) (Appendix A).

Each year during the FTA Certifications and Assurances reporting process, El Metro will transmit any updates to our SPTs to both the Laredo Urban Transportation Study and TxDOT (unless those agencies specify another time in writing).

4. SAFETY MANAGEMENT SYSTEMS – 673 SUBPART C

As noted previously, FTA has adopted SMS as the basis for improving safety across the public transportation industry. In compliance with the NSP, National Public Transportation Safety Plan, and 49 CFR Part 673, El Metro is adopting SMS as the basis for directing and managing safety and risk at our agency. El Metro has always viewed safety as a core business function. All levels of management and employees are accountable for appropriately identifying and effectively managing risk in all activities and operations in order to deliver improvements in safety and reduce risk to the lowest practical level during service delivery.

SMS is comprised of four basic components: SMP, SRM, SA, and SP. The SMP and SP are the enablers that provide structure and supporting activities that make SRM and SA possible and sustainable. The SRM and SA are the processes and activities for effectively managing safety as presented in Figure 2.

FIGURE 2: SAFETY MANAGEMENT SYSTEMS



Implementing SMS at El Metro will be a major undertaking over the next several years. This ASP is the first step to putting in place a systematic approach to managing the agency's risk. El Metro has already taken several steps to implement SMS, such as developing this initial ASP and designating a CSO. During the first year of implementation, El Metro will identify SMS roles and responsibilities and key stakeholder groups, identify key staff to support implementation, and ensure the identified staff receive SMS training. El Metro will also develop a plan for implementing SMS, inform stakeholders about the ASP, and discuss our progress toward implementation with the City of Laredo, the Laredo Mass Transit Board and our agency's planning partners.

A. Safety Risk Management – 673.25

By adopting this ASP, El Metro is establishing the SRM process presented in Figure 3 for identifying hazards and analyzing, assessing and mitigating safety risk in compliance with the requirements of 49 CFR Part 673.25. The SRM processes described in this section are designed to implement the El Metro SMS.

FIGURE 3: SAFETY RISK MANAGEMENT PROCESS



The implementation of the SRM component of the SMS will be carried out over the course of the next year. The SRM components will be implemented through a program of improvement during which the SRM processes will be implemented, reviewed, evaluated, and revised, as necessary, to ensure the processes are achieving the intended safety objectives as the processes are fully incorporated into El Metro's SOPs.

The SRM is focused on implementing and improving actionable strategies that El Metro has undertaken to identify, assess and mitigate risk. The creation of a Risk Register provides an accessible resource for documenting the SRM process, tracking the identified risks, and documenting the effectiveness of mitigation strategies in meeting defined safety objectives and performance measures. The draft Risk Register is presented in Figure 4.

FIGURE 4: DRAFT RISK REGISTER

Hazard	Type	Likelihood	Consequence	Resolution

What is wrong?

What could happen

What could mitigate this?

As the SRM process progresses through the steps of identifying what may be wrong, what could happen as a result, and what steps El Metro is taking to resolve the risk and mitigate the hazard, the CSO completes and publishes the various components of the Risk Register. These components include the use of safety hazard identification, safety risk assessment, and safety risk mitigation, as described in the following sections.

I. Safety Hazard Identification – 673.25(b)

El Metro currently has a Job Safety Checklist (Monthly Safety Walk Checklist) and a Safety Equipment Checklist, both of which are found in Section X of the *Safety Policy* (Appendix A). These checklists provide a means of regularly inspecting job sites and equipment to identify potential hazards before they result in negative safety outcomes. El Metro has a Hazard Communication Program located in Section 9 of the *General Rules, Regulations and Policies Employee Handbook*. This program is based on the requirements of the Occupational Safety Health Administration (OSHA)’s Hazard Communication Standard. In addition, El Metro’s *Maintenance and Facility Plan* (Appendix A) details procedures for preventative maintenance for vehicles and facilities. Although the current procedures have been effective in achieving our safety objectives, to ensure compliance with 49 CFR Part 673, El Metro is working to implement the following expanded SRM process.

The El Metro SRM process is a forward-looking effort to identify safety hazards that could potentially result in negative safety outcomes. In the SRM process, a hazard is any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or, damage to the environment.

Hazard identification focuses on out-of-the-norm conditions that need special attention or immediate action, new procedures, or training to resolve a condition that is unacceptable and return conditions to an acceptable level. El Metro uses a variety of mechanisms for identifying and documenting hazards, namely:

- Through training and reporting procedures, El Metro ensures personnel can identify hazards and that each employee clearly understands that the employee has a responsibility to immediately report any safety hazards identified to the employee's supervisors. Continued training helps employees to develop and improve the skills needed to identify hazards.
- Employee hazard training coupled with the ESRP ensures that El Metro has full use of information from frontline employees for hazard identification.
- Upon receiving the hazard report, Supervisors/Department Heads communicate the identified hazard to the Safety & Training Coordinator or CSO and the CSO will register the hazard into the risk register for risk assessment, classification and mitigation.
- In carrying out the risk assessment, the CSO uses standard reporting forms (e.g. *Facility (Lessee) Inspection Work Sheet (Appendix A)* and *Fixed Route Trip Cards* to mitigate mechanical based safety hazards that are identified) and other reports completed on a routine basis by administrative, operations and maintenance. The El Metro *Employee Safety Reporting Program (Appendix A)* contains procedures for flagging and reporting hazards as a part of day-to-day operations using different avenues to report, anonymous or not.
- Supervisors are responsible for performing and documenting regular safety assessments, which include reporting and recommending methods to reduce identified hazards.
- El Metro uses incident reports and records to determine specific areas of training that need to be covered with employees to ensure safety hazard identification is continually improved, and thus ensure that hazards are identified before an event recurrence.
- Incident reports are also analyzed by the SMS team (Safety & Training Coordinator and Chief Safety Officer) to identify any recurring patterns or themes that would help to identify underlying hazards and root causes of the event that can be mitigated to prevent recurrence.
- If a hazard is such that an employee would be reluctant to report the information due to perceived negative consequences (e.g. disciplinary action), alternative, anonymous reporting mechanisms are available through an anonymous suggestion box outside Operations Department Offices, an anonymous online reporting form on www.elmetrotransit.com, or other secure mechanism.
- To increase the safety knowledge of our agency, the CSO, key safety personnel, SPAC Committee and qualified personnel from the respective department are also encouraged to participate in

available professional development activities and peer-to-peer exchanges as a source of expertise and information on lessons learned and best practices in hazard identification.

- Other sources for hazard identification include:
 - ESRP
 - Inspections of personnel job performance, vehicles, facilities and other data
 - Investigations of safety events
 - Safety trend analysis on data currently collected
 - Training and evaluation records
 - Internal safety audits
 - External sources of hazard information could include:
 - FTA and other federal or state authorities
 - Reports from the public
 - Safety bulletins from manufacturers or industry associations

In addition to identifying the hazard, the hazard identification process also classifies the hazard by type (organizational, technical or environmental) to assist the CSO in identifying the optimal combination of departmental leadership and qualified personnel from the respective department to select in assembling the safety risk assessment team.

The various hazard types can also be categorized by subcategory for each type. For example, organizational hazards can be subcategorized into resourcing, procedural, training or supervisory hazards. Each of the subcategories implies different types of mitigation strategies and potentially affect overall agency resources through varying costs for implementation. Technical hazards can be subcategorized into operational, maintenance, design and equipment. Additionally, environmental hazards can be subcategorized into weather and natural, which is always a factor for every operation.

II. Safety Risk Assessment – 673.25(c)

As part of the new SRM process, El Metro has developed methods to assess the likelihood and severity of the consequences of identified hazards, and prioritizes the hazards based on the safety risk. The process continues the use of the Risk Register described in the previous section to address the next two components.

To accurately assess a risk, El Metro may need to perform an investigation. El Metro currently investigates accidents or crashes in accordance to the *LTMI Employee Accident / Incident Investigation and Reporting Standard Operating Procedures SOP-AIIP-201* (Appendix A) but will need to develop a full investigation procedure to inform the SRM process. The investigation procedure will start with *LTMI Employee Accident / Incident Investigation and Reporting Standard Operating Procedures SOP-AIIP-201* and the framework found in the *General Rules, Regulations and Policies Employee Handbook* and will be developed to cover all risk assessment. Once fully developed, the document will become the

Investigation SOP. The SOP will include accident investigation procedures as well as risk investigation procedures. These procedures will be used to investigate risks identified from multiple sources including the ESRP.

Safety risk is based on an assessment of the likelihood of a potential consequence and the potential severity of the consequences in terms of resulting harm or damage. The risk assessment also considers any previous mitigation efforts and the effectiveness of those efforts. The results of the assessment are used to populate the third and fourth components of the Risk Register as presented in Figure 5.

FIGURE 5: SAFETY RISK ASSESSMENT STEPS IN POPULATING THE RISK REGISTER

Hazard	Type	Likelihood	Consequence	Resolution

The risk assessment is conducted by the CSO and their risk management team through the safety compliance committee supplemented by qualified personnel from the respective department or section to which the risk applies. The process employs a safety risk matrix, similar to the one presented in Figure 6, that allows the safety team to visualize the assessed likelihood and severity, and to help decision-makers understand when actions are necessary to reduce or mitigate safety risk.

FIGURE 6: SAFETY RISK ASSESSMENT MATRIX

RISK ASSESSMENT MATRIX				
SEVERITY LIKELIHOOD	Catastrophic (1)	Critical (2)	Marginal (3)	Negligible (4)
Frequent (A)	High	High	High	Medium
Probable (B)	High	High	Medium	Medium
Occasional (C)	High	Medium	Medium	Low
Remote (D)	Medium	Medium	Low	Low
Improbable (E)	Medium	Low	Low	Low

Although the current version of the matrix relies heavily on the examples and samples that are listed on the PTASP Technical Assistance Center website, lessons learned from the implementation process during the coming years will be used to customize the matrix that El Metro will use to address our unique operating realities and leadership guidance.

The Risk Assessment Matrix is an important tool. If a risk is assessed and falls within one of the red zones, the risk is determined to be unacceptable under existing circumstances. This determination means that management must take action to mitigate the situation. This is the point in the process when SRMs are developed. If the risk is assessed and falls within one of the yellow zones, the risk is determined to be acceptable, but monitoring is necessary. If the risk falls within one of the green zones, the risk is acceptable under the existing circumstances.

Once a hazard's likelihood and severity have been assessed, the CSO enters the hazard assessment into the Risk Register that is used to document the individual hazard and the type of risk it represents. This information is used to move to the next step, which is hazard mitigation.

III. Safety Risk Mitigation – 673.25(d)

The El Metro *Safety Policy* (Appendix A) contains a list of Basic Safety Rules that help to mitigate potential risks that may be present in the day-to-day operations of the agency. This list includes rules such as:

- All personnel will be required to attend safety meetings;
- Warning signs, barricades, and tags will be used to the fullest extent and shall be obeyed; and
- Horseplay on the jobsite is strictly prohibited.

El Metro also has several SOPs/policies/programs in place to help mitigate and prevent potential risks. These include, but are not limited to:

- Aerial Platform and Scissor Lift SOP;
- Powered Industrial Truck SOP;
- Electrical Safety Program; and
- Personal Protective Equipment SOP.

Over the next year, LTMI will hold staff meetings to discuss the Safety Risk Mitigation Process and Procedures. LTMI will provide Instruction-Led Training on Safety Risk Mitigation Process and Procedures to all key personnel and Department Heads. PTASP Technical Assistance Center Webinars will also be presented on respective topics. The process will also be presented to all employees and the Union.

In addition, as part of the *Employee Safety Reporting Program* (Appendix A), El Metro management and supervisors review all injury and illness documentation annually to analyze occurrences, identify trends, and plan courses of corrective action.

Upon completion of the risk assessment, the CSO, Safety and Training Coordinator and subject matter experts continue populating the Risk Register by identifying mitigations or strategies necessary to reduce the likelihood and/or severity of the consequences. The goal of this step is to avoid or eliminate

the hazard or, when elimination is not likely or feasible, to reduce the assessed risk rating to an acceptable level (Figure 7). However, mitigations do not typically eliminate the risk entirely.

FIGURE 7: RISK REGISTER MITIGATION COMPONENT

Hazard	Type	Likelihood	Consequence	Resolution

To accomplish this objective, the CSO, through the risk management team, works with qualified personnel from the respective department or section to which the risk applies. The risk management team then conducts a brainstorming exercise to elicit feedback from staff and supervisors with the highest level of expertise in the components of the hazard.

Documented risk resolution and hazard mitigation activities from previous Risk Register entries and the resolution’s documented level of success at achieving the desired safety objectives may also be reviewed and considered in the process. If the hazard is external (e.g., roadway construction by an outside agency) information and input from external actors or experts may also be sought to take advantage of all reasonably available resources and avoid any unintended consequences.

Once a mitigation strategy is selected and adopted, the strategy is assigned to an appropriate staff member or team for implementation. The assigned personnel and the personnel’s specific responsibilities are entered into the Risk Register. Among the responsibilities of the mitigation team leader is the documentation of the mitigation effort, including whether the mitigation was carried out as designed and whether the intended safety objectives were achieved. This information is recorded in the appendix to the Risk Register for use in subsequent SA activities and to monitor the effectiveness of the SRM program.

B. Safety Assurance – 673.27 (a)

Safety Assurance means processes within the El Metro Safety Management System that function to ensure a) the implementation and effectiveness of safety risk mitigation, and b) El Metro meets or exceeds our safety objectives through the collection, measurement, analysis and assessment of information.

SA helps to ensure early identification of potential safety issues. SA also ensures that safeguards are in place and are effective in meeting critical El Metro safety objectives and contribute towards SPTs.

I. Safety Performance Monitoring and Measuring – 673.27 (b)

As the first step in the El Metro SA program, El Metro collects and monitors data on safety performance indicators through a variety of mechanisms described in the following sections. Safety performance indicators can provide early warning signs about safety risks. El Metro currently relies primarily on lagging indicators representing negative safety outcomes that should be avoided or mitigated in the future. However, initiatives are underway to adopt a more robust set of leading indicators that monitor conditions that are likely to contribute to negative outcomes in the future. In addition to the day-to-day monitoring and investigation procedures detailed below, El Metro will review and document the safety performance monitoring and measuring processes as part of the annual update of this ASP.

MONITORING COMPLIANCE AND SUFFICIENCY OF PROCEDURES – 673.27 (B)(1)

El Metro monitors our system for personnel compliance with operations and maintenance procedures and also monitors these procedures for sufficiency in meeting safety objectives. A list of documents describing the safety related operations and maintenance procedures cited in this ASP is provided in Appendix A of this document.

Supervisors monitor employee compliance with El Metro standard operating procedures through direct observation and review of information from internal reporting systems such as the *Employee Safety Reporting Program* and *Customer Comment/Complaint Procedure and Record Retention Policy* (Appendix A) from both employees and customers.

El Metro addresses non-compliance with standard procedures for operations and maintenance activities through a variety of actions, including revision to training materials and delivery of employee and supervisor training if the non-compliance is systemic. If the non-compliance is situational, then activities may include supplemental individualized training, coaching, and heightened management oversight, among other remedies.

Sometimes personnel are fully complying with the procedures, but the operations and maintenance procedures are inadequate and pose the risk of negative safety outcomes. In this case, the cognizant person submits the deficiency or description of the inadequate procedures to the SRM process. Through the SRM process, the SRM team will then evaluate and analyze the potential organizational hazard and assign the identified hazard for mitigation and resolution, as appropriate. The SRM team will also conduct periodic self-evaluation and mitigation of any identified deficiencies in the SRM process itself.

MONITORING OPERATIONS – 673.27(B)(2)

Department Heads are required to monitor investigation reports of safety events and SRM resolution reports to monitor the department's operations to identify any safety risk mitigations that may be ineffective, inappropriate, or not implemented as intended. If it is determined that the safety risk mitigation did not bring the risk to an acceptable level or otherwise failed to meet safety objectives, then the Department Head resubmits the safety risk/hazard to the SRM process. The CSO will work with

the Safety & Training Coordinator and qualified personnel from the respective department to re-analyze the hazard and consequences and identify additional mitigation or alternative approaches to implementing the mitigation.

II. Safety Event Investigation – 673.27(B)(3)

El Metro currently conducts investigations of safety events. From an SA perspective, the objective of the investigation is to identify causal factors of the event and to identify actionable strategies that El Metro can employ to address any identifiable organizational, technical or environmental hazard at the root cause of the safety event.

El Metro uses the After Accident Investigation procedure located in the *General Rules, Regulations and Policies Employee Handbook* and the *LTM Employee Accident / Incident Investigation and Reporting Standard Operating Procedures SOP-AIIP-201* to identify safety and operational risks based on individual assets.

Safety Event Investigations that seek to identify and document the root cause of an accident or other safety event are a critical component of the SA process because they are a primary resource for the collection, measurement, analysis and assessment of information. El Metro gathers a variety of information for identifying and documenting root causes of accidents and incidents, including but not limited to:

1. Stop, identify yourself and Radio Dispatch immediately giving them the location and your bus number. (A Supervisor or Dispatcher will call the Policy and Ambulance when necessary). Employees are required to report all accidents/incidents within five (5) minutes after the occurrence. Dispatch will notify the Safety and Training Coordinator of the accident/incident.
2. Assist the injured person, but do not move them except to avoid danger. Use extreme care and protect yourself avoiding contact with bodily fluids.
3. Secure full names, addresses, and telephone numbers of:
 - a. Passengers
 - b. Other driver
 - c. Injured persons
 - d. Witnesses
 - e. Transporting motorists
4. Make a sketch showing names of streets, positions of cars, and direction of traffic at the time of the accident.
5. Do not argue, accuse, nor give statements to the media or bystanders.
6. Do not discuss the mechanical condition of the vehicle with anyone except Company Supervisory personnel
7. Refer the operator for required drug and alcohol testing in compliance with 49 CFR § 655.44 Post-accident testing, if the safety event meets the definition of accident in 49 CFR § 655.4.

8. Dispatcher on duty will give the Operator an incident report to complete before the Operator leaves that day. Dispatcher will transmit the Operator's report to the Safety & Training Coordinator.
9. The CSO and the Safety & Training Coordinator, working with qualified personnel from the respective department, evaluate the incident reports and other available information to determine the root cause of the accident/event. Follow up with driver or other cognizant parties may be necessary to elicit additional information.
10. The CSO identifies any hazards noted in the incident report and refers those hazards to the SRM process.

After the accident has been cleared up by law enforcement, an employee shall not leave the scene until released by Dispatcher or Supervisor. It is extremely important that the employee creates a complete, specific, and legible report. The employee must complete and submit the report of the accident by the end of his/her work schedule. A complete, specific, and legible report must be made for every accident or incident, however slight, which occurs on or near a company vehicle in case of a passenger or pedestrian accident; even if the person involved declines to give his name or states that he is unhurt, a full report should be made.

The El Metro *Drug and Alcohol Policy* (Appendix A) requires that any accidents resulting in a fatality will subject any involved El Metro employee to post-accident drug and alcohol testing. The policy also provides the conditions under which employees will be subject to post-accident drug and alcohol testing following an accident resulting in no fatalities.

In addition, the *General Rules, Regulations and Policies Employee Handbook* contains procedures for how to react to and report other more specific incidents, such as hit and runs, fires on vehicles, and disabled vehicles.

MONITORING INTERNAL SAFETY REPORTING PROGRAMS – 673.27(B)(4)

As a primary part of the internal safety reporting program, our agency monitors information reported through the ESRP. When a report originating through the complaint process documents a safety hazard, the supervisor submits the hazards identified through the internal reporting process, including previous mitigation in place at the time of the safety event. The supervisor submits the hazard report to the SRM process to be analyzed, evaluated and, if appropriate, assigned for mitigation/resolution.

OTHER SAFETY ASSURANCE INITIATIVES

Because leading indicators can be more useful for safety performance monitoring and measurement than lagging indicators, El Metro is undertaking efforts to implement processes to identify and monitor more leading indicators or conditions that have the potential to become or contribute to negative safety outcomes. This may include trend analysis of environmental conditions through monitoring National Weather Service data; monitoring trends toward or away from meeting the identified SPTs; or other indicators as appropriate.

C. Safety Promotion – 673.29

Management support is essential to developing and implementing SMS. SP includes all aspects of how, why, when and to whom management communicates safety related topics. SP also includes when and how training is provided. The following sections outline both the safety competencies and training that El Metro will implement and how safety related information will be communicated.

I. Safety Competencies and Training – 673.29(a)

El Metro provides comprehensive training to all employees regarding each employee's job duties and general responsibilities. This training includes safety responsibilities related to the employee's position. In addition, regular Operations and Maintenance safety meetings are held to ensure that safety related information is relayed to the key members of our agency's safety processes.

As part of SMS implementation, El Metro will be conducting the following activities:

- Conduct a thorough review of all current general staff categories (administrative, driver, supervisor, mechanic, maintenance, etc.) and the respective staff safety related responsibilities.
- Assess the training requirements spelled out in 49 CFR Part 672 and the various courses required for different positions. (El Metro is not subject to the requirements under 49 CFR Part 672 but will review the training requirements to understand what training is being required of other larger agencies in the event these trainings might be useful).
- Assess the training material available on the FTA PTASP Technical Assistance Center website.
- Review other training material available from industry sources such as the Community Transportation Association of America and the American Public Transportation Association websites.
- Develop a set of competencies and trainings required to meet the safety related activities for each general staff category.
- Develop expectations for ongoing safety training and safety meeting attendance.
- Develop a training matrix to track progress on individuals and groups within the organization.
- Adjust job notices associated with general staff categories to ensure that new personnel understand the safety related competencies and training needs and the safety related responsibilities of the job.
- Include refresher training in all trainings and apply it to agency personnel and contractors.

LTMI SMS implementation is important and the CSO is the resource person for providing a corporate perspective on LTMI's approach to safety management. OSHA, FTA, TXDOT and SMS training will be provided to key personnel and all Department Heads. Courses, conferences or training seminars will include but are not limited to:

- Defensive driver training
- Behind-the-wheel training
- On-the-job training for maintenance functions
- Occupational safety training
- Informal staff meetings
- Webinars
- Formal certification from accredited institutions
- Other forms of training required for employees and contractors designated as “directly responsible for safety”

Safety Management training topics may include:

A. Initial Safety Training for All Staff

1. Basic principles of safety management including the integrated nature of SMS, risk management, safety culture, etc.
2. Corporate safety goals and objectives, safety policy, and safety standards
3. Importance of complying with the safety policy and SMS procedures, and the approach to disciplinary actions for different safety issues
4. Organizational structure, roles and responsibilities of staff in relation to safety
5. Transit agency’s safety record, including areas of systemic weakness
6. Requirements for ongoing internal assessment of organization safety performance (e.g. employee surveys, safety audits, and assessments)
7. Reporting accidents, incidents, and perceived hazards
8. Lines of communication for safety managers
9. Feedback and communication methods for the dissemination of safety information
10. Safety promotion and information dissemination

B. Safety Training for Operations and Maintenance Personnel

1. Unique hazards facing operational personnel
2. Seasonal safety hazards and procedures (e.g. winter operations)
3. Procedures for hazard reporting
4. Procedures for reporting safety events (accidents and incidents)
5. Emergency procedures

C. Safety Training for Key Personnel and Department Heads

1. Principles of the SMS
2. Management responsibilities and accountabilities for safety
3. Legal issues (e.g. liability)

D. Training for the Chief Safety Officer and Safety & Training Coordinator

1. Familiarization with different transit modes, types of operation, routes, etc.
2. Understanding the role of human performance in safety event causation and prevention
3. Operation of the SMS
4. Investigating safety events
5. Crisis management and emergency response planning
6. Safety promotion
7. Communication skills
8. Performing safety audits and assessments
9. Monitoring safety performance
10. National Transit Database (NTD) safety event reporting requirements

II. Safety Communication – 673.29(b)

El Metro regularly communicates safety and safety performance information throughout our agency's organization that, at a minimum, conveys information on hazards and safety risks relevant to employees' roles and responsibilities and informs employees of safety actions taken in response to reports submitted through the ESRP (noted in Section 3.A.I) or other means.

Over the next year, LTMI will have a staff meeting to discuss Safety Communication Processes and Methods. PTASP TAC Webinars will be presented on respective topics and all approved Processes and methods will be provided to the Union.

Methods of communication are:

- New Employee Orientation;
- Driver's Training;
- Internal Marketing Strategies;
- Instructor-Led Training;
- Safety Meetings;
- El Metro Toolbox Talk (Safety Bulletin);
- Safety Planning Advisory Committee;
- Staff Meetings;
- Department bulletin boards;
- Employee handbooks;
- Safety plans and strategies are communicated throughout the organization to all personnel; and
- Significant events and investigation outcomes associated with the organization are communicated to all personnel, including contracted organizations where appropriate.

Safety plans and strategies are communicated throughout the organization to all personnel. Organizational roles and duties in SMS are presented and explained to SMS key staff. Significant events and investigation outcomes associated with the LTMI are communicated to all personnel, contracted organizations and the Union where appropriate.

El Metro reports any safety related information to the Laredo Mass Transit Board at their regular meetings and will begin including safety performance information. In addition, El Metro holds regularly scheduled meetings with drivers to ensure that any safety related information is passed along that would affect the execution of the drivers' duties. El Metro also posts safety related and other pertinent information in a common room for all employees at all worksites and holds monthly safety and training meetings with all employees.

El Metro will begin systematically collecting, cataloging, and, where appropriate, analyzing and reporting safety and performance information to all staff. To determine what information should be reported, how the information should be reported and to whom, El Metro will answer the following questions:

- What information does this individual need to do their job?
- How can we ensure the individual understands what is communicated?
- How can we ensure the individual understands what action must be taken as a result of the information?
- How can we ensure the information is accurate and kept up-to-date?
- Are there any privacy or security concerns to consider when sharing information? If so, what should we do to address these concerns?

In addition, El Metro will review our current communications strategies and determine whether others are needed. As part of this effort, El Metro has conducted, and will continue to conduct, a Safety Culture Survey to understand how safety is perceived in the workplace and what areas El Metro should be addressing to fully implement a safety culture at our agency.

5. APPENDIX A

TABLE 8: PTASP SUPPORTING DOCUMENTS

File Name	Revision Date
Accidents Incidents 2018.xlsx	2018
CIRCULATOR C1 Bifold.pdf	
COA 2015 Report.pdf	November, 2005
Customer Reporting Procedures.pdf	July, 2018
Drug and Alcohol Policy.pdf	1/15/2019
El Metro 2016 Transit Develop Appendix C.pdf	2016
El Metro 2016 Transit Development Plan.pdf	2016
El Metro 2016 Transit Development Plan_Appendix A.pdf	2016
El Metro 2016 Transit Development Plan_Appendix B.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 1.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 2.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 3.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 4.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 5.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 6.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 7.pdf	2016

File Name	Revision Date
El Metro 2016 Transit Development Plan_Chapter 8.pdf	2016
El Metro 2016 Transit Development Plan_Chapter 9.pdf	2016
El Metro 2016 Transit Development Plan_Executive Summary.pdf	2016
El Metro Overview.docx	
El Metro Safety Policy 9 19 2019.doc	9/19/2019
El Metro TAMP_Appendix A.pdf	
El Metro TAMP_Appendix B.pdf	
El Metro TAMP_Chapter 1.pdf	January, 2017
El Metro TAMP_Chapter 2.pdf	January, 2017
El Metro TAMP_Chapter 3.pdf	January, 2017
El Metro TAMP_Chapter 4.pdf	January, 2017
El Metro TAMP_Chapter 5.pdf	January, 2017
El Metro TAMP_Combined.pdf	January, 2017
El Metro Vehicle Listing FY 18-19_Updated 6-20.19_Granados Copy.xlsx	6/20/2019
Employee Handbook 8-08-2017 final.docx	July, 2017
Ethics and Compliance Program.pdf	7/21/2017
FTA 2018 TRIENNIAL FINAL REPORT.pdf	6/11/2018
Information Security Incident Response Plan.pdf	4/22/2019
Job Descriptions.pdf	
Laredo EL Metro Asset Inventory 022717.xlsm	2/27/2017

File Name	Revision Date
Laredo Mass Transit Board.docx	
Laredo Transit Management and Teamsters 657 2018-21 CBA.pdf	10/1/2018
Laredo Transit Management, Inc - 2017 Agency Profile.pdf	2017
Laredo_MPO_Boundary_Map.pdf	December, 2007
LTMI Aerial Platform and Scissor Lift SOP_Rev 9-19-19.docx	10/8/2019
LTMI Bloodborne Exposure Control_Rev_9-19-19.doc	June, 2017
LTMI Electrical Safety Program_9-20-19.docx	10/8/2019
LTMI Emergency Action Plan_9-20-19.docx	10/8/2019
LTMI Employee Accident Incident Investigation and Reporting SOP.docx	3/18/2020
LTMI_EMPLOYEE_SAFETY_REPORTING_PROGRAM 3 9 2020.docx	3/9/2020
LTMI Fall Protection Policy_9-20-19.docx	10/8/2019
LTMI Funding Sources.docx	2019
LTMI Hazard Communication_9-20-19.docx	1/1/2015
LTMI Lockout Tagout_9-20-19.docx	1/27/2006
LTMI Powered Industrial Truck SOP_Rev 9-19-19.docx	9/19/2019
LTMI PPE Policy_Rev 9-19-19.docx	10/8/2019
LTMI Purchasing Policy_Revised Oct 2, 2018_Tri2018_PDF.pdf	10/2/2018

File Name	Revision Date
LTMI Respiratory Protection Program_9-20-19.docx	10/8/2019
LTMI_SAFETY_PERFORMANCE_2 10 2020.xlsx	2/10/2020
Maintenance & Facility Plan_Updated 8-8-18_pdf Format (1).pdf	8/8/2018
MOU- LAREDO MPO-TXDOT-TRANSIT - 2018- EXECUTED.pdf	2/20/2018
MPO.pdf	
EL_METRO_ORGANIZATIONAL_CHART 3 26 2020.docx	3/26/2020
Performance Measures.pdf	
Route 1 Bifold.pdf	
Route 2A Bifold.pdf	
Route 2B Bifold.pdf	
Route 3 Bifold.pdf	
Route 4 Bifold.pdf	
Route 5 Bifold.pdf	
Route 6 Bifold.pdf	
Route 7 Bifold.pdf	
Route 8A Bifold.pdf	
Route 8B Bifold.pdf	
Route 9 Bifold.pdf	
Route 10 Bifold.pdf	
Route 11 Bifold.pdf	
Route 12A Bifold.pdf	
Route 12B Bifold.pdf	
Route 13 Bifold.pdf	
Route 14 Bifold.pdf	
Route 15 Bifold.pdf	
Route 16 Bifold.pdf	
Route 17 Bifold.pdf	
Route 18 Bifold.pdf	
Route 19 Bifold.pdf	
Route 20 Bifold.pdf	
Safety Inspections Audits.pdf	

File Name	Revision Date
LTFI SAFETY MANAGEMENT POLICY.docx	3/17/2020
SPAC Meetings.pdf	
SPAC MEMBERSHIP 5 22 2017 (3).docx	5/24/2017
TAPTCO Training.pdf	

A. Glossary of Terms

Accident: means an event that involves any of the following: a loss of life; a report of a serious injury to a person; a collision of transit vehicles; an evacuation for life safety reasons; at any location, at any time, whatever the cause.

Accountable Executive (typically the highest executive in the agency): means a single, identifiable person who has ultimate responsibility for carrying out the SMS of a public transportation agency, and control or direction over the human and capital resources needed to develop and maintain both the agency’s PTASP, in accordance with 49 U.S.C. 5329(d), and the agency’s TAM Plan in accordance with 49 U.S.C. 5326.

Agency Leadership and Executive Management: means those members of agency leadership or executive management (other than an Accountable Executive, CSO, or SMS Executive) who have authorities or responsibilities for day-to-day implementation and operation of an agency’s SMS.

Chief Safety Officer (CSO): means an adequately trained individual who has responsibility for safety and reports directly to a transit agency’s chief executive officer, general manager, president, or equivalent officer. A CSO may not serve in other operational or maintenance capacity, unless the CSO is employed by a transit agency that is a small public transportation provider as defined in this part, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

Corrective Maintenance: Specific, unscheduled maintenance typically performed to identify, isolate, and rectify a condition or fault so that the failed asset or asset component can be restored to a safe operational condition within the tolerances or limits established for in-service operations.

Equivalent Authority: means an entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient’s PTASP.

Event: means an accident, incident, or occurrence.

Federal Transit Administration (FTA): means the Federal Transit Administration, an operating administration within the United States Department of Transportation.

Hazard: means any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment.

Incident: means an event that involves any of the following: a personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency.

Investigation: means the process of determining the causal and contributing factors of an accident, incident, or hazard, for the purpose of preventing recurrence and mitigating risk.

Key staff: means a group of staff or committees to support the Accountable Executive, CSO, or SMS Executive in developing, implementing, and operating the agency's SMS.

Major Mechanical Failures: means failures caused by vehicle malfunctions or subpar vehicle condition which requires that the vehicle be pulled from service.

National Public Transportation Safety Plan (NSP): means the plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53.

Occurrence: means an event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a transit agency.

Operator of a Public Transportation System: means a provider of public transportation as defined under 49 U.S.C. 5302(14).

Passenger: means a person, other than an operator, who is on board, boarding, or alighting from a vehicle on a public transportation system for the purpose of travel.

Performance Measure: means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

Performance Target: means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the FTA.

Preventative Maintenance: means regular, scheduled, and/or recurring maintenance of assets (equipment and facilities) as required by manufacturer or vendor requirements, typically for the purpose of maintaining assets in satisfactory operating condition. Preventative maintenance is conducted by providing for systematic inspection, detection, and correction of anticipated failures either before they occur or before they develop into major defects. Preventative maintenance is maintenance, including tests, measurements, adjustments, and parts replacement, performed specifically to prevent

faults from occurring. The primary goal of preventative maintenance is to avoid or mitigate the consequences of failure of equipment.

Public Transportation Agency Safety Plan (PTASP): means the documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and this part.

Risk: means the composite of predicted severity and likelihood of the potential effect of a hazard.

Risk Mitigation: means a method or methods to eliminate or reduce the effects of hazards.

Road Calls: means specific, unscheduled maintenance requiring either the emergency repair or service of a piece of equipment in the field or the towing of the unit to the garage or shop.

Safety Assurance (SA): means the process within a transit agency's SMS that functions to ensure the implementation and effectiveness of safety risk mitigation and ensures that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information.

Safety Management Policy (SMP): means a transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of the agency's employees regarding safety.

Safety Management System (SMS): means the formal, top-down, data-driven, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards.

Safety Management System (SMS) Executive: means a CSO or an equivalent.

Safety Objective: means a general goal or desired outcome related to safety.

Safety Performance: means an organization's safety effectiveness and efficiency, as defined by safety performance indicators and targets, measured against the organization's safety objectives.

Safety Performance Indicator: means a data-driven, quantifiable parameter used for monitoring and assessing safety performance.

Safety Performance Measure: means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

Safety Performance Monitoring: means activities aimed at the quantification of an organization's safety effectiveness and efficiency during service delivery operations, through a combination of safety performance indicators and safety performance targets.

Safety Performance Target (SPT): means a quantifiable level of performance or condition, expressed as a value for a given performance measure, achieved over a specified timeframe related to safety management activities.

Safety Promotion (SP): means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.

Safety Risk: means the assessed probability and severity of the potential consequence(s) of a hazard, using as reference the worst foreseeable, but credible, outcome.

Safety Risk Assessment: means the formal activity whereby a transit agency determines SRM priorities by establishing the significance or value of its safety risks.

Safety Risk Management (SRM): means a process within a transit agency's Safety Plan for identifying hazards, assessing the hazards, and mitigating safety risk.

Safety Risk Mitigation: means the activities whereby a public transportation agency controls the probability or severity of the potential consequences of hazards.

Safety Risk Probability: means the likelihood that a consequence might occur, taking as reference the worst foreseeable, but credible, condition.

Safety Risk Severity: means the anticipated effects of a consequence, should the consequence materialize, taking as reference the worst foreseeable, but credible, condition.

Serious Injury: means any injury which:

- Requires hospitalization for more than 48 hours, commencing within seven days from the date that the injury was received;
- Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
- Causes severe hemorrhages, nerve, muscle, or tendon damage;
- Involves any internal organ; or
- Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

Small Public Transportation Provider: means a recipient or subrecipient of Federal financial assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operate a rail fixed guideway public transportation system.

State: means a State of the United States, the District of Columbia, or the Territories of Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.

State of Good Repair: means the condition in which a capital asset is able to operate at a full level of performance.

State Safety Oversight Agency: means an agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth in 49 CFR part 674.

Transit Agency: means an operator of a public transportation system.

Transit Asset Management (TAM) Plan: means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation, as required by 49 U.S.C. 5326 and 49 CFR part 625.

Vehicle Revenue Miles (VRM): means the miles that vehicles are scheduled to or actually travel while in revenue service. Vehicle revenue miles include layover/recovery time and exclude deadhead; operator training; vehicle maintenance testing; and school bus and charter services.

B. Additional Acronyms Used

ASP: Agency Safety Plan

El Metro: Laredo Transit Management, Inc./El Metro Transit, City of Laredo, Texas

ESRP: Employee Safety Reporting Program

FAST Act: Fixing America's Surface Transportation Act

LTMI: Laredo Transit Management, Inc.

MAP-21: Moving Ahead for Progress in the 21st Century Act

MOU: Memorandum of Understanding

MPO: Metropolitan Planning Organization

NTD: National Transit Database

OSHA: Occupational Safety and Health Administration

SOP: Standard Operating Procedure

SPAC: Safety Planning Advisory Committee

TxDOT: Texas Department of Transportation

6. APPENDIX B

A. City Council/Board Minutes or Resolution

RESOLUTION NO. 2020-RT-06

AUTHORIZING THE LAREDO MASS TRANSIT BOARD TO APPROVED THE TEXAS DEPARTMENT OF TRANSPORTATION SPONSORED PUBLIC TRANSPORTATION AGENCY SAFETY PLAN AND ESTABLISHING SAFETY PERFORMANCE TARGETS FOR THE LAREDO TRANSIT MANAGEMENT INC. (LTMI).

WHEREAS, Safety is a core business function of all public transportation providers and should be systematically applied to every aspect of service delivery, as the Federal Transit Administration (FTA) has adopted the principles and methods of Safety Management Systems (SMS) as the basis for enhancing the safety of public transportation in the United States; and

WHEREAS, On July 19, 2018 the FTA published the Public Transportation Agency Safety Plan (PTASP) Final Rule, 49 CFR Part 673, which took effect July 19, 2019 requiring all FTA Section 5307 recipient transit agencies to, within one calendar year after July 19, 2019, establish a PTASP that meets the requirements of Part 673; and

WHEREAS, The PTASP, and subsequent updates, must be signed by the Accountable Executive and approved by the agency's Board of Directors, or an Equivalent Authority; and

WHEREAS, PTASP must document the processes and activities related to Safety Management System (SMS) implementation and include performance targets based on the safety performance measures established under the National Public Transportation Safety Plan, with those targets being shared with the Laredo-Webb County Area Metropolitan Planning Organization formerly known as the Laredo Urban Transportation Study Metropolitan Planning Organization (LUTS) and the Texas Department of Transportation (TxDOT); and

WHEREAS, The initial PTASP for El Metro Transit has been drafted by TxDOT per 49 CFR 673.11(d) and will remain in effect until the Laredo Transit Management Inc. (LTMI) has drafted the next version; and

WHEREAS, El Metro Transit is dedicated to ensuring that the necessary processes are in place to accomplish both enhanced safety at the local level and the goals of the NSP, as the SMS helps organizations improve upon their safety performance by supporting the institutionalization of beliefs, practices, and procedures for identifying, mitigating, and monitoring safety risks;

NOW THEREFORE, BE IT RESOLVED BY THE MASS TRANSIT BOARD OF THE CITY OF LAREDO THAT:

Section 1. the Laredo Mass Transit Board approves this PTASP and the tenets of SMS including a Safety Management Policy (SMP) and the processes for Safety Risk Management (SRM), Safety Assurance (SA), and Safety Promotion (SP), per 49 U.S.C. 5329(d)(1)(A); and as

Section 2. Safety has always been a primary function at LTMI, this PTASP lays out a process to fully implement and review an SMS on a yearly and ongoing basis in order to continue compliance with the PTASP final rule.

PASSED BY THE MASS TRANSIT BOARD AND APPROVED BY THE MAYOR ON THIS THE

4th DAY OF May, 2020.


PETE SAENZ
MAYOR

ATTEST:


JOSE A. VALDEZ, JR.
CITY SECRETARY



APPROVED AS TO FORM:

BY 
for KRISTINA LAUREL HALE
CITY ATTORNEY

**LAREDO WEBB COUNTY AREA
METROPOLITAN PLANNING ORGANIZATION
ACTION ITEM**

DATE: 9-21-20	ITEM: IV-C.
<p>SUBJECT: MOTION(S) Motion to accept the ranking of firms that submitted proposals in response to the Request For Qualifications (RFQ) invitation issued for the development of the Comprehensive Operations Analysis (COA) of El Metro Project, and authorize contract negotiation fee.</p>	
INITIATED BY: Staff	STAFF SOURCE: J. Kirby Snideman, MPO Director
PREVIOUS COMMITTEE ACTION: None	
<p>BACKGROUND: The Laredo & Webb County Area Metropolitan Planning Organization (LW-CAMPO), in coordination with Laredo Transit Management Inc. (LTMI), locally known as El Metro, solicited Request For Qualifications (RFQ) for the development of a Comprehensive Operational Analysis (COA) study of El Metro’s service and operations. The objective of the plan is to evaluate both the current fixed route and paratransit bus service, and provide recommendations to improve the system’s service, efficiency, effectiveness, and connectivity. The RFQ Invitation was issued on May 20, 2020 and closed on June 2, 2020.</p>	
<p>The two (2) interested firms that responded are as follows:</p> <ol style="list-style-type: none"> 1. Stantec Consulting Services, Inc. 2. Parra & Co. in association with: <ul style="list-style-type: none"> • Able.City, San Antonio, Texas • Nelson Nygaard, Seattle, Washington • LAN - Lockwood, Andrews & Newman, Inc., Laredo, Texas • Liquid Studio Group, Laredo, Texas 	
<p>A committee was established to evaluate both submittals. The committee reviewed their qualifications and, developed their scores and rankings. Evaluation forms were due on Tuesday, August 25, 2020, at 2:00 P.M. Forms were received from the following members:</p> <ul style="list-style-type: none"> • Kirby Snideman – MPO Director • Claudia San Miguel – Transit, El Metro • Danny Magee – City Traffic Safety Department • Humberto “Tito” Gonzalez, Jr. – TxDOT • Sara Garza – TxDOT • Luis Perez-Garcia – Webb County Engineer 	
<p>The committee recommends <u>Stantec Consulting Services, Inc.</u> for the development of the project.</p>	
<p>Attachments:</p> <ul style="list-style-type: none"> • RFQ Invitation • RFQ Question & Answer • RFQ Submittal – Stantec Consulting Services, Inc. • RFQ Submittal – Parra & Co. • Evaluation Ranking Sheet 	
<p>FINANCIAL IMPACT: N/A</p>	
COMMITTEE RECOMMENDATION: Approval	STAFF RECOMMENDATION: Approval



RFQ FY20-055

RFQ MPO Comprehensive Operational Analysis (COA) of El Metro

Issue Date: 5/18/2020

Questions Deadline: 7/1/2020 12:00 PM (CT)

Response Deadline: 7/20/2020 05:00 PM (CT)

City of Laredo Purchasing

Contact Information

Contact: Eduardo Bernal

Address: Transit

401 Scott Street

Laredo, TX 78040

Phone: (956) 795-2288 x123

Email: ebernal@ci.laredo.tx.us

Event Information

Number: RFQ FY20-055
Title: RFQ MPO Comprehensive Operational Analysis (COA) of EI Metro
Type: Request For Qualifications
Issue Date: 5/18/2020
Question Deadline: 7/1/2020 12:00 PM (CT)
Response Deadline: 7/20/2020 05:00 PM (CT)
Notes: Bidders are strongly encouraged to submit their proposals electronically through use of Cit-E-Bid or in person - hand delivery. Mailed Bids (i.e. USPS, FedEx, UPS), telegraphic, or facsimile bids will not be considered.

Due to current COVID-19 crisis* Respondents are strongly encouraged to submit their proposals electronically through the use of Cit-E-Bid. If vendor needs to hand-delivered sealed RFQ, please follow steps below:

MANUAL BID DROP-OFF PROCEDURES NOTE: Manual Bids will only be accepted the first 45 minutes of the hour before they are due. For example, if bid is due at 4:00, bids will only be accepted between 3:00 and 3:45 p.m. 1. Please make sure that the bid is in a sealed envelope marked with the following: • Name of Bid • Name of Company submitting Bid • Address of Company submitting Bid
2. Place Bid Envelope on table right inside the door on the Houston Street side of City Hall. The receptionist will call the City Secretary's office to pick up.
3. If you need a copy of the time-stamped envelope, you will need to wait outside until we pick the envelope up, go back up to the 3rd floor to timestamp the envelope, make a copy of it and bring it back to you.
Thank you for your understanding and help at this time of trying to stay healthy and safe.

The City of Laredo has established a local vendor preference ordinance 2018-O-175. All informal and formal Requests for bids for contracts will be evaluated with a 5% preference for local vendors.

Ship To Information

Contact: Jose A. Valdez, Jr.
Address: City Secretary
City Hall
3rd floor
1110 Houston St
3rd floor
Laredo, TX 78043
Phone: (956) 791-7312

Billing Information

Contact: Jorge Jolly
Address: Accounts Payable
City Hall
2nd
PO Box 210
Laredo, TX 78042
Phone: (956) 791-7326
Email: jjolly@ci.laredo.tx.us

Bid Attachments

CIQ_Form.pdf

Conflict of Interest Form

Download

Form_1295- _Certificate_of_Interested_Parties.pdf

Certificate of Interested Parties

Download

Non-Collusive_Affidavit_Form.pdf

Non-Collusive Affidavit Form

Download

Requested Attachments

Non Collusive Affidavit form

(Attachment required)

Non Collusive Affidavit form: This form must be notarized and submitted as part of your bid to be considered complete.

Form 1295 Certificate of Interested Parties

Form 1295 Certificate of Interested Parties: This form will need to be submitted by the vendor through the Texas Ethics Commission website within 10 days of award of bid. If not, bid will become nulled

Proposal

(Attachment required)

Proposal: Submit your proposal based on RFQ specifications.

Bid Attributes

1 Award by Best Value

Proposal will be awarded based on evaluated criteria and to the bidder who provides the best value to the City of Laredo and who's proposed price and other factors have been considered in accordance to the provisions of Chapters 252 and 271 of the State of Texas – Local Government Code.in accordance to the provisions of Chapters 252 and 271 of the State of Texas – Local Government Code

I agree

(Required: Check if applicable)

2 Terms and Conditions for Request for Qualifications

• GENERAL TERMS AND CONDITIONS FOR STATEMENT OF QUALIFICATIONS

1. GENERAL CONDITIONS Interested firms (Respondents) are required to submit statements upon the following expressed conditions: A. Respondents shall thoroughly examine the specifications, schedule instructions and other contract documents. Once the award has been made, failure to read all specifications, instructions, and the contract documents, of the City shall not be cause to alter the original contract or for a Respondent to request additional compensation. B. Respondents shall make all investigations necessary to thoroughly inform themselves regarding the services being requested. No pleas of ignorance by the Respondent of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the Respondent to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents, will be accepted as a basis for varying the requirements of the City or the compensation to the Respondent. C. Respondents are advised that City contracts are subject to all legal requirements provided for in the City Charter and/or applicable City Ordinances, State and Federal Statutes.

2. PREPARATION OF SUBMITTALS Submittals shall be prepared in accordance with the following: A. For hand delivered submittals only, all information required by the RFQ form shall be furnished. The Respondent shall print or type the business name and manually sign the schedule. For Electronic submittals, this information shall be submitted electronically on Cit-E-Bid system. B. Alternate Proposals will not be considered unless authorized by the invitation for proposals or any applicable addendum.

3. DESCRIPTION OF SUPPLIES Not applicable for this request.

4. SUBMISSION OF HAND DELIVERED STATEMENTS A. Statement of qualifications and changes thereto

shall be enclosed in sealed envelopes, properly addressed and to include the date and hour of the opening. B. Unless otherwise noted on the Notice to Respondents cover sheet, all hand delivered statements of qualifications must be submitted to the Office of the City Secretary, City Hall, 1110 Houston Street, Laredo, Texas 78040. C. SOQ forms can be downloaded and printed through Cit-E-Bid. **Mailed Bids (i.e. USPS, FedEx, UPS), telegraphic, or facsimile bids will not be considered.** D. The City shall pay no costs or other amounts incurred by any entity in responding to this RFQ, or as a result of issuance of this RFQ.

5. REJECTION OF STATEMENT OF QUALIFICATIONS. The City may reject an SOQ if: A. Respondent misstates or conceals any material fact in the SOQ. B. SOQ does not strictly conform to the law or the requirements of the SOQ. C. Respondent is in arrears on existing contracts or taxes with the City of Laredo. D. In the event that a Respondent is delinquent in the payment of City of Laredo taxes on the day the SOQ is opened, including state and local taxes, such fact may constitute grounds for rejection of the SOQ or cancellation of the contract. A Respondent is considered delinquent, regardless of any contract or agreed judgments to pay such delinquent taxes E. No SOQ submitted herein shall be considered unless the Respondent warrants that, upon execution of a contract with the City of Laredo, Respondent will not engage in employment practices such as discriminating against employees because of race, color, sex, creed, or national origin. Respondent will submit such reports as the City may therefore require assuring compliance with said practices. F. The City may reject all SOQs or any part of an SOQ whenever it is deemed necessary.

6. WITHDRAWAL OF STATEMENT OF QUALIFICATIONS SOQs may not be withdrawn after they have been publicly opened, unless approved by the City Council.

7. LATE PROPOSALS OR MODIFICATIONS SOQs and modifications received after the time set for the proposal receiving deadline will not be considered. Late proposals will be returned to the Respondent unopened.

8. CLARIFICATIONS OR OBJECTION TO STATEMENT OF QUALIFICATIONS If any person contemplating submitting an SOQ for this contract is in doubt as to the true meaning of the specifications, or other SOQ documents or any part thereof, they may submit to the City Purchasing Agent. All requests for information shall be made in writing through email or Question & Response section on Cit-E-Bid system no later than seven (7) days prior to the scheduled date for opening to : CITY OF LAREDO PURCHASING AGENT Miguel A. Pescador, 5512 Thomas Avenue Laredo, TX 78041; email: mpescador@ci.laredo.tx.us Any vendor submitting questions shall make reference to a specific RFQ number, section, page and item of this solicitation. Questions untimely submitted may not elicit a response. It is the bidder's responsibility to follow up and make certain that the request was received. In case there are changes, additions, and/or edits to the original scope, an addendum will be issued by the Purchasing Agent to all vendors through Cit-E-Bid system under Questions and Responses section to clarify any inquiries. The City will not be responsible for any other interpretations of the SOQ during the RFQ process, bidder, or any persons acting on their behalf, shall not contact any City official or employee staff except those specifically designated in this or another subsequent solicitation document. The following sequence of activities must take place in filing a protest: To be performed by protesting Respondent: Within ten (10) calendar days prior to the time that the City Council considers the recommendation of the City's Purchasing Officer, the protesting Respondent must provide written protest to the City Purchasing Officer. Such protest must include specific reasons for the protest. To be performed by City's Purchasing Officer: Shall review the records of procurement and determine legitimacy and procedural correctness. With five (5) working days, the City Purchasing Officer shall provide written response to the protesting Respondent of the decision. If the protesting Respondent is not satisfied with the decision of the City Purchasing Officer, such protesting Respondent may appeal to the City Manager of the City of Laredo. If the protesting Respondent cannot resolve the issue with the City Manager, he shall be entitled to address his concerns when the City Council of the City of Laredo considers the awarding of the contract. Such appeal may be made only after exhausting all administrative procedures through the City Manager. All protests must be duly submitted via Certified Mail to: City of Laredo - Purchasing Agent 5512 Thomas Ave. Laredo, Texas 78041.

9. RESPONDENT DISCOUNTS Not applicable for this contract.

- **10. AWARD OF CONTRACT** The selection and award shall be based on the basis of demonstrated competence and qualifications to perform the services; and for a fair and reasonable price. The firm selected will be the firm which, in the opinion of the City, is the best qualified. The professional fees under the contract may not exceed any maximum established by law. The Respondent shall bear the burden of proof of compliance with the City of Laredo specifications.

11. PAYMENTS & INVOICING All invoices to the City of Laredo have a 30-day term from receipt of completion of services. All invoices shall be mailed to the Accounts Payable Office, City Hall, P.O. Box 210, Laredo, Texas 78042. Electronic Funds Transfer (EFT) payments are also available; if electronic payments are preferred, an Electronic Funds Transfer (EFT) Authorization form needs to be completed and returned via e-mail to: jjolly@ci.laredo.tx.us . For more information, please contact Mr. Jorge Jolly, Accounts Payable Manager at (956) 791-7328.

12. PROHIBITED CONTACTS DURING CONTRACT SOLICITATION PERIOD A person or entity who seeks or

applies for a city contract or any other person acting on behalf of such person entity is prohibited from contacting city officials and employees regarding such a contract after a Request for Proposal (RFP), Request for Qualification (RFQ) or other solicitation has been released. This no-contact provision shall conclude when the contract is awarded. If contact is required, such contact will be done in accordance with procedures incorporated into the solicitation document. Violation of this provision by respondents or their agents may lead to disqualification of their offer from consideration.

13. TITLE VI ASSURANCE The City of Laredo along with the Texas Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S. C. ss 2000d to 2000d-4) and the Regulations, hereby notifies all providers that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit Statements of Qualifications in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

I Agree to the Terms and Conditions

(Required: Check if applicable)

3 Insurance Terms and Conditions

INSURANCE REQUIREMENTS If and when applicable or required by the contract, the successful bidder(s) shall furnish the City with original copies of valid insurance policies herein required upon execution of the contract and shall maintain said policies in full force and effect at all times throughout the term of this contract.

(a) Commercial General Liability insurance at minimum combined single limits of \$1,000,000 per-occurrence and \$2,000,000 general aggregate for bodily injury and property damage, which coverage shall include products/completed operations (\$1,000,000 products/completed operations aggregate) and XCU (Explosion, Collapse, Underground) hazards. Coverage must be written on an occurrence form. Contractual Liability must be maintained covering the Contractors obligations contained in the contract. The general aggregate limit must be at least two (2) times the each occurrence limit.

(b) Workers Compensation insurance at statutory limits, including Employers Liability coverage a minimum limits of \$1,000,000 each-occurrence each accident/\$1,000,000 by disease each-occurrence/\$1,000,000 by disease aggregate.

(c) Commercial Automobile Liability insurance at minimum combined single limits of \$1,000,000 per-occurrence for bodily injury and property damage, including owned, non-owned, and hired car coverage.

(d) Any Subcontractor(s) hired by the Contractor shall maintain insurance coverage equal to that required of the Contractor. It is the responsibility of the Contractor to assure compliance with this provision. The City of Laredo accepts no responsibility arising from the conduct, or lack of conduct, of the Subcontractor.

(e) A Comprehensive General Liability insurance form may be used in lieu of a Commercial General Liability insurance form. In this event, coverage must be written on an occurrence basis, at limits of \$1,000,000 each-occurrence, combined single limit, and coverage must include a broad form Comprehensive General Liability Endorsement, products/completed operations, XCU hazards, and contractual liability.

(f) With reference to the foregoing insurance requirement, Contractor shall specifically endorse applicable insurance policies as follows:

1. The City of Laredo shall be named as an additional insured with respect to General Liability and Automobile Liability.
 2. All liability policies shall contain no cross liability exclusions or insured versus insured restrictions.
 3. A waiver of subrogation in favor of the City of Laredo shall be contained in the Workers compensation, and all liability policies.
 4. All insurance policies shall be endorsed to require the insurer to immediately notify The City of Laredo of any material change in the insurance coverage.
 5. All insurance policies shall be endorsed to the effect that The City of Laredo will receive at least sixty- (60) days' notice prior to cancellation or non-renewal of the insurance.
 6. All insurance policies, which name The City of Laredo as an additional insured, must be endorsed to read as primary coverage regardless of the application of other insurance.
 7. Required limits may be satisfied by any combination of primary and umbrella liability insurances.
 8. Contractor may maintain reasonable and customary deductibles, subject to approval by The City of Laredo.
 9. Insurance must be purchased from insurers that are financially acceptable to the City of Laredo. Insurer must be rated A- or greater by AM Best Rating with an admitted carrier licensed by the Texas Department of Insurance.
- (g) All insurance must be written on forms filed with and approved by the Texas Department of Insurance. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent and shall contain provisions representing and warranting the following:

1. Sets forth all endorsements and insurance coverage's according to requirements and instructions contained herein.
2. Shall specifically set forth the notice-of-cancellation or termination provisions to The City of Laredo.

(h) Upon request, Contractor shall furnish The City of Laredo with certified copies of all insurance policies.

(i) Certificates of insurance are subject to review and approval from the City of Laredo Risk Manager.

(j) Specialty certificates and licenses must be inspected and verified for accuracy and validity before award of contract.

(k) Awarded vendor is required to maintain current and active all: certifications, licenses, permits and/or insurance coverages, required to perform work, throughout the duration of this project/contract.

I agree my insurance meets minimum requirements

(Required: Check if applicable)

4 Disqualification & Debarment Certification

DISQUALIFICATION & DEBARMENT CERTIFICATION By submitting this request for bids, proposal or statement of qualifications, the firm certifies that it is not currently debarred or eligible for debarment from the City of Laredo pursuant to **Ordinance No. 2017-O-098**, and that it is not an agent of a person or entity that is currently debarred from receiving contracts from any political subdivision or agency of the State of Texas. The contract parties are further prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension."

By executing this agreement, the Engineer certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this contract shall require any party to a subcontract or purchase order awarded under this contract to certify its eligibility to receive Federal funds and, when requested by the City, to furnish a copy of the certification. Additionally, in accordance with Chapter 2270, Texas Government Code, a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract.

The signatory executing this contract on behalf of company verifies that the company does not boycott Israel and will not boycott Israel during the term of this contract. S.B. 252 (V. Taylor/S. Davis) is a bill relating to government contracts with terrorists. The bill provides that: (1) a governmental entity, including a city, may not enter into a governmental contract with a company that is identified on a list prepared and maintained by the comptroller and that does business with Iran, Sudan, or a foreign terrorist organization; and (2) a company that the United States government affirmatively declares to be excluded from its federal sanctions regime relating to Sudan, its federal sanctions regime relating to Iran, or any federal sanctions regime relating to a foreign terrorist organization is not subject to the contract prohibition under the bill.

I certify to the terms and conditions

(Required: Check if applicable)

5 Contract Requirements

1.CODE OF ETHICS ORDINANCE Vendors doing business with the City of Laredo shall comply with all provisions of the City of Laredo's Code of Ethics (Ordinance, as amended). Vendors may be required to participate in Code of Ethics trainings.

1.2 PROHIBITED CONTACTS DURING CONTRACT SOLICITATION PERIOD A person or entity who seeks or applies for a city contract or any other person acting on behalf of such person or entity, is prohibited from contacting city officials and employees regarding such a contract after a Formal Bid, Request for Proposal (RFP), Request for Qualification (RFQ) or other solicitation has been released. This no-contact provision shall conclude when the contract is awarded. The City of Laredo reserves the right to contact respondents and may require such contact as part of the evaluation process (for presentation, clarification) of bids and/or negotiation of RFP submittal(s) prior to the award of contract. If contact is required, such contact will be done in accordance with provisions of Chapter 252 and 271 of the Texas Local Government Code and procedures incorporated into the solicitation document. Violation of this provision by respondents or their agents may lead to disqualification of their offer from consideration.

1.3 NON-COLLUSIVE AFFIDAVIT (Form can be downloaded and submitted through Cit-E-Bid system) The City may require that vendors submit a Non-Collusive Affidavit. The vendor will be required to state that the party submitting a proposal or bid, that such proposal or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any Bidder or Person, to put in a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price or affiant or of any other Bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against the City of Laredo or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

1.4 CONTRACT DISCLOSURE FORMS (This is submitted through Cit-E-Bid system) The City of Laredo requires the following forms to be completed as a part of this bid for consideration; 1. Company Information Questionnaire, 2. Signed Price Schedule, 3. Conflict of Interest Questionnaire, 4. Non-Collusive Affidavit 5.

Discretionary Contracts Disclosure 6. Certificate of Interested Parties (Form 1295) ****Upon Award of RFP Only****

1.5 CONFLICT OF INTEREST FORMS (This is submitted through Cit-E-Bid system) Conflict of Interest Disclosure: A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature.

1.6 TEXAS ETHICS COMMISSION (Form 1295, Form can be downloaded and submitted through Cit-E-Bid system) Certificate of Interested Parties (Form 1295) Implementation of House Bill 1295: In an effort to comply with state law the certificate of interested parties must be filled out once a vendor has been granted a contract. All of this information can be found on the state of Texas website, please use this link provided, <https://www.ethics.state.tx.us/tec/1295-Info.htm>. In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016. In order to comply with state law the Certificate of Interested Parties (Form 1295) must be submitted to the Texas Ethics Commission within 10 days upon receiving notice of award of contract. This form must be submitted within the allotted time otherwise this may result in the cancellation of the contract.

I have read and understand this section

(Required: Check if applicable)

6 Questionnaire Description

"The undersigned affirms that they are duly authorized to execute this contract, that this company, corporation, firm, partnership or individual has not prepared this bid in collusion with any other bidder, and that the contents of this bid as to prices, terms or conditions of said bid have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this request. By submitting this bid the vendor agrees to the City of Laredo specifications and all terms and conditions stipulated in the proposed document. That I, individually and on behalf of the business named in this Business Questionnaire, do by my signature below, certify that the information provided in the questionnaire is true and correct".

7	Name of Offeror (Business) and Name & Phone Number of Authorized Person to sign bid
<hr/> <hr/> <hr/>	
<i>(Required: Maximum 1000 characters allowed)</i>	

8	State how long under has the business been in its present business name
<hr/> <hr/> <hr/>	
<i>(Required: Maximum 1000 characters allowed)</i>	

9	If applicable, list all other names under which the Business identified above operated in the last five years
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
<i>(Required: Maximum 4000 characters allowed)</i>	

10	State if the Company is a certified minority business enterprise
The below information is requested for statistical and tracking purposes only and will not influence the amount of expenditure the City will make with any given company.	

11	Questions Part 1
1) Is any litigation pending against the Business? 2) Has the Business ever been declared "not responsive" for the purpose of any governmental agency contract award? 3) Has the Business been debarred, suspended, proposed for debarment, suspended, proposed for debarment, declared ineligible, voluntarily excluded, or other wise disqualified from bidding, proposing or contracting? 4) Are there any proceedings, pending relating to the Business responsibility, debarment, suspension, voluntary exclusion, or qualification to receive a public contract? 5) Has the government or other public entity requested or required enforcement of any of its rights under a surety agreement on the basis of default or in lieu of declaring the Business at default?	
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
<i>(Required: Maximum 4000 characters allowed)</i>	

1
2 **Questions Part 2**

1) Is the Business in arrears in any contract or debt? 2) Has the Business been a defaulter, as a principal, surety, or otherwise? 3) Have liquidated damages or penalty provisions been assessed against the Business for failure to complete work on time or any other reason?

(Required: Maximum 4000 characters allowed)

1
3 **State if the Company is a certified minority business enterprise**

Historically Underutilized Business (HUB) Small Disadvantaged Business Enterprise (SCBC)

Disadvantaged Business Enterprise (DBE) Other

This company is not a certified minority business

(Required: Check only one)

1
4 **Conflict of Interest Disclosure**

A form disclosing potential conflicts of interest involving counties, cities, and other local government entities may be required to be filed after January 1, 2006, by vendors or potential vendors to local government entities. The new requirements are set forth in Chapter 176 of the Texas Local Government Code added by H.B. No. 914 of the last Texas Legislature. Companies and individuals who contract, or seek to contract, with the City of Laredo and its agents may be required to file with the City Secretary's Office, 1110 Houston Street, Laredo, Texas 78040, a Conflict of Interest Questionnaire that describes affiliations or business relationships with the City of Laredo officers, or certain family members or business relationships of the City of Laredo officer, with which such persons do business, or any gifts in an amount of \$250.00 or more to the listed City of Laredo officer (s) or certain family members. The new requirements are in addition to any other disclosures required by law. The dates for filing disclosure statements begin on January 1, 2006. A violation of the filing requirements is a Class C misdemeanor. The Conflict of Interest Questionnaire (Form CIQ) may be downloaded from http://www.ethics.state.tx.us/whatsnew/conflict_forms.htm. The City of Laredo officials who come within Chapter 176 of the Local Government Code relating to filing of Conflicts of Interest Questionnaire (Form CIQ) include: 1. Mayor 2. Council Members 3. City Manager 4. Members of the Fire Fighters and Police Officers Civil Service Commission. 5. Members of the Planning and Zoning Commission. 6. Members of the Board of Adjustments 7. Members of the Building Standards Board 8. Parks & Leisure Advisory Committee Member, 9. Historic District Land Board Member, 10. Ethics Commission Board Member, 11. The Board of Commissioners of the Laredo Housing Authority 12. The Executive Director of the Laredo Housing Authority 13. Any other City of Laredo decision making board member If additional information is needed please contact Miguel A. Pescador, Purchasing Agent at 956-794-1731.

1
5 **Conflict of Interest Questionnaire Form CIQ**

For vendor or other person doing business with local governmental entity. This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session. This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a). By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code. A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

16 **Conflict of Interest Questionnaire**
If vendor acknowledges there is no conflict of interest, there are no further actions for the vendor to take. If vendor acknowledges a possible conflict of interest, vendor must download and fill out CIQ Form and submit it as part of their bid.
 I attest there is no conflict of interest I acknowledge possible conflict of interest
(Required: Check only one)

17 **Acknowledgement of Questions & Answers II**
 Yes
(Required: Check if applicable)

18 **Ordinance 2018-O-175**
The City of Laredo has established a local vendor preference ordinance 2018-O-175. All informal and formal Requests for bids for contracts will be evaluated with a 5% preference for local vendors.

(Optional: Maximum 1000 characters allowed)

19 **Disclosure Form**
For details on use of this form, see Section 4.01 of the City's Ethics Code.

20 **This is a**
 New Submission Correction Update to previous submission
(Required: Check only one)

21 **Question 1. Name of person submitting this disclosure form**
Please include First Name, Middle Initial, Last Name and Suffix (if applicable)

(Required: Maximum 1000 characters allowed)

22 **Question 2. Contract Information**
Please include the following: a)Contract or Project Name b)Originating Department

(Required: Maximum 4000 characters allowed)

**2
3** **Question 3. Name of individual(s) or entity(ies) seeking a contract with the city (i.e. parties to the contract)**

(Required: Maximum 4000 characters allowed)

**2
4** **Question 4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3.**

Not Applicable It applies to my business

(Required: Check only one)

**2
5** **Question 4. List any business entity(ies) that is a partner, parent, subsidiary business entity(ies) of the individual or entity listed in Question 3**

If you selected Not Applicable on Question 4, skip this section. If it applies to you, please list the name of partner, parent, or subsidiary business entity(ies) in this section.

(Optional: Maximum 4000 characters allowed)

**2
6** **Question 5. List any individuals or entities that will be subcontractors on this contract**

Not Applicable It applies to my business

(Required: Check only one)

**2
7** **Question 5. List any individuals or entities that will be subcontractors on this contract**

If you selected Not Applicable on Question 5, please skip this section. If it applies to you, please list subcontractors in this section.

(Optional: Maximum 4000 characters allowed)

**2
8** **Question 6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract**

Not Applicable It applies to my business

(Required: Check only one)

29 Question 6. List any attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract

If selected Not Applicable on question 6, please skip this section. If it applies to you, please list attorneys, lobbyists, or consultants that have been retained to assist in seeking this contract.

(Optional: Maximum 4000 characters allowed)

30 Question 7. Disclosure of political contributions

List any campaign or officeholder contributions made by the following individuals in the past 24 months totaling more than \$100 to any current member of City Council, former member of City Council, any candidate for City Council, or to any political action committee that contributes to City Council elections. a) Any individual seeking contract with the city (Question 3) b) Any owner or officer of entity seeking contract with the city (Question 3) c) Any individual or owner or officer of any entity listed above as partner, parent, or subsidiary business (Question 4) d) Any subcontractor or owner/office of subcontracting entity for the contract (Question 5) e) The spouse of any individual listed in response to (a) through (d) above f) Any attorney, lobbyist, or consultant retained to assist in seeking contract (Question 6)

Not Applicable It applies to my business

(Required: Check only one)

31 Question 7. Disclosure of political contributions

If you selected Not Applicable on question 7, please skip this section. If it applies to you, please list all contributors in this section.

(Optional: Maximum 4000 characters allowed)

32 Updates on contributions required

Information regarding contributions must be updated by submission of a revised form from the date of the submission of this form, up through the time City Council takes action on the contracts identified in response to Question 2 and continuing for 30 calendar days after the contract has been awarded.

33 Question 8. Disclosure of Conflict of Interest

Are you aware of any fact(s) with regard to this contract that would raise a "conflict of interest" issue under Section 2.01 of the Ethics Code for any City Council member or board/commission member that has not or will not be raised by these city officials?

I am aware of conflict of interest I am not aware of any conflict of interest

(Required: Check only one)

3 4 8. Disclosure of Conflict of Interest

If you selected I am aware of conflict of interest is question 8, please list them in this section.

(Optional: Maximum 4000 characters allowed)

3 5 Question 9. Updates Required

I understand that this form must be updated by submission of a revised form if there is any change in the information before the discretionary contract is the subject of action by the City Council, and no later than five (5) business days after any changes has occurred, whichever comes first. This include information about political contributions made after the initial submission and up until thirty (30) calendar days after the contract has been awarded.

I have read and understand this section
(Required: Check if applicable)

3 6 Question 10. No Contract with City Officials or Staff during Contract Evaluation

I understand that a person or entity who seeks or applies for city contract or any other person acting on behalf of that person or entity is prohibited from contacting city officials and employees regarding the contract after a Request for Proposal (RFP), Request for Qualifications (RFQ), or other solicitation has been released. This no-contact provision shall conclude when the contract is posted as a City of Laredo Council agenda item. If contact is required with city officials or employees, the contact shall take place in accordance with procedures incorporated into the solicitation documents. Violation of this prohibited contacts provision set out in Section 2.09 of the Ethics Code by respondents or their agents may lead to disqualification of their offer from consideration.

I have read and understand this section
(Required: Check if applicable)

3 7 Question 11. Conflict of Interest Questionnaire (CIQ)

Chapter 176 of the Local Government Code requires contractor and vendors to submit a Conflict of Interest Form (CIQ) to the Office the of City Secretary.

I have acknowledge that I have been advised
(Required: Check if applicable)

3 8 Question 11. Oath

Please complete in this section the required information for your company: 1) Name 2) Title 3) Company or DBA 4) Date

(Required: Maximum 4000 characters allowed)

3 9 Question 12. Oath

I swear or affirm that the statements contained in this Discretionary Contracts Disclosure Form, including any attachments, to the best of my knowledge and belief are true, correct, and complete.

I swear or affirm information is correct
(Required: Check if applicable)

Bid Lines

1 SUBJECT:

COMPREHENSIVE OPERATIONAL ANALYSIS (COA) OF EL METRO

The Laredo Webb County Area Metropolitan Planning Organization (MPO), in coordination with Laredo Transit Management Inc. (LTMI), locally known as El Metro, solicits statements of qualifications for the development of a Comprehensive Operational Analysis study of EL Metro's service and operations. The objective of the plan is to evaluate both the current fixed route and paratransit bus service, and provide recommendations to improve the system's service, efficiency, effectiveness, and connectivity.

Submittal packages shall be submitted in conformance with the requirements outlined in this Request for Qualifications. Submittals shall be limited to fifteen (15), 8.5 x 11 inch, pages, exclusive of professional resumes, cover sheets, fly leaves, table of contents, dividers, etc., printed on one side, double spaced, using Times New Roman font with a font size of 12. All submittals become the property of the Laredo MPO. The Laredo MPO reserves the right to reject any and all submittals and to waive any minor irregularities. All submittals shall be submitted at the time, place and date specified. Submittals received late shall not be considered.

Item Notes: **Only for Manual Submittals:**

-

Interested firms should submit 1 original signed hard copy package, 9 hard copies (no faxes or emails), and 1 electronic package with all files on CD or USB drive, of their statement of qualifications package no later than **5:00 P.M. C.S.T. on July 20th, 2020** in sealed envelopes marked "EL METRO: COMPREHENSIVE OPERATIONAL ANALYSIS" either mailed to Mr. Jose A. Valdez, Jr., City Secretary, City of Laredo, P.O. Box 579, Laredo, Texas 78042-0579, or delivered to Mr. Jose A. Valdez, Jr., City Secretary, 3rd floor, City Hall, 1110 Houston St., Laredo, Texas, 78040

Supplier Notes: _____

Additional notes
(Attach separate sheet)

2 INTRODUCTION

The Laredo Webb County Area Metropolitan Planning Organization in coordination with Laredo Transit Management, Inc. (LTMI), locally known as El Metro, are soliciting qualifications from consulting firms to develop a Comprehensive Operational Analysis (COA) of El Metro's current fixed-route bus and paratransit/ADA demand-response services. The MPO and LTMI seek to optimize the allocation of resources to provide the highest quality transit service, while increasing ridership and regional connectivity. The study is intended to provide recommendations for the improvement the system's service, efficiency, effectiveness, and connectivity. The analysis should result in comprehensive recommendations for meeting the community's current and future transit needs. The study should also define an on-going methodology to monitor the overall system performance.

All study recommendations, to the extent possible, shall align with the Viva Laredo Comprehensive Plan and the adopted Active Transportation. The MPO, in collaboration with El Metro staff, will manage the project.

Supplier Notes: _____

Additional notes
(Attach separate sheet)

3 BACKGROUND

Transit

The City of Laredo continues to experience significant growth, and changing land use and demographic patterns, which have resulted in system inefficiencies, and unmet transit service demand.

The City of Laredo employs Laredo Transit Management, Inc. (LTMI) also known as "El Metro," a private non-profit organization, to manage and provide transit services within the city limits. The day-to-day management and actual operations of the transit services are carried out under contract with First Transit from Cincinnati, Ohio. LTMI is governed by the Laredo City Council, acting as the Laredo Mass Transit Board.

Current service consists of two elements: a traditional fixed route service and general paratransit service. The fixed route service includes a total of 22 bus routes and 1 neighborhood circulator, operating Monday through Sunday, 362 days a year. Weekday service periods vary by route, but are generally 6:00 a.m. until 10:00 p.m. requiring a peak-hour fleet of 35 buses. The system provides on average 8,000 trips per day, or 2.5 million annual rides, covering 1.7 million miles per year.

The paratransit service is a curb-to-curb demand response transportation service for those people who are unable to access fixed route buses. This specialized transportation service is branded as "El Lift" and operates within $\frac{3}{4}$ of a mile from the nearest El Metro fixed route during regular bus hours. The Paratransit Advisory Committee (PAC) provide oversight and recommendations to transit staff regarding the Paratransit Eligibility and Certification program.

The current fleet includes 65 vehicles including: 41 heavy-duty buses, 2 light-duty buses, 1 rubber-tire trolley and 21 Paratransit vans. El Metro has 174 employees including: 121 coach operators, 26 mechanics and maintenance staff, and 27 professional, clerical, and other employees.

Facilities include an Operations & Maintenance building located at 401 Scott Street and a Transit Center. The Transit Center is located in downtown Laredo, and houses the agency's headquarters including the Administrative, Customer Service, Public Information and Advertising Departments.

MPO

The Laredo Webb County Area Metropolitan Planning Organization provides “3C” or “continuous, cooperative and comprehensive” transportation planning for the Laredo Metropolitan Area, as required by the Fixing America’s Surface Transportation (FAST) Act.

The Laredo Metropolitan Planning Organization is comprised of a Policy Committee and Technical Committee. The Policy Committee is the MPO body that holds review and decision-making authority and is comprised of 7 elected City and County officials, the TxDOT District Engineer, and one Member At Large. The MPO The Technical Committee provides technical review and recommendations to the Policy Committee. Technical Committee is comprised of 22 members from both the public and private sector.

On September 19, 2017, the City of Laredo adopted the Viva Laredo Comprehensive Plan, which articulated the hope for a future with reduced auto dependence and an improved quality of life. Much of realizing this future depends on the city’s ability to enable modes of transportation other than the personal vehicle

Supplier Notes: _____

Additional notes
(Attach separate sheet)

4 STUDY AREA

The project will encompass that area located within the Laredo Metropolitan Area as identified on the Laredo Metropolitan Boundary Area Map.

https://www.cityoflaredo.com/Planning/MPO/files/maps/Laredo_MPO_Boundary_Map.pdf

Supplier Notes: _____

Additional notes
(Attach separate sheet)

5 PROJECT OBJECTIVES AND AVAILABLE RESOURCES

Project Objectives include but are not limited to:

1. Analyze the performance of LMTI's fixed-route bus and paratransit services.
2. Examine the efficiency and effectiveness of the current system which shall include:
 - a. A review of the transit fixed route structure.
 - b. A review of current and planned neighborhood circulator services.
 - c. A review of the service levels including transit service frequencies as well as time of the day, evening and weekend coverage.
 - d. A review of the transit ADA Demand Response services.
3. Develop recommendations to address service needs, including but not limited to:
 - a. Realignment of existing services
 - b. Propose new routes.
 - c. Propose optimal location or area for transit hubs
 - d. Evaluate the South Laredo College campus as a potential site for a new hub
 - e. Discontinuation or reduction of non-productive routes/services.
4. Identify a methodology for the on-going evaluation of the fixed-route system.
5. Evaluate staffing and other organizational factors that contribute to and support operation of a FTA compliant transit system.
6. Run Cut. Provide run cutting and run bid preparation to implement study recommendations.

Supplier Notes: _____

Additional notes
(Attach separate sheet)

6 Minimum Project Requirements:

The COA must be adopted by the Laredo Mass Transit Board is required for the COA. The COA should include the following at a minimum:

- Develop a local setting, existing system description (including fleet vehicle age, and miles), ridership profile, and ridership survey;
- Development, performance, an analysis of a transit survey, including transit passenger profile survey and a ridership level of activity survey (boardings and alightings).
- Review and analysis of current operation data including trend analysis and peer analysis;
- Evaluation of existing transit services and transit programs;
- Assessment of unmet transit needs and service gaps;
- Analysis of individual and system route performance;
- Guidance in the preparation of annual budgets;
- Assessment of current/future operating and capital needs and matching with available financial resource.
- Final GIS Geodatabase (GDB) that includes Transit System and Network Analysis

Supplier Notes: _____

Additional notes
(Attach separate sheet)

7 Additional Requirements and Expectations:

1. Project Management

The project will be conducted primarily by the consultant. The MPO in collaboration with LTMI staff will provide project management, as well as, any currently available relevant data, and full access to the transit system.

2. Reports

The Consultant shall develop draft reports on each task and submit these reports, as they are completed, to the MPO and LTMI for review and approval. All data, basic sketches, charts, calculations, plans, specifications, and other documents created, or collected as part of this project shall be provided and become the exclusive property of the Laredo MPO.

The Consultant shall prepare a Draft Final Report which summarizes all the task reports and includes: an executive summary; narrative description of the work performed; the project objectives met; methodologies used; analyses of the data collected utilizing charts, tables, graphs, and maps; and specific recommendations based on the results of the analysis. After review by Staff and the MPO Technical Committee, the Consultant shall prepare a Final Report incorporating and addressing all comments on the Draft Final Report.

The Final report must be submitted within twenty (20) days of completion of the project. The consultant shall submit the final report in electronic format to the MPO.

3. Meetings

The Consultant shall propose a series of meetings at significant milestones during the study to present to the public, and gather public input. A separate series of meetings with project management staff shall be required provide periodic project status reports.

4. Implementation Assistance

The Consultant shall assist LTMI staff implement approved study recommendations by providing an outline of the sequence and timing for implementing components of the service plan.

5. Scheduling/ Run Cutting

Upon adoption of part or all of the recommendations developed by the COA, the Consultant shall design new schedules for revised routes and new service. These schedules shall show pull-out times from the operating facility, departure times from each time-point, designated vehicle blocks, and vehicle pull-in times at the operating facility. These completed schedules shall be divided into a cost effective run cut which meets efficient work rule requirements. The run cut shall be in sign able form and be ready for the driver bidding process.

6. Data Deliverables

The consultant will deliver a GIS Database of the transit system, network analysis (report & final network) used to create recommendations. It is important that the consultant identify the inefficiencies of the system and provide feedback on the proper remedies to improve our transit network

The consultant will submit all final reports to the MPO in both pdf and word. All data, basic sketches, charts, calculations, plans, specifications, and other documents created, or collected as part of this project shall be provided and become the exclusive property of the Laredo MPO.

7. Presentations:

- a. One (1) at some point during the project to the Technical Committee
- b. One (1) at some point during the project to the Technical Committee
- c. At least one (1) to the public
- d. One (1) at Final to the Technical Committee
- e. One (1) at Final to the Policy Committee
- f. One (1) at Final to the Laredo Mass Transit Board

Consultant should assume all presentations will occur on separate days.

Resources

1. Viva Laredo Comprehensive Plan, 2017
2. Opportunity Map Project – Harvard-Bloomberg Partnership, 2017
3. Comprehensive Operating Analysis, First Transit, 2005.
4. ADA Plan Update, A & R Consulting, 2012

5. Bus Rapid Transit Plan, Parsons Brinkerhoff, 2012
6. ADA Plan Update, 2012
7. El Metro Transportation Development Plan, 2016
8. Active Transportation Plan, 2020 (in-progress)
9. Various maps and previous studies compiled by the City of Laredo Planning Department.
10. Any other studies or pertinent information as it becomes available.

Supplier Notes: _____

Additional notes
(Attach separate sheet)

8 STATEMENT OF QUALIFICATIONS

-
- At a minimum the statement of qualifications shall include:
1. Title: El Metro: Comprehensive Operational Analysis
 2. Firm name, address, phone number, and persons to contact regarding the statement of qualifications. Include names of sub-consultants, addresses and contact person.
 3. The submittal shall be signed by the authorized person on behalf of the firm.
 4. General Statement of Firm(s) Qualifications – Provide information on the firm(s) background and experience in transportation planning.
 5. Qualifications of Consulting Team or individuals- Provide information on the individuals proposed for work on the project; identify proposed project management responsibilities, resumes of lead consultant team members and sub-contractors (lead persons only). Resumes of company personnel who are not part of the project team should be omitted.
 6. Provide information on the consultant team(s) or key personnel (lead persons only) knowledge and experience with federal and state transportation planning requirements and processes.
 7. List of recent comparable projects performed by the consultant team(s) or key personnel (lead persons only), brief description of project, project owner, the name, address, and telephone number of the person(s) closely associated with the firm’s prior projects, status of the project, if the project was completed on time, on budget, and date of completion.
 8. A brief summary of the firm’s approach to the project and factors that will be considered in accomplishing the project including:
 - methodology for collection and evaluation of data,
 - the uniqueness of a “pulse” system currently operational. Discuss potential “grid” systems
 - strategies for implementation of the COA’s recommendations

- survey methodology. Both an off-and on route segmentation survey and an attitudinal and passenger profile survey will occur on the bus system. The consultant has the latitude to propose how the survey can be done in the most efficient means while obtaining relative significant data.
- Public involvement. A proactive public involvement effort will be required that at a minimum seeks input from: El Metro employees, downtown businesses and organizations, local stakeholders, citizen advisory committees, surrounding neighborhoods, downtown residents, and the general public (including seniors and those persons who are disabled). Discuss any unique or innovative techniques that may be applied.
- how the project will incorporate Geographic Information Systems (GIS). Identify how the project will data will be used and what analysis will be performed to produce the most efficient route/scheduling.
- any other pertinent information the interested firm may wish to include.

9. Schedule to complete the project.

10. Familiarity with the geographical area of the project

11. Availability to commence services immediately after successfully negotiating a contract.

NOTICE: Submittals shall NOT include fee proposals. Submittals including a cost estimate for the development of the study SHALL NOT be considered.

-

Interested firms should submit 1 original signed hard copy package, 9 hard copies (no faxes or emails), and 1 electronic package with all files on CD or USB drive,

Statement of qualifications submittals shall be limited to fifteen (15), 8.5 x 11 inch, pages, exclusive of professional resumes, cover sheets, fly leaves, table of contents, dividers, etc., printed on one side, double spaced, using Times New Roman font with a font size of 12. It is the responsibility of all Consultants to examine the entire RFQ package and seek clarification of any item or requirement that may not be clear and to check all responses for accuracy before submitting a proposal.

All submittals become the property of the Laredo MPO. The Laredo MPO reserves the right to reject any and all submittals and to waive any minor irregularities. All submittals shall be submitted at the time, place and date specified. Submittals received late shall not be considered. Failure to include any item listed in the statement of qualification minimum requirements may result in the rejection of the submittal.

The MPO shall not be liable for any costs incurred by the Consultants in response to the RFQ, or any cost incurred in connection with any discussions, correspondence or attendance at interviews or negotiation sessions.

Supplier Notes: _____

Additional notes
(Attach separate sheet)

9 EVALUATION CRITERIA

In general, the submittals shall be evaluated based on the following criteria:

Evaluation Criteria	Maximum Point Possible
Project understanding, approach and familiarity with study area	50
Demonstrated experience of the consultant team(s) or individuals (lead persons only) with the development of similar studies	30

Qualifications of key individual(s) and or sub-contractors (lead persons only)

20

Supplier Notes: _____

Additional notes
(Attach separate sheet)

1
0

U.S. DOT Standard Title VI Assurance

The Recipient, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Supplier Notes: _____

Additional notes
(Attach separate sheet)

Supplier Information

Company Name: _____

Contact Name: _____

Address: _____

Phone: _____

Fax: _____

Email: _____

Supplier Notes

By submitting your response, you certify that you are authorized to represent and bind your company.

Print Name

Signature

Questions & Answers

Event Information

Number: RFQ FY20-055
Title: RFQ MPO Comprehensive Operational Analysis (COA) of El Metro
Type: Request For Qualifications
Issue Date: 5/18/2020
Question Deadline: 7/1/2020 12:00 PM (CT)
Response Deadline: 7/20/2020 05:00 PM (CT)
Notes: Bidders are strongly encouraged to submit their proposals electronically through use of Cit-E-Bid or in person - hand delivery. Mailed Bids (i.e. USPS, FedEx, UPS), telegraphic, or facsimile bids will not be considered.

Due to current COVID-19 crisis* Respondents are strongly encouraged to submit their proposals electronically through the use of Cit-E-Bid. If vendor needs to hand-delivered sealed RFQ, please follow steps below:

MANUAL BID DROP-OFF PROCEDURES NOTE: Manual Bids will only be accepted the first 45 minutes of the hour before they are due. For example, if bid is due at 4:00, bids will only be accepted between 3:00 and 3:45 p.m. 1. Please make sure that the bid is in a sealed envelope marked with the following: • Name of Bid • Name of Company submitting Bid • Address of Company submitting Bid
2. Place Bid Envelope on table right inside the door on the Houston Street side of City Hall. The receptionist will call the City Secretary's office to pick up.
3. If you need a copy of the time-stamped envelope, you will need to wait outside until we pick the envelope up, go back up to the 3rd floor to timestamp the envelope, make a copy of it and bring it back to you.
Thank you for your understanding and help at this time of trying to stay healthy and safe.

The City of Laredo has established a local vendor preference ordinance 2018-O-175. All informal and formal Requests for bids for contracts will be evaluated with a 5% preference for local vendors.

Published Questions

Question	I do not see the RFQ or solicitation documents with SOW available.
Answer	Please refer to bid document pages 16-22, Bid Line Items #1 - #8, for SOW project details.
Asked	5/18/2020 08:13 AM (CT)



CITY OF LAREDO

RFQ FY20-55

MPO COMPREHENSIVE OPERATIONAL
ANALYSIS (COA) OF EL METRO

JULY 20, 2020





Stantec Consulting Services Inc.

70 NE Interstate 410 Loop #1100

San Antonio, TX 78216

July 20, 2020

City of Laredo, 401 Scott Street

Laredo, TX 78040

Re: RQQ MPO Comprehensive Operational
Analysis (COA) of El Metro

Dear Mr. Bernal,

Public transit moves communities. It is the foundational core of how people get from A to B in any city, town, or region. Transit impacts the quality of life and economic prosperity of communities by connecting people to places such as jobs, recreation, education, and healthcare. However, the importance of high quality, available transit can sometimes be overlooked.

The unprecedented COVID-19 pandemic has introduced a new reality for the agency that couldn't have been foreseen even as this solicitation was being written. Once we are on the other side of the pandemic, it affords us an opportunity to reintroduce services in a pragmatic fashion, adjusting types and levels of service in response to actual demand.

Stantec Consulting Services Inc. (Stantec) has been helping our transit clients implement innovative

strategies and tactics that deliver measurable results quickly. To us, what is most important in completing this study is striking the right balance between creative blue sky thinking and setting actionable tactics that can show early progress quickly while gaining the confidence of the community. Also, we must address the needs of transit-dependent customers while also speaking to choice customers who have other mobility options and getting them to ride El Metro's services.

Stantec believes we are the best partner for the assignment because -

We approach every assignment as though we are on the agency's frontline. Our clients receive this type of sincerity because we understand the complexities of running transit systems. Stantec has been the consultant of choice to more than 250 transit peers across North America. We are proud that our clients not only take our advice on how to design and deliver their service but often ask us to help implement our recommendations.

Transit agency transformations are where we shine. Stantec has worked with several transit agencies over the last three years to overhaul the way they do business – including, but not limited to GETBus, GTrans, AVTA, Winnipeg Transit,

and the Toronto Transit Commission – to set them up for future successes. Since implementing early recommendations, including enhanced frequency on a key route, Stantec has helped AVTA grow ridership by 20% on this route compared to the previous year. We know that change is difficult. We approach assignments with sensitivity and ‘tell stories’ in a way that individuals draw their conclusions about what they will need for the future.

Fresh perspective and deep expertise. Although we have not yet worked with you, if selected, we will approach this project with the clarity required to craft an inspirational vision for the future. In the end, whatever the outcome, we will develop an action plan that improves the customer experience and reassures elected officials and policymakers of the decisions made and the dollars committed. From overall corporate governance and staffing levels to financial analysis and technology, the outcome of this study will be a future-proofed agency.

In closing, Stantec is 100% committed to the success of this project. To us, our clients are partners with a common goal. We see a mobility ecosystem that is more useful for more people. We see a mobility ecosystem that better reflects lifestyles and integrates multiple choices. We see a mobility ecosystem that is inclusive and responsive to how people move now and how they will move in the future. We see an agency that is right-sized and has the needed

technology tools to do the job. Simply, we see modern mobility as the future for El Metro.

Sincerely,



Sasha Pejic, PMP
Principal, Global Bus Lead
c: (416) 276-7057
e: sasha.pejic@stantec.com

Table of Contents

MANDATORY FORMS (provided under separate upload)

Company Overview.....	1
Team Overview.....	2
Project Experience	3
Project Understanding.....	3
Methodology	5
Schedule	15

APPENDICES

- A| Project Organizational Chart and Resumes
- B| Project Experience and References
- C| Preliminary Project Schedule

Company Overview

The Stantec community unites approximately 22,000 employees working in over 350 locations across six continents. Since 1954, our local strength, knowledge, and relationships, coupled with our world-class expertise, have allowed us to go anywhere to meet our clients' needs in more creative and personalized ways. Stantec has worked with more than 250 transit agencies over the past 30 years.

Communities all over North America are increasingly seeking integrated, value-added solutions that build on the momentum of recent trends in mobility. Stantec's Transit Advisory team answers this call by giving communities a "one-stop" offering. We provide end-to-end solutions across the full spectrum of transit, including planning, operations, fleet, facilities, maintenance, safety, customer satisfaction/ market research, technology, asset management, and strategy.

The Transit Advisory Team has completed several operational analyses, transit plans and system redesigns. Recently, Stantec completed the Antelope Valley Integrated Mobility Plan for Antelope Valley Transit Authority (AVTA), located at the northern border of Los Angeles County. Early action items included increasing frequency on a key route, resulting in a 9% increase in ridership compared to the previous year.

Additionally, Stantec is currently finalizing the Winnipeg Transit Master Plan which entails a bus

network redesign of approximately 100 routes that serves a population of over 700,000 residents, and related paratransit, infrastructure, technology, marketing, fare, and staffing analyses. As part of the plan a number of lower-density neighbourhoods were recommended for alternative service delivery (on-demand transit) which connects to the high-frequency network to enhance coverage and convenience for riders.

Furthermore, the Transit Advisory team recently completed a network redesign for the communities of Bangor, Maine and Gardena, California where a route-by-route analysis was completed with public input to redesign the transit network to better serve the needs of the communities and more efficiently deploy resources. We are currently also working in the Research Triangle area of North Carolina reviewing priority corridors and developing a freeway and street-based transit (FAST) network aimed at improving regional connectivity.

Stantec is well versed to complete the tasks and deliverables required by the City of Laredo. Stantec investigates all avenues, creating a service approach that fits the current and future needs of community residents, and offers tailored recommendations to achieve it.

Team Overview

Stantec has assembled a team for this assignment that we feel is large enough to give the City of Laredo and El Metro the benefit of Stantec's extensive network of subject matter experts, yet small enough to maximize your value for money and allow for effective collaboration among our team.

Stantec's Project Manager will be **Sasha Pejic**. Sasha brings 18 years of experience and leads Stantec's Transit Advisory practice and serves as Stantec's Global Bus Lead. He has overseen and managed countless transit and bus assignments including dozens of bus network reviews and network redesigns. A demonstrated leader in transit, Sasha was appointed to the Zero Emission Bus (ZEB) Task Force for the California Transit Association. He proudly serves on the Board of Directors for the Ontario Public Transit Association (OPTA), sits on the Executive Committee of the Institute for Asset Management and is involved with numerous industry committees of APTA, CTA, CUTRIC and CUTA. Sasha is conversant in all things transit and has unique experience with regards to service structuring, transit funding and strategic planning, which will make him valuable in the Project Manager role. Sasha will ensure that all deliverables will be completed on time and within budget to guarantee the greatest outcomes for the City of Laredo.

Stantec's Deputy Project Manager will be **David Verbich**. Serving as the Team Lead of the Transit

Advisory group in Los Angeles he has experience on a variety of transit, transportation, and urban mobility projects. David has extensive knowledge of redesigning transit networks and strategic visioning for transit agencies. Most recently Dave has served as the Deputy Project Manager on the AVTA Integrated Mobility Plan and was extensively involved in the network redesign for the Winnipeg Transit Master Plan.

The core team consists of eight individuals with additional supporting staff. These individuals, together with Sasha, and David will be involved in the "day to day" activities of this project and are responsible for the completion of all project deliverables. The core team consists of the following individuals:

- **Mark Maldonado** and **Hassan Madhoun** will serve as the **Background Analysis and Stakeholder Engagement Specialists**. Both local to Texas, Mark brings over 15 years of experience in landscape architecture and urban planning, allowing him to understand how transit fits in within a larger urban context. Similarly, Hassan bring extensive experience in transportation engineering offering technical insights. Their complimentary skill sets, and local understanding will bring unique insights to engage Laredo residents and outline an extensive background review.
- **Brian Putre** and **Samantha Squires** will act as the **Implementation Planning and Economics**

Specialists. Brian brings eight years of consulting experience and serves as the Team Lead for the Transit Advisory group in Toronto. Having worked on countless transit and bus assignments, across North America, Brian specializes in business case preparation and financial analyses making him valuable in analyzing the different service offerings, evaluating cost-benefit, and devising innovative service delivery concepts. Similarly, Samantha brings a strong background in economics with experience working on several transit financial analyses.

- **Luxmi Shanmuganantha** and **Jeremy Cohen** will serve as the **Transit Advisory Specialists**. Luxmi has experience in both transit and broader transportation systems, and she brings to this assignment a strong data and quantitative analysis background. Similarly, Jeremy brings a strong analytical background with a robust understanding of transit fleet and technology requirements as well as business case preparation.
- **Amanda McDaniel** and **Michele Colley** will act as the **Transit Planning Specialists**. Both Amanda and Michele bring transit planning experience, having worked on a number of operational reviews and transit planning assignments. Recently, Michele and Amanda were both extensively involved in the route planning and network redesign for the Winnipeg Transit Master Plan and Antelope Valley Integrated Mobility Plan.

Our core team will be supported by subject matter experts who will contribute to the study at strategic moments. **John Gobis** will provide insight into everything technology related. He is a leading industry expert in fare payment technologies and innovative service delivery strategies. He also has significant Texas experience as the former Director of Service Development at Dallas Area Rapid Transit, where he was responsible for service planning, scheduling, customer service, and marketing. **Graeme Masterton** will provide expertise during scheduling and run cutting efforts, drawing on his past experience in management positions at large transit agencies such as BC Transit and TransLink. Finally, **Peter Chatoff** brings over 40 years of experience and he has focused his career on an in-depth understanding of transit fleet, facilities, and procurement, holding senior management positions in operations and maintenance at large transit agencies such as the Toronto Transit Commission.

Project Experience

Stantec's project experience can be found in **Appendix B**.

Project Understanding

Transportation services should shape the character of a community, creating economic opportunities while maintaining the quality of life for those who live, work, study, and visit your community. Transit services must be effective, meaning the right types and levels

of service to meet local needs, and efficient, meaning that the service is delivered at the lowest possible cost to both the rider and the taxpayer. By connecting people to places and opportunities, transit services must provide real measurable value and actively improve the communities they serve.

Laredo and the larger metropolitan region in which it operates is unique in many ways, and the city and region as it exists today is deeply shaped by and connected to its history—from its long and intimate relationship with its sister city across the border, its economic position as the busiest inland port in the country, and focus on retaining its small town feel in the face of continued population growth and development. Laredo is also unique in terms of its transportation history, where the Laredo streetcar (the first electric street railway system in operation in the country west of the Mississippi River) flourished from the time of its construction in 1889 to when the automobile became the primary choice of transportation in the early twentieth century. While private automobile is the mode of choice for Laredoans (with 77.5% of the population traveling by single-occupancy vehicle), El Metro provided 2.8 million fixed-route and dial-a-ride paratransit trips in 2018. However, like most transit agencies across the country, El Metro has seen decreases in ridership amid rising operating costs in recent years, with unlinked passenger trips for bus and paratransit services decreasing by 14% between 2014 and 2018. At the same time, operating cost per unlinked passenger boarding rose 22% for bus services and 41% for paratransit services in this

same time period. The city's transportation patterns, congestion, and circulation patterns also continue to be impacted by port-related freight activity, as well as cross-border travel.

Like many cities experiencing population growth and continued economic development (specifically, the city's population increased 42% between 2000 and 2018, and 9% between 2010 and 2018), Laredo is looking to grow and expand while maintaining the existing small-town feel of the city and without increasing traffic and congestion or the cost of living. Providing effective and efficient public transit services is an integral component of this, so that the vision for the future of Laredo, in which mixed-use, walkable neighborhoods with a distinct sense of place can be achieved, and Laredoans can travel to different destinations within the city without use of a car. The city already acknowledges the important role that transit plays in creating equitable places to live and providing access to opportunity. As Viva Laredo states, "investing in transit...will benefit the lower sector of Laredoans who are less mobile, both physically and financially." Providing convenient transit connections to other trip generators and high demand areas, such as northern parts of the city outside of downtown and the south side of town, is also important to consider. For example, robust transit connections from the TAMU campus to downtown and other parts of Laredo as development around the campus intensifies is important in reducing private vehicle dependency and creating more sustainable communities.

An important component of the COA process for El Metro will be examining the current hub and spoke system

of its fixed routes, with all routes pulsing out of the transit center located in downtown. As we saw in the route revisioning process for Winnipeg Transit, all routes connecting to downtown may not be necessary, and results in longer trip times for those not traveling to or from downtown. Origin-destination analyses revealed a higher demand for inter-neighborhood travel or travel between areas outside of downtown as opposed to all travel originating or terminating in downtown. In fact, leveraging the grid-based road network that exists in much of Laredo today may help to create faster, more direct service, improving efficiency and helping people get to where they need to go quickly and conveniently. Examining the viability of a grid-based system will also have to consider optimal locations for additional transit hubs, such as at the South Laredo College campus.

As the region grows, it is important to focus on regional connectivity and creating a comprehensive transit system that improves quality of life and broadens access to opportunities while creating a more sustainable and vibrant Laredo. This can be achieved through looking at how to improve connectivity with the surrounding region and with other transportation providers such as intercity and intermodal mobility services to truly enable transit's ultimate function, which is to connect people to opportunities. Throughout the COA Stantec will keep the regional context in mind. This is especially important for Laredo, whose regional position and relationship with Nuevo Laredo is of unique economic and historic importance. Only

with an attractive transit offering can El Metro and the Laredo Mass Transit Board work towards its regional and long-term goals of creating a vibrant, sustainable, prosperous city while still maintaining the small town feel that characterizes the city.

Methodology

INTRODUCTION

Reorienting the transit network to better serve currently unserved communities, travel patterns, and destinations, while positioning El Metro as a shared mobility provider, can help implement sustainable land use changes and support the realization of walkable, mixed-use neighborhoods, cutting congestion, pollution, and improving quality of life. We propose a comprehensive approach to assessing, restructuring, and collaboratively developing not only a revised transit network, but also developing policies and strategies to make El Metro more efficient and more attractive to support Laredo's Comprehensive Plan vision of becoming "... the most livable city in south Texas".

Our proposed methodology is based on our experience and expertise in successfully executing similar projects for agencies throughout North America. We focus on developing data-driven insights, tempered by outreach to community stakeholders, and informed by industry-best practices. Outreach will occur strategically throughout the life of the project (and due to the evolving nature of Covid-19, the method of engagement may rely less on in-person meetings and more on online forums).

The first activities include data analysis, plan and policy reviews, and a deep dive into your specific needs and operating practices and requirements. This analysis can show where transit supply is best focused to better match demand now and into the future based on MPO projections. Next, we turn our attention to a gaps analysis and the draft development of strategies to address these gaps. Based on feedback from stakeholders and further analysis, we will develop supporting recommendations that go beyond the ‘map’ to encompass fare policy, paratransit policy, and operations to add value to the COA. Finally, Stantec will develop a phased implementation plan, together with scheduling and run cutting, to help El Metro roll out the recommendations from the COA.

We confirm our availability to commence services immediately after successfully negotiating a contract. Based on our team’s experience working on similar projects and COAs, we have proactively identified staff with availability as well as strategic redundancy to ensure that we can be nimble and responsive to El Metro.

TASK 1: STAKEHOLDER ENGAGEMENT

We propose a robust and targeted stakeholder engagement approach. After the project kickoff, Stantec will develop and submit a draft stakeholder engagement plan that outlines who the key stakeholders are, when engagement would take place, where it will take place, and the different goals of each of the stakeholder phases. This stakeholder engagement plan would be submitted to El Metro for one round of review and then we would finalize the plan. Briefly, we describe the high-level plan below that would be refined after project initiation.

Stakeholders. Stantec typically organizes engagement around our intended audience and purpose of an activity. For this project, we would reach out to internal El Metro staff, LMTI staff, and Transdev operators; external stakeholders, such as planning and transportation departments at the City, faith and community based organizations, board of trade, schools and other destinations for transit; and the community, encompassing current riders, past riders, and non-riders.

Purposes, timing, and methods. The purposes for engagement would be multiple and be distinct throughout the project life cycle. The first round of engagement would occur just after the start of the project to engage with all kinds of stakeholders through multiple forums, from short online surveys for current and non-riders, focus groups and interviews with staff and external stakeholders, to open house type forums for the broader public and interest groups. This round would focus on data and intelligence gathering to inform our team of the current strengths of El Metro, your challenges, who your riders are, where they go, and what the community’s overall desires and visions are for mobility. This round would also provide Stantec with the opportunity to in-person engagement (if possible) to further familiarize ourselves with the community and educate participants about how transit can be used to transform land use and transportation networks. Some key elements of data gathering would include travel patterns from customer surveys and customer satisfaction to help inform network and service design decisions.

The second round of engagement would focus on

meeting key stakeholders and presenting initial findings from the analysis and first engagement round, as well as preliminary service concepts and trade-offs that will shape El Metro's strategic plan. We find this round to be crucial because this is where the community gets to put its fingerprints on the plan. Through workshops and charettes, Stantec will provide an overview of the planning process, our initial findings and strategies, and ask the public to weigh in on trade-offs like a more frequent network with less coverage, or less frequent network with more coverage; more bus stops for less walking access but slower buses, or fewer stops that may require longer walks but shorter in-vehicle travel time; does the community prefer one-seat rides which may take longer than journeys with a transfer but is more direct? At this point, we'll also engage with internal staff to develop routing concepts collaboratively.

The final round of engagement will be when we present the final draft plan based on all our analysis, engagement, gaps and needs analysis, and the development of recommendations and strategies. This engagement would occur, hopefully, through in-person pop-up events with poster boards and other visuals at highly-trafficked locations in Laredo and at the Transit Center and major stops—we would also direct people to visit a project website where all the information and material would be housed. The purpose of this engagement would be to provide information and gather confirmation of our proposals and minimally adjust our final plan and recommendations. We also propose a working session with key staff at El Metro to review draft recommendations and adjust as needed.

Overall, our engagement plan would rely on a mix of online engagement, through virtual meetings, online resources like a website, survey, online map etc., and in person engagement insofar as resources and the evolving Covid-19 situation will permit. All material would be bilingual and accessible to ensure that we meet the needs of your community.

TASK 2: BACKGROUND DATA ANALYSIS

In this task, Stantec will paint a detailed portrait of the Laredo community to understand how transit has been shaped by policy and land use including, for example, the original trolley network and your recent Comprehensive Plan, and the greater role transit should play in shaping the economy and quality of life in Laredo.

We'll start with a policy document review and highlight overarching visions and objectives that need to align with the COA. For example, the Comprehensive Plan's land use vision exploits the gridiron street network to develop nodes of activity—the transit network should work in harmony by providing service to make these nodes reachable by transit and other active modes. The policy review will also inform other recommendations such as the transit fare policy, and accessible and ADA services.

Next, Stantec will use a GIS to develop a spatial analysis of the factors that determine transit use and propensity. We know from numerous studies and first-hand experience that the density, car-ownership, land use diversity, and street design and walkability are the key indicators of strong transit use. To uncover the patterns in Laredo, Stantec will develop several maps outlining all

the key indicators of transit use—we'll also map transit-related performance, such as bus speeds and ridership activity per stop based on data availability.

With this data, Stantec will perform two innovative analyses to uncover opportunities in your system. First, we'll conduct an analysis of job access across the City by transit. This analysis models the number of jobs—which serves as a proxy for other amenities like retail, schools, and healthcare—accessible from neighborhood by transit at a given time of day for a certain travel time threshold. This analysis reveals where transit is the most useful, that is, where transit provides the best access to jobs. This analysis is key since it can uncover disparities in transit supply and demand as we can overlay the access map onto a map of transit mode share, population density, or Title VI indicators to determine whether transit-dependent communities are getting a fair share of transit resources. Second, with GIS, Stantec will develop a 'transit propensity' indicator by standardizing and aggregating the key indicators of transit use onto a single map. The indicators include: activity density (jobs + population); density of zero-car households; density of young and elderly people; travel flows, stop-level travel activity; route passenger load; and bus operating speeds.

We find this particularly helpful to locate hotspots where transit propensity is high and low. By overlaying this map with your current transit network and routes categorized by midday route frequency, we can visualize where transit resources could be focused on more frequent service, and areas where lower frequencies services

could be better suited. This map will also be used in later stages to sketch initial network concepts, design service strategies, and future routing. Furthermore, Stantec will also map future developments (residential and employment) to identify when and where future transit service would need to go.

With this analysis and together with stakeholder outreach, we can develop a profile of El Metro's current ridership, and segment them by market typologies based on frequency of transit use, access to a private vehicle, and other factors that induce transit use. The ridership segments will then be mapped in GIS so that we can determine the spatial distribution of the various ridership segments. Together with analysis outlined above, Stantec's background analysis will help dissect your current ridership, potential ridership, and help us understand where and why transit is successful, and how to leverage opportunities to grow ridership by making transit more useful to more people.

TASK 3: SYSTEM EFFICIENCY AND EFFECTIVENESS REVIEW

We approach comprehensive operations analyses (COAs) in a holistic manner, first building on the findings from Task 2 by getting an appreciation of the transit market, potential riders, land use and transportation realities and opportunities. Once laying the groundwork, we begin to examine performance at different levels, including the overall network, individual routes, and when required, individual stops. By understanding the individual

components of a transit network, as well as the ensemble, we can begin to uncover issues and areas for improvement, while also discovering assets that require strengthening.

Fixed Route Transit Review

Fundamental to the development of recommendations for the future of El Metro services will be a review of existing route structure, service levels and performance relative to current and forecasted demand.

A system-level analysis is a good starting point when reviewing existing conditions. It can give us a sense of the overall health of El Metro, as well as provide comparable data for a peer systems comparison. Based on our past experiences with agencies all over North America, and based on industry guidelines from the American Public Transportation Association (APTA), Federal Transit Administration (FTA), and Transportation Research Board (TRB), our system-level performance analysis and peer review will include key performance indicators (KPIs) including boardings per revenue hour, boardings per revenue mile, ridership per capita, revenue hours per capita, cost per boarding, effective or average fare, cost per revenue hour, cost per revenue mile, and revenue-cost and farebox recovery ratios.

Next, we will examine route, trip and stop-level performance. This analysis will help us understand the purpose of each route, areas for targeted improvement, and the ingredients that garner strong performance on some routes as well as any factors potentially limiting

the success of others. This route-level analysis will help Stantec and El Metro staff understand the performance of each route, identify problematic areas at the stop-level, and help piece together the appreciation of the whole network. Our analysis, based on our expertise and with input from the City of Laredo, the route, trip, and stop-level analysis will include:

- **Service frequency**
- **Service span**
- **Average on-time performance**
- **Travel/running time**
- **Average daily boardings**
- **Boardings per revenue hour and revenue mile**
- **Maximum and average passenger load on the route and trip**
- **Route simplicity**

The primary cost driver in accessible transportation is an entirely external one—demand. The realities of an aging population are such that, according to a recent study by Transportation for America, the vast majority of senior citizens, who also often have mobility challenges, will continue to live in their own houses and will become reliant on public transportation for travel in their later years. And while changes to eligibility and the improved universal accessibility of conventional bus services may decrease the number of registrants requiring accessible door-to-door service, the fact remains that accessible paratransit services are very expensive to provide, typically on the order of ten times the cost per trip compared to conventional service.

The escalating costs related to door-to-door service requires new approaches to help individuals with the ability to use conventional service shift to these modes for improved travel freedom and flexibility, as well as to lower operating costs. During this assignment, Stantec will review El Lift from a number of different angles:

- **Review of Origin Destination Data**
- **Performance assessment**
- **Operational efficiency**

Neighbourhood Circulator Review

A fundamental trade-off in transit planning is the tension between frequency and coverage, where transit agencies must decide to what degree their system should be geared towards frequent routes compared to coverage routes. Coverage routes aim to ensure that every part of the community receives transit service, but as a result, frequent headways and high service levels are not typically possible. Neighborhood circulators act as coverage routes, primarily designed to provide access within residential or low-density areas that do not have enough demand to support frequent and direct fixed-route transit. More specifically, circulator routes are often designed for target audiences, like seniors or people working in an employment area, and bring riders to transfer points where they can access the rest of the fixed-route transit network.

Since the role of circulator service is not to attract high ridership and is to instead provide coverage to transit-dependent populations, evaluating the success of circulator service is not based solely on achieving high

KPIs. While there are minimum ridership benchmarks that should be achieved by any route, we will evaluate circulator services based on how well they meet the needs of the target population(s). We will begin by overlaying current and planned circulator routes with key destinations such as educational institutions, healthcare centers, employment opportunities, outdoor and recreational opportunities, and community organizations to display destinations located within a 5 to 10-minute walking distance of service. We will then use origin-destination data from the ridership survey for the entire network, as well as from El Lift trip data, to determine if there are other neighborhoods that should be considered for circulator service or if any segments of underperforming fixed routes should be replaced with circulator services.

Fare Review

Fare policy serves as a vital strategic tool at a transit manager's disposal. Fares can be used to stimulate (and manage) demand, as well as respond to financial needs by generating revenue. Fare policy can be tailored depending on context and must strike a balance between charging an adequate fare and ensuring riders are still able to afford the service. Stantec will review the current fare structure to determine if it encourages ridership by setting fares at rates that can be sustained in the marketplace while making transit financially sustainable. We will examine the different fare categories and determine the need for a revised fare structure as passengers will soon be able to buy transit passes instead of the single fares that are available today. Our review will also look at existing and potential fare programs, such as student passes and

EcoPasses for employees. We will consider how added fare differentiation creates an additional layer of difficulty in administering the fare policy and collecting and processing fares.

TASK 4: GAP ANALYSIS

By synthesizing our analyses from the reviews of the service area, existing system, peer evaluations, and results of the stakeholder and public engagements, Stantec will identify gaps or needs regarding transit and mobility for the City of Laredo that may be preventing El Metro and the community from reaching their mobility objectives.

The gaps analysis will be comprehensive and will include items that may not necessarily be needs or issues today but could become needs or issues in the future. As an example, we may identify neighborhoods or areas of the service area where transit-dependent populations are located (low incomes, zero-vehicle households, seniors, etc.) where transit is not yet provided or that may be candidates for a neighborhood circulator or fixed-route service, identifying unmet transit demand. Overall, by considering both present and future needs, we'll be in a position to develop proactive strategies which are typically cost-efficient compared to reactive strategies. The gaps analysis will look at an array of items that will impact customers (and potential customers), the City, and the community as a whole.

TASK 5: EL METRO NETWORK PLAN

Our experience gained from studies across North America tells us that a typical progression for a transit network starts with a radial network focused upon the downtown

core. As the city grows, transit systems add services, but there may be still only a single business district that remains the focus of the transit network. The final stage is when a city matures, and multiple business centers are located throughout the city. The downtown is no longer the pure focus for jobs, meaning that many people want to travel to their destination without having to go downtown to transfer. Instead of a radial network where service pulses from one location, cities begin redesigning their networks based on a more grid-like pattern to facilitate transfers at new locations.

Using the information gathered thus far, our team will develop network concepts, where we will explore a modification of today's radial network, a grid or modified grid network, the use of crosstown routes and/or the use of regional transit hubs. The downtown historic neighborhoods of Laredo are laid out on a grid network that is ideal for travel by active and sustainable modes of transportation. In addition, the City of Laredo Comprehensive Plan designs future neighborhoods outside the downtown that will be mixed-use and walkable along a grid network that will mimic the feel of Laredo's historic neighborhoods. The transit network concept we develop will integrate land use and transportation to create complete communities as the city continues to grow. We will also explore and propose optimal locations for transit hubs, including evaluating the South Laredo College campus as a potential transfer site, as well as looking at existing and planned regional mixed-use centers.

The network and transfer concepts will be developed

and evaluated collaboratively with your project team to ensure there is agreement on the planning philosophy within the group. To ensure mutual understanding of the differences in network structure, we will work with the City of Laredo to undertake internal workshops that are focused upon high-level sketch planning to explore the potential of different network styles to meet the city's vision and objectives.

The concept development will also lean heavily on the background review, existing conditions and gaps analysis, and will identify strong routes that need increases in service levels, alignment changes that would improve operations, underserved neighborhoods where transit should be introduced, and underperforming routes that should be eliminated or replaced with alternative service delivery strategies. Finding innovative ways to serve populations along low-performing routes is one area that offers great opportunity for improving performance across multiple efficiency and effectiveness measures. As we have done on many projects to date, we will explore the options of on-demand transit services or neighborhood circulators in areas with low transit performance, making sure transit-dependent neighborhoods are not left behind.

Our team will then create route profiles to show the changes made through the network plan. Creating a template that will be replicated across each route improves the functionality and ease of use for El Metro. Each route profile will include:

- A map clearly showing the existing route and proposed route alignments

- The route layer and its service profile including service span and frequency
- Vehicle requirements
- Connections to major transfer points and routes
- A detailed account of the impact to existing ridership and opportunities to capture new markets
- Performance measures and goals

The deliverables for Task 5 include: a network map that illustrates the new network; a service plan illustrating the span, frequency, and number of vehicles required for each service layer; a GIS database containing network layers; and route profiles showing proposed alignments and service changes.

TASK 6: SUPPORTING RECOMMENDATIONS

The COA requires an approach that carefully considers the interplay between transit planning decisions and operational considerations such as organizational structure, fare structure, technology, and asset/fleet management.

Organizational Structure

The El Metro, LMTI and Transdev operator workshops conducted during Task 1 will be used to understand the corporate culture, staff, and departmental roles and needs throughout the organization. We will then review El Metro's marketing, outreach, procurement, state-level lobbying activities, and its personnel policies, along with any strategies or incentive programs for frontline staff, to provide recommendations based on

industry best practice. Our team will review El Metro's vision and mission statement, organizational structure, how it organizes, contracts and provides its services, and compensation levels of its staff. This review will determine if the current governance, organization and operating models can deliver the agency's vision.

Technology

With the right technology strategies, El Metro can leverage a small and nimble team that is flexible and adaptable to changing technologies and at the forefront of innovation. Task 6 will include a Technology Plan that highlights best practices in delivering enhanced mobility through advanced technology, the relationship between internal IT investments and technology-driven mobility services for the community, and how to best fuse these together to drive efficiencies and customer satisfaction.

When it comes to defining innovative technology planning and implementation, Stantec has successfully leveraged a proven approach for this type of activity which we propose for El Metro's consideration:

- **Think Big:** Bold vision for leveraging technologies including cloud services, data analytics, smart mobility, etc.
- **Start Small:** Select 1-3 early priorities and build foundation for future growth with minimal re-investments.
- **Learn Fast:** Focus on smart partnering, whether with state, regional and local agencies, or with

technology service providers. Leverage economies of scale and perform rapid deployments.

TASK 7: IMPLEMENTATION PLAN

Based on the recommended service options, Stantec will develop and revise an implementation plan. Our team consists of project leaders who have decades of experience advising transit agencies, both developing and implementing plans. Because of this proven experience, our recommendations and implementation strategy will be realistic and approvable. The implementation plan, like the recommendations themselves, will be developed in collaboration with the City of Laredo project team.

In our experience, the implementation plan is as important as the recommendations because how they are implemented impacts customers, potential customers, and the transit agency. We'll provide you with short, mid, and long-term actions to ensure a smooth implementation process. The phased implementation plan will be stratified by theme to provide a clear roadmap for the implementation of recommendations as well as identifying the responsible party and potential funding sources.

Operating Costs and Funding

Acknowledging that all transit agencies are working in environments with limited resources, the implementation plan will include a funding plan that will explore the feasibility of funding sources such as local sales taxes and public-private partnerships for

capital projects. The COA will include cost estimates that will consider operations and maintenance, capital requirements, and fare and ancillary revenues. Our forecasts will focus on operational measures, such as trips (or boardings), number of vehicles, full-time equivalents (FTEs), and revenue hours resulting from the implementation of the service changes and other recommendations, such as fare adjustments. Then, by understanding items like salary rates, fuel consumption rate, and average fare per boarding, we will estimate the annual costs and revenues. Importantly, at this stage, we will identify items that require external funding sources, as well as potential funding sources.

Monitoring Plan

You can't manage what you don't measure. In the context of our industry, key performance indicators are the measurement tools that not only keep us accountable to our ourselves, but also establish the value proposition and commitment to our customers. They help us gauge the 'health' of our business and give us early warning signals where we might be going off-course. However, collecting information, analyzing and cleansing that data, and disseminating it to both internal and external customers can be labor-intensive and one that is administratively exhaustive. Stantec will review what level of key performance indicator (KPI) tracking is appropriate and provide recommendations regarding improved KPI tracking, data management, and data analysis for the purpose of monitoring and managing the health of the transit system as well as evaluating

the effectiveness of the recommendations once implemented. A monitoring plan will be developed to create a systematic workflow where ongoing operational data can be obtained and analyzed to determine adherence to KPI targets.

Furthermore, Stantec will work with El Metro to review baseline data and develop metrics to evaluate the long-term impacts of the new route plan. This could include factors such as decreased fuel usage due to reductions in idling time and time spent turning through intersections, changes to maintenance routines as the new routes alter the nature of vehicle wear and tear, and other long-term operational considerations.

TASK 8: SCHEDULING AND RUN CUTTING

Scheduling, runcutting, blocking, and other aspects of transit operations planning are closely related extensions of our bread and butter work. A schedule will be drafted that accounts for operational realities (deadheading to/from the garage, operator breaks, layover, etc.) and meets the service design standards decided during prior tasks. For example, the decision to create a schedule that is easy to remember may be less efficient and cost slightly more than creating a schedule that is optimized for the route length. We recommend that the schedule be put forward to the public as a 'sneak peek' in order to ensure the schedule is precisely designed to accommodate as many people as possible.

At the completion of the scheduling and blocking exercise, Stantec will proceed with runcutting, which

refers to the creation of driver “run boards” associated with each block. The most notable considerations are with respect to shift times, shift types (AM, PM, midday, split, etc.), while also facilitating the operators’ abilities to easily ensure they have adequate hours between shifts and are able to work the prescribed number of hours per week.

It is important in runcutting to also look beyond the collective agreement and ensure the exercise considers operators as human beings. While a mixture of AM and PM shifts, or excessive split shifts, in a given week, for example, may be compliant within the collective agreement, they can contribute to operator fatigue which in turn can contribute to customer complaints and/or lost time, which also leads to decreasing employee morale and increasing costs. Stantec will approach the runcutting exercise in a way that best appreciates the feedback received from operators during stakeholder engagement and maximizes employee satisfaction and fulfillment.

At the same time, it is important to ensure these considerations are balanced with cost considerations of staffing and anticipated levels of overtime.

SUMMARY

Stantec sees many opportunities to improve effectiveness and efficiency of service and grow ridership through the fundamentals—we’ve helped other agencies throughout North America develop strategies to grow ridership from current riders and attract new ones too. The fundamentals—convenience,

reliability, safety, and comfort—guide our planning process when adjusting networks and performing comprehensive operations analyses.

A successfully executed project requires a thorough approach to project management that outlines a plan, allocates resources, builds capacity, implements QA/QC throughout the life cycle of the project, and provides enough flexibility to deal with unforeseen issues and mitigate risks. Put simply, Stantec pursues a rigorous project management approach built upon deep experience on projects of all sizes, and our proposed project management team includes subject matter experts.

Our project managers follow a process—Project Management (PM) Framework—on every project. This 10-step process begins with the proposal and concludes with the final project closeout. All proposed team members understand and contribute to the various steps.

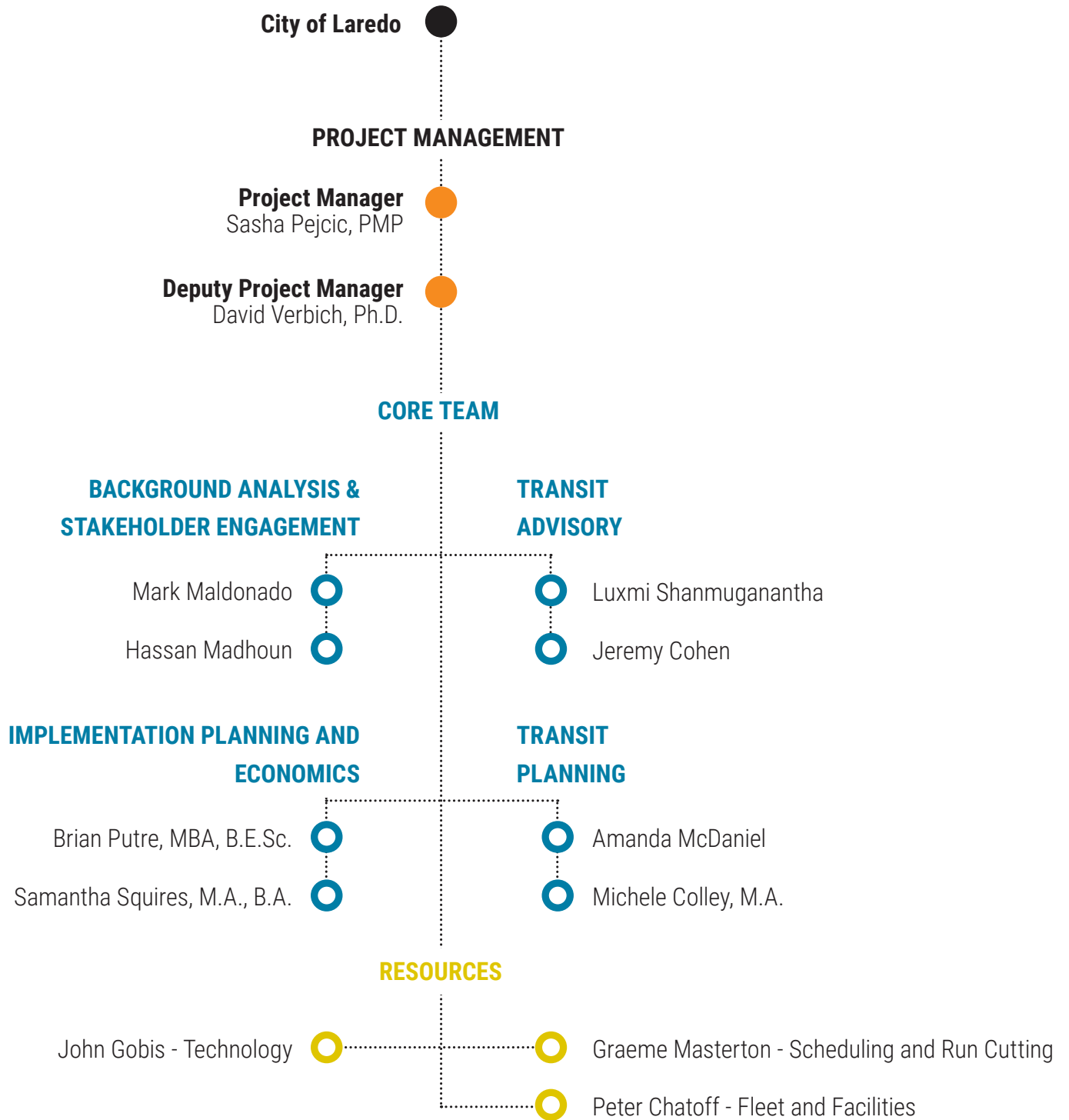
We propose biweekly project updates, including a memo providing work completed, work in progress, and any issues that need addressing and resolution. We will review this on a biweekly update call with the project manager. We are aware that El Metro’s first job is to operate transit services—we will be cognizant and respectful of your time when developing data requests, scheduling meetings, and submitting deliverables.

Schedule

A preliminary project schedule has been provided in **Appendix C**.

Appendix A

Project Organizational Chart and Resumes



Sasha Pejic PMP

Managing Principal, Transit Advisory Lead · Hamilton, Ontario

Sasha is managing principal and lead of Stantec's transit advisory practice. As a management consultant, Sasha helps transit agencies rationalize their services to grow ridership, improve customer satisfaction, and maximize cost efficiencies. Sasha has led a broad portfolio of assignments that include operations and maintenance (O&M) contracting, service optimization, service planning, transit master planning, alternative service delivery strategies, paratransit, new technologies, asset management, economic analysis and strategic planning.

A demonstrated leader in transit, Sasha is an alumnus of ENO. He proudly serves as a Director of the Board for the Ontario Public Transit Association, sits on the Executive Committee of the Institute of Asset Management (IAM), and is involved with numerous industry committees of APTA, CTA, CUTRIC and CUTA. Sasha was recently appointed to the Zero Emission Bus (ZEB) Task Force for the California Transit Association. A testament to his dedication and love for the industry, Sasha was named one of Mass Transit's Top 40 Under 40 for 2018.

Sasha approaches assignments with fresh perspective that challenge the status-quo. He believes it is important to achieve a healthy balance of vision and reality in projects since overly optimistic 'blue-sky' thinking could quickly become defeatist if not the recommendations are not implementable. At the core of Sasha's approach is the customer. The transit industry is being challenged to keep its riders considering competing market disruptors; Sasha is devising strategies for transit agencies globally to reinvent themselves to remain relevant and prosper in the mind of the customer.

EDUCATION

Project Management Certificate, Ryerson University, Toronto, Ontario, 2009

Bachelor of Arts, Honours Economics – Finance Specialization & Applied Studies – Human Resources Management Specialization, Co-Op Program, University of Waterloo, Waterloo, Ontario, 2003

Transit Mid-Manager Seminar, ENO Center for Transportation, Transit Leadership, San Diego, California, 2018

CERTIFICATIONS & TRAINING

Accessibility for Ontarians with Disabilities Training, Hamilton, Ontario, 2016

Workplace Hazardous Materials Information System (WHMIS) Training, Hamilton, Ontario, 2016

Five Star Leadership for Project Managers, Leadership Academy, Toronto, Ontario, 2015

REGISTRATIONS

Project Management Professional (PMP)® #1306473, Project Management Institute

MEMBERSHIPS

Board of Directors, Ontario Public Transit Association

Zero Emission Bus (ZEB) Task Force Member, California Transit Association

Executive Committee Member (Canadian Chapter) - Knowledge Management Lead, The Institute of Asset Management

Member, Mobility Management Committee, American Public Transportation Association

* denotes projects completed with other firms

Member, Bus Safety Committee, American Public Transportation Association

Member, Bus Operations Committee, American Public Transportation Association

Member, Accessible Transit Committee, Canadian Urban Transit Association

Member, Accessible Transit Committee, American Public Transportation Association

AWARDS

2018 Mass Transit Top 40 Under 40

PROJECT EXPERIENCE

Comprehensive Operational Analysis

Regional Transit Plan for the Antelope Valley, Lancaster, California (Project Manager and Technical Resource)

Developing a regional transit plan for the Antelope Valley Transit Authority (AVTA) that will increase ridership and customer satisfaction in the Antelope Valley. Our review includes both local routes and commuter routes to Los Angeles. Exhaustive 360-degree review of the agency including routing, technology, capital infrastructure, fleet, and marketing. Outlining plan for the introduction of microtransit services to replace conventional fixed route in low density areas of the Antelope Valley

Operational Review of TTC Service Delivery Group, Toronto, Ontario (Project Manager and Technical Resource)

\$1M on-call assignment to review the operational effectiveness and efficiency of TTC's service delivery group.

Task Assignments Include:

Support of Corporate Camera Strategy & Delivery Project. Stantec is developing a roadmap outlining the TTC's approach for the deployment of agency-wide closed-circuit television cameras (CCTV). In addition, developing 13 individual business cases in support of the outlined roadmap to justify the investment, identify the payback period to identify the cost/benefit relationship.

Winnipeg Transportation Master Plan, Winnipeg, Manitoba (Co-Project Manager and Technical Resource)

Developing a future-proofed short term and 20-year long-range master plan for Winnipeg Transit. This \$2.6M all-encompassing study includes, but is not limited to, routing optimization for 550 buses, development of service layers, battery electric bus (BEB) transition plan, technology review, alternative service delivery strategy, marketing review and paratransit review.

Transit Master Plan, Whitehorse, Yukon (Project Manager and Technical Resource), 2017-2018

Developed a 6-year transit master business plan that will pivot Whitehorse Transit into a future mobility provider. Exhaustive 360-degree review of the agency including routing, technology, capital infrastructure, fleet, and marketing. Outlined plan for the introduction of micro-transit services to replace conventional fixed route in low density areas of the city.

Transit Strategic Plan, Fredericton, New Brunswick (Project Manager and Technical Resource), 2017-2018

A long-term strategic plan that aims to improve the effectiveness and efficiency of transit services in the city. Investigating opportunities to pivot agency into a mobility provider through promotion of integrated mobility solutions including microtransit and active transportation. Investigating opportunities to replace conventional fixed route service with other coverage solutions in low density areas of the city.

Improvement and Efficiency Review of Service Delivery Group, Toronto, Ontario (Project Manager and Technical Resource), 2017

\$1M on-call assignment that seeks to improve the effectiveness and efficiency of TTC's service delivery group. Task assignments include:

- User Accessibility Audit in Preparation of Family of Services Pilot
- Assisting the TTC in preparing for the introduction of conventional transit service into its service delivery model for specialized transit (Wheel-Trans)
- Undertaking exhaustive evaluations of TTC infrastructure to determine legitimate accessibility from the perspective of a user and to eliminate risks to the agency
- Managing and providing technical expertise to 7 embedded Stantec staff at TTC supporting the Wheel-Trans Transformation Project, which evolves the agency into a Family of Services provider using all modalities of transit including conventional bus, subway and street car

GTrans Line-by-Line Analysis of Transit Services, Gardena, California (Project Manager and Technical Resource), 2017-2018

Sasha oversaw an exhaustive review of GTran's routing structure with a focus on improving route directedness, travel time and productivity. The approach involves a robust stakeholder engagement process, including "pop-up" stakeholder engagement events across the city. Additionally, Sasha and his team reviewed paratransit services and outlined an approach for encouraging a family of services delivery approach to trips.

Southern Maine Regional Transit Development Plan (RTDP), Greater Portland, Maine (Deputy Project Manager and Technical Resource), 2017

Sasha developed a coordinated regional transit plan for seven transit agencies in Southern Maine exploring the broadened role technology and mobility as a service will play in the future. The transit plan includes a variety of service modalities including mass transit, ferry, heavy passenger rail and community volunteer organizations.

Transit Route Optimization and Terminal Concept Plan, Thunder Bay, Ontario (Project Manager and Technical Resource), 2017

Exhaustive review of Thunder Bay Transit's routing structure with a focus on improving route directedness, travel time and productivity. The cumulative efforts of our work will identify whether the City needs to construct a new transit terminal and the location of the terminal if so. Lastly, we will identify innovative solutions to provide service coverage in areas of the City where underlying land uses do not lend themselves to conventional fixed route.

Transit Business Plan, Cornwall, Ontario (Technical Lead – Specialized Transit and Technology), 2017

Development of a 5- and 10-year business plan that aims to improve the effectiveness and efficiency of the agency in the provision of transit services. Reviewed specialized transit and technology functions of the agency and provided recommendations for improvement.

Transit Services Review*, Oakville, Ontario (Project Manager and Technical Resource), 2015

Review of Oakville Transit's conventional transit and para-transit systems along with other related elements of its operations in order to plan for delivery of future services. The overall goals are to continue to meet the Town's public transit needs in an efficient and innovative manner; to identify and implement industry best practices; and to increase overall ridership and maximize cost recovery. In July 2015, Oakville Town Council unanimously approved the plan.

Transit Review and Business Plan*, Fort Saskatchewan, Alberta (Project Manager and Technical Resource), 2015

Review of Fort Saskatchewan's pilot conventional transit system. The outcome of the project is to determine whether fixed-route conventional transit should continue in the community, and if so, how could the service be delivered more effectively and efficiently to the citizens of Fort Saskatchewan. The project includes recommending a new routing strategy, marketing, branding and fleet requirements. Additionally, the project seeks to identify opportunities and a strategy to divert specialized transit trips to conventional transit. Based on the strength of the analysis, Fort Saskatchewan City Council approved making transit a permanent fixture in the community.

2016-2020 Business Plan*, Kitchener, Ontario (Project Manager and Technical Resource), 2015-Ongoing

Development of Grand River Transit's (GRT) five-year business plan in an exciting transitional period with the introduction of Light Rail Transit during the term of the study. The study seeks to provide a blueprint for the agency that will ensure seamless integration of LRT and Bus services, achievement of ridership goals and cost-recovery goals by 2021.

Functional Review of TTC Service Delivery Group*, Toronto, Ontario (Project Manager and Technical Resource), 2015-2016

\$1M on-call assignment leading review to improve bus operations and service delivery in the City of Toronto. Task assignments include:

- **Wheel-Trans Service Delivery Review:** exhaustive review of service delivery and eligibility at Wheel-Trans. In addition, developed an implementation plan to assist the TTC to transition Wheel-Trans to a Family of Services delivery model. (\$450K)
- **Bus Idling Study and Policy:** study to develop a bus idling and noise policy for the TTC's conventional services. (\$175K)
- **Bus Operator Hours of Work Analysis:** analysis of maximum bus operator work hours across transit peers in North America and development of a recommendation for the TTC on maximum hours for its operators. (\$8K)
- **Review of Community Bus Routes and development of a strategy to entice diversion of riders from Wheel-Trans door-to-door specialized transit to Community Bus** (\$85K)

* denotes projects completed with other firms

Short Term Routing Action Plan*, Burlington, Ontario (Project Manager and Technical Resource), 2016

Assignment to review Burlington Transit's current system routing and identify other routing options that could achieve immediate productivity, effectiveness and efficiency gains.

Strategic Plan for Transit in Bangor Maine , Bangor, Maine, United States (Project Manager)

Stantec was retained by the City of Bangor to develop a short to mid term strategic plan for the provision of transit in city. The project is all encompassing including service planning, microtransit, asset management, capital planning and community engagement. As project manager, Sasha is leading the overall project and acting as a technical resource.

Transit Operations

Customer and Community Satisfaction Surveying, Bakersfield, California (Project Manager and Technical Resource), 2017

Assignment to undertake customer and community satisfaction surveying on both conventional and paratransit with the goal of improving ridership and cost-recovery for the agency. Scope of work also includes public outreach with elected officials and community leaders.

Training Review and Procurement Advisor*, York Region, Ontario (Project Manager), 2014-Ongoing

Review of current training practices and assisting in the procurement of a third-party training vendor to develop customized training materials for YRT.

Transit Implementation Support Services*, Fort Saskatchewan, Alberta (Project Manager and Technical Resource), 2016-Ongoing

Implementation of permanent transit services in the growing community. Scope of work includes developing an Operations and Maintenance Contract for transit services and assisting the City through the procurement phase, developing a technical bus specification and assisting the City through the implementation phase, identifying infrastructure requirements and finally providing mentoring to the City's newly hired Transit Coordinator.

Transit Maintenance and Operations Facilities

Project Management Support*, York Region, Ontario (Project Manager), 2015

Supported YRT through the transition of O&M service contractors, as well as the physical move from a leased maintenance facility to YRT's new VIVA Operating, Maintenance and Storage Facility (OMSF). The project has an aggressive timeline of achieving all milestones within a three month period.

* denotes projects completed with other firms

Santa Barbara MTD - Facilities Master Plan, Santa Barbara, California, United States (Project Manager - Phase 1)

Stantec was retained to undertake a three phase facilities master plan for Santa Barbara MTD. Sasha, acting as PM and technical resource for Phase 1, is leading the operational and service planning review. This transit planning review will confirm the number of buses required to meet service into the future which will translate directly into facility size and location requirements. In addition, our review includes consideration of how battery electric buses (BEBs) will change the spacing and programming requirements of the agency.

Facilitation and Strategic Planning

Transit Priorities for Halton Region*, Halton Region, Ontario (Project Manager and Technical Resource), 2015-2016

Strategic effort to identify a strategy for allocating \$77M of Metrolinx Quick-Wins designated for Dundas BRT to fund alternate infrastructure projects that will improve intra- and inter-regional transit connectivity in Halton.

Strategic Planning Facilitation Services*, Toronto, Ontario (Project Manager), 2014

Strategic planning session with OPTA's newly elected board of members. Purpose of session was to help facilitate discussion that would define the association's goals and associated key performance metrics to inform development of their five-year business plan.

Transit Review and Strategic Plan, Elliot Lake, Ontario (Deputy Project Manager and Technical Resource)

Hosted strategic planning sessions with city staff and city council to design the future of Elliot Lake Transit. In addition, undertook cursory-level review of transit operations, including the operations and maintenance contract and fleet, and provided initial recommendations for the city to consider.

Mobility Management

Smart Stations, Sydney, New South Wales, Australia (Project Manager and Technical Resource)

Seeking to be a leader in Smart Tech, Transport for New South Wales in Sydney, Australia is endeavoring on an ambitious plan to alleviate customer pain points while traveling and navigating the transit system by developing and piloting Smart Stations. TfNSW identified eight customer pain points to which Stantec was tasked to develop smart solutions (120+ were developed), short list to the top 20 and establish an implementation plan, along with an early action plan.

Alternative Service Delivery Strategy, Edmonton, Alberta (Project Manager and Technical Resource)

Edmonton Transit Services (ETS) underwent a rationalization exercise that resulted in half of their initial 200 routes being eliminated. This has created orphaned pockets in the community no longer served by conventional fixed routes. Our scope of work is to develop alternate service delivery strategies to provide coverage in those areas including microtransit, home-to-hub, volunteer programs, ride share, ride hailing, etc.

* denotes projects completed with other firms

Sasha Pejcic PMP

Managing Principal, Transit Advisory Lead · Hamilton, Ontario

Alternative Service Delivery Strategy, Bakersfield, California (Project Manager and Technical Resource)

Developed an alternative service delivery strategy to augment and replace conventional fixed route services on low productivity routes within Golden Empire Transit District's network. Proposed strategy including microtransit, home-to-hub and bike share will save the agency \$1M per year in operational costs and improve the service quality being offered.

Development of Campus Shuttle Program - Citibank Corporate Headquarters , Tampa Bay , Florida, United States

Stantec was retained by Citibank to develop a campus shuttle program for its corporate headquarters in Tampa Florida. As project manager, Sasha led the overall project which detailed routing alignments, schedules, infrastructure costing and operational challenges. The project also included outreach to HART to explore the opportunity for the introduction of an employer pass program to the campus.

PUBLICATIONS

Transit Paradise Lost. Ontario Transportation Expo Conference, 2016.

Specialized Transit Industry Practices Review. CUTA Fall Conference, 2015.

Deep Dive - National Review of Specialized Transit Practices. CUTA Annual Conference, 2015.

Beyond the Money: Municipalities can look beyond monetary benefits to ensure a P3 approach is aligned with business practices. ReNew Canada, ReFinance section, 2014.

Para/Accessible Transit. Session Title: Paratransit – Much More Than Just an After-Thought. Association of Municipalities of Ontario (AMO) Conference, 2013.

Municipal P3s: Considerations from Ontario's P3 Market. Economic Forecasting Review, 2012.

Microtransit series (Part 4): Academic research can help advance accessible transit. Metro Magazine, 2018.

Microtransit series (Part 3): How tech can help transit unlock microtransit's opportunities. Metro Magazine, 2018.

S. Pejcic, Uber isn't here to kill mass transit but it could make mass transit better. American City & County, 2019.

Microtransit series (Part 2): Key considerations when integrating on-demand service. Metro Magazine, 2018.

S. Pejcic and K. Anderson, Retrofitting Garages for Zero-Emissions Buses (Part 1 of Series). Metro Magazine, 2019.

Microtransit series (Part 1): Technology helps cities meet demand for accessible transit. Metro Magazine, 2018.

PRESENTATIONS

Innovative Access and Mobility, The 'Mash-Up' of Microtransit and Paratransit. *American Public Transit Association Bus and Paratransit Conference*, 2018.

The 'Mash-Up' of Microtransit and Paratransit. *Ontario Public Transit Association Webinar*, 2018.

Transit Technology Currently Making the Biggest Impact. *Ontario Public Transit Association Conference*, 2018.

Innovative Alternative Service Delivery Strategies for Sparsely Populated Communities. *Arizona Rural Transit Summit*, 2018.

Smart Stations: How Smart Tech is Being Used to Alleviate Customer Pain Points. *American Public Transit Association - Sustainability & Multimodal Planning Workshop*, 2019.

What's Driving the Zero Emission Bus? *Ontario Public Transit Association Conference*, 2019.

Graeme Masterton M.A. (Urban Planning)

Transit Planning Leader · Victoria, British Columbia

Multimodal planning is the overall understanding of the physical planning and psychological behavior of moving people – whether on a daily basis for transit or as a large single movement at an event or as the result of an incident. Transit planning by necessity requires an understanding of active modes and traffic because they are all linked along the transit journey. Urban influences, land use opportunities and constraints, road network challenges, passenger behavior, and the desire to create innovative and cost-efficient transit networks that function for the passenger and the operator have been my passion for the past 30 years. A well designed transit network becomes part of the urban fabric and used by everyone for its simplicity and value. A great transit network values the customers' time but understands that some trips require a less direct path. Transit that is easy to understand, easy to use, and simple to operate creates its own ridership and grows with the community. Layers of transit service, from high frequency to community shuttle can be designed to create an effective network that grows with the community with each layer services a different purpose.

Graeme has put these theories to the test within transit agencies such as TransLink (Vancouver – where he was the Manager of Transit Planning and co-creator of the Frequent Transit Network concept now in place throughout North America) including all the annual and long range service and fleet planning. Graeme also undertook operational planning for the B-Line services in Vancouver including the 98 BLine (centre running BRT), 99 BLine (44,000 passengers per day) and future BLine service planning.

EDUCATION

M.A. (Community and Regional Planning),
University of British Columbia (UBC), Vancouver,
British Columbia, 1994

B.A. (Urban and Economic Geography), University
of Toronto, Toronto, Ontario, 1988

PROJECT EXPERIENCE

Transit-Oriented Development

C-Train/7th Avenue Capacity Study, Calgary,
Alberta

A review of current and projected ridership volumes on 7th Avenue in Calgary to determine the lifespan of existing platform lengths based on operational constraints. The recommendation to begin extending platforms from 3 car lengths was implemented.

Skytrain Utilization Review, Vancouver, British
Columbia

Review of headway options based on current ridership volumes, station dwell times, and restrictions within the system.

Squamish Service Review*, Squamish, British
Columbia

System structure review to improve ridership using
the TEC process.

Whistler Service Review*, Whistler, British
Columbia

12 month detailed stop by stop review of the
system to create a more financially feasible
system structure using the TEC process.

Transit Planning

Edmonton Transit - Task Mapping for
Maintenance Functions, 2014

Project Manager using subconsultants to
undertake a specific review of tasks associated
with maintenance of buses between Fleet
Services and operations along with proposals for
various models for simplifying the task
assignments.

* denotes projects completed with other firms

Graeme Masterton M.A. (Urban Planning)

Transit Planning Leader · Victoria, British Columbia

Comprehensive Review of Edmonton Transit, Edmonton, Alberta

Project managed a multi-tiered review of ETS including internal management structure, fare policy and structure, service standards, strategic planning, maintenance practices, maintenance governance and asset management. This led to the development of a process for creating a Strategic Plan.

TransLink Service Standards Review*

Project manager of an in-house multi-discipline team to use a process to evaluate the relevance and measurability of existing service standards and propose a revised set of standards.

Strathcona County Transit Internal Process Mapping, Strathcona, Alberta, 2013

Project Manager for a team that reviewed all existing process from planning to implementation for Strathcona Transit. This included identification of all tasks ranging from a 25 year master plan through formal 3 year plans, annual plans, service reviews, system prioritization, scheduling and implementation including the provision of timelines for all functions as well as key dates.

Victoria Regional Transit Annual Service Plans*, Victoria, British Columbia

Project director and planner for a program to use the Effectiveness Program approach to conduct extensive annual reviews of the transit system leading to the development of a long range strategy. Annual reports to a Transit Commission highlighted performance measures.

Evergreen Line Essential Elements Report*, Vancouver, British Columbia

Helped review and edit the final version of the base report for TransLink that led to the project definition and approval.

Victoria Rapid Transit Project*, Victoria, British Columbia

Transit specialist on this 18 month review of alignment and mode options for a rapid transit service in Greater Victoria. This project included the evaluation of various corridors, creating a preferred corridor concept and recommending the preferred mode choice.

Operational Review Program*

Created and managed a program for the review of contracted operations at the larger systems in British Columbia ranging from 20-90 buses in size. Reviews included operations, management, training, staffing, site layout, maintenance practices, radio systems, environmental practices etc using a team within BC Transit.

Transit Effectiveness Program*, 2009

Created a program to rank systems, routes and expansions, undertake operator reviews, undertake restructuring reviews and create three-year service plans using measurable and repeatable service metrics and standards for the provincial transit agency.

Evergreen Line Preliminary Design Process*, Vancouver, British Columbia

Provided input on the Technical report in terms of the structure of the right of way, alignment, interface with the Millennium Line, interface with local bus services, operating principles, and the MAE evaluation of the Alternatives.

* denotes projects completed with other firms

Graeme Masterton M.A. (Urban Planning)

Transit Planning Leader · Victoria, British Columbia

West LRT Feasibility Review* (Transit Planner), 2001

Lead planner on the 2001 review providing transit expertise on alignment, station location, alternatives analysis and bus interface challenges.

Southeast LRT Feasibility Review*, 2000

Project manager leading consultants on an initial alignment review including land purchase requirements, station location, bus interface challenges, as well as staging options.

Canyon Meadows LRT Station Justification Report*, Calgary, Alberta, 2000

Senior Planner responsible for the transit services and economics of the proposed Canyon Meadows station on the South LRT corridor.

NE LRT Review*, Calgary, Alberta (Senior Planner)

Senior Planner leading the review of corridor alignment, station location and local bus integration for a future extension.

NW LRT and South LRT Extensions*, Calgary, Alberta

Senior planner representing Calgary Transit on teams implementing the extension of LRT in Calgary, AB. including transit exchange design, Park & Ride, Station design, and local bus integration.

Access Transit (TransLink)*

Helped create and manage this review of accessibility including the creation of guidelines for infrastructure. The review looked at all aspects of accessibility within the transit modes including buildings, rolling stock, policies, external contracting policies and internal functions.

The review led to a new Universal Accessibility design Guideline for accessibility that was a world leader with the assistance of Nelson/Nygaard

Community / Long Range Transportation Plans Lethbridge Alberta Transit Master Plan, Lethbridge, Alberta, 2016

Currently working with the City of Lethbridge to review the existing conventional and accessible services. Graeme is the project manager and lead on transit visioning and reconstruction of the transit network.

Greater Bridgeport Transit Master Plan and TOD Review, Bridgeport, Connecticut (Transit Planning Lead), 2014-2016

Project lead for the review of system data and creation of short range improvements as well as the creation of long range system plans that focus upon internal BRT corridors and regional connectors. Short and medium term transit route changes are a major focus of the work along with the revision of the TOD plan for the Town of Stratford.

Victoria Transit Future Plan*, Victoria, British Columbia

Led the development of the background review of the system as well as the creation of draft options for the future including development of key corridors.

** denotes projects completed with other firms*

Graeme Masterton M.A. (Urban Planning)

Transit Planning Leader · Victoria, British Columbia

South of Fraser Area Transit Plan*

Long Range study in a sector of Greater Vancouver that included five municipalities and the regional district. Short-, medium-, and long-term implementation steps that covered areas of funding, governance, transit system structure, hierarchy of services, short range strategy, policy, infrastructure, and capital investment were developed.

Kelowna Smart Transit Plan 2005 & KelTrans2018*, Kelowna, British Columbia

Transit planner on long range transit plans including creation of land use and transportation guidelines, forecasts of land use reflecting growth of town centres to upgrade regional traffic forecasting model, and development of a phased implementation plan.

Transit/Rail Systems

Green Line - South East Calgary, Calgary, Alberta (Lead Transit Planner), 2013-2014

Lead transit planner for a project leading into Preliminary Engineering to create and analyze routing options for LRT through the southeast of Calgary into downtown including multiple account evaluation of the options, station locations, infrastructure needs and routing.

Red Rock Corridor (MN) Alternatives Analysis Update, Minneapolis-St.Paul, Minnesota, 2013

Led the BRT planning portion of the updated AAU for the Red Rock Corridor of the Minneapolis-St. Paul region. Work included station location, infrastructure improvements, schedule, and routing.

Granville Truncation Study, Vancouver, British Columbia, 2016

Project Manager and Transit lead for a mini-study examining the potential to end the Broadway SkyTrain Extension one station early. This includes predicting ridership, creating bus movement options, evaluation of the options, creation of new station designs and passenger modelling.

Green Line - North Central Calgary, Calgary, Alberta, 2013-2014

Lead transit planning within a team undertaking corridor analysis, route selection, and mode selection for the LRT corridor in the North Central portion of Calgary including a full review of routes and elevation options within the downtown along with station identification and multiple account analysis of options.

Broadway SkyTrain Extension Reference Case Phase 3A, Vancouver, British Columbia, 2015

Planning lead for the alignment planning and station location verification, preliminary planning of stations and the urban integration components of the process. This process leads into Preliminary Design and the creation of all business case inputs for TransLink.

Green Line LRT Calgary, Calgary, Alberta, 2015-2016

Evaluation lead for the 24th Avenue to SE Alignment to determine the preferred option for creation of the Green Line LRT as it extends from the approved SE alignment through downtown Calgary and north across the Bow River and Highway #1.

* denotes projects completed with other firms

Graeme Masterton M.A. (Urban Planning)

Transit Planning Leader · Victoria, British Columbia

**Broadway SkyTrain Extension Preliminary
Engineering Phase 3B, Vancouver, British
Columbia, 2015-2016**

Lead for the modelling program including managing subconsultants for the update of the Regional Transportation model and internal staff for Pedestrian Modelling for the VCC-Clark to Arbutus Station extension to prepare for funding requests.

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory - Toronto (Wellington St),
Ontario

Brian is an experienced project manager with eight years of experience across dozens of planning, research, economics, and management consulting studies. During this time, Brian's conscientious approach to problem solving and business case preparation has been recognized by clients in the transit, transportation, infrastructure, freight, buildings, oil and gas, and international development sectors. Brian's specialty is in public transit and urban mobility, where his business case expertise is supplemented by his experience in analyzing transit operations, engaging stakeholders, devising innovative transit and mobility concepts, and preparing recommendations that are tailored to the communities he works in. Throughout his career he has proven to be well-rounded and nimble, and he has added value on assignments ranging from financial plans to marketing plans, from feasibility studies to implementation support, and from conventional transit analysis to specialized transit (paratransit) analysis. Brian has an MBA and is passionate about public transit and the role it plays in fostering social, environmental, and economic sustainability.

EDUCATION

Master of Business Administration (with Co-op),
Wilfrid Laurier University, Waterloo, Ontario, 2012

Bachelor of Engineering Science in Integrated
Engineering, University of Western Ontario,
London, Ontario, 2010

CERTIFICATIONS & TRAINING

Workplace Hazardous Materials Information
System (WHMIS) Training, Toronto, Ontario, 2016

Accessibility for Ontarians with Disabilities
Training, Toronto, Ontario, 2016

Introduction to Transit Operations Planning
Course, Walter Cherwony and Brian McCollom,
Atlanta, Georgia, 2015

Rudimentary Map Creation and Manipulation Skills
in ArcGIS version 10.2.1, Toronto, Ontario, 2014

Flexible Accurate Structured Transparent (FAST)
Project Finance Modeling Course, Washington,
DC, 2012

MEMBERSHIPS

Former President, Toronto Professional Chapter,
Engineers Without Borders, Canada

PROJECT EXPERIENCE

Transit Planning

Transit Strategic Plan, St. Thomas, Ontario
(Project Manager), 2019

Project Manager, lead consultant, and principal point of contact for the development of a Strategic Plan for St. Thomas Transit, with an emphasis on route optimization, emerging vehicle technologies, capital needs and opportunities, innovative service delivery strategies, and possibilities for inter-city service. Leading stakeholder engagement activities and actively involved with all elements of the scope of work, including strategy and visioning, operations data analysis, market scans, peer reviews, contract review, financial analysis, and report preparation tasks. Providing leadership and oversight to a team of 11 in the completion of this assignment.

Bangor Transit Study, Bangor, Maine, United
States (Deputy Project Manager), 2019

Engaged with stakeholders including committee staff, transit staff, riders, non-riders, third-party organizations, and advocacy groups in the analysis of Community Connector's operations, a transit agency operating in urban, suburban, and rural areas within the Greater Bangor Area. Analyzed operating data and devised innovative service delivery concepts for low-density areas and to solve first/last mile challenges. Assisted

* denotes projects completed with other firms

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory · Toronto (Wellington St), Ontario

and oversaw activities related to route planning and fare and technology reviews. Provided direction to subconsultant on the completion of a capital plan for the agency.

Corridor Route Review, Halifax, Nova Scotia (Project Manager), 2018-2019

Project manager, lead consultant, and principal point of contact for a review of Halifax Transit's proposed and implemented high-frequency (corridor) routes. Analyzed transit, land use, and transportation datasets as well as recent planning activities to understand what gaps and opportunities exist in the existing corridor route network. Developed a suite of proposed modifications to the corridor route alignments and proposed frequencies based on analysis and transit planning best practices. Supplemented the analysis with ancillary recommendations on long-term improvements and on fostering a culture of on-time performance. Ensured compatibility between corridor route recommendations and BRT planning activities.

Transit Master Plan, Whitehorse, Yukon (Task Lead), 2017-2018

Assisted in the preparation of Whitehorse Transit's very first Transit Master Plan. Reviewed past studies commissioned by the City to ensure transit objectives are in alignment with other mandates. Analyzed performance of existing routes and led the development of a new route network and schedule that better meets the needs of residents. Recommended capital infrastructure projects and updates to transit accessibility and the City's specialized transit (paratransit) service, Handy Bus.

GTrans Line-by-Line Analysis of Transit Services, Gardena, California (Task Lead), 2018

Brian reviewed route profiles and GTrans' operating environment, as well as connectivity with Los Angeles Metro. He evaluated fare and transfer policies and the latent and future ridership demand. Brian also prepared for on-board rider surveys and customer and community attitudes surveys. Analyzed survey responses and assisted with the development and costing of line-by-line recommendations.

Fredericton Transit Strategic Plan, Fredericton, New Brunswick (Deputy Project Manager), 2017-2018

Reviewed operating data to understand current performance and the strengths and weaknesses of the system. Conducted in-field stakeholder and public engagement activities. Reviewed the City's geography, demographics, and land use, as a basis for evaluating the feasibility of express routes, Sunday service, Park and Ride lots, and partnership opportunities, as well as the impacts of transit hub relocation.

Transit Route Optimization and Terminal Concept Plan, Thunder Bay, Ontario (Task Lead), 2017-2019

Conducted in-field stakeholder and public engagement to understand community needs, which formed the basis for a route optimization of Thunder Bay Transit's route network. Forecasted transit ridership demand using a regression analysis. Estimated fare elasticity based on historical data. Reviewed land use and activity centres in Thunder Bay as a basis for identifying prospective passenger terminal locations. Prepared cost estimates of the proposed route network to assist in evaluating the cost-benefit and in finalizing the schedule.

** denotes projects completed with other firms*

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory - Toronto (Wellington St), Ontario

Southern Maine Regional Transit Development Plan (RTDP), Greater Portland, Maine (Task Lead), 2017

Brian met with stakeholders across 7 service providers and multiple transit modes including bus, shuttle, rail, ferry, and on-demand services, as part of an operational review and regional transit needs assessment. He conducted an in-field survey of transit riders, prepared regional capital project prioritization frameworks for new and state-of-good-repair projects, and recommended performance measures based on operational datasets and regional goals and objectives. Brian also led the scenarios modeling of the future of transit services in Southern Maine, crafted recommendations and an implementation plan based on background analysis and the results of the scenarios model, and synthesized all work in the form of a public-facing document focused on action items in the short term (2018-2023).

Support of Family of Services Implementation for the TTC Service Delivery Group, Toronto, Ontario (Task Lead), 2017

Worked on-property at the Toronto Transit Commission to support the pilot of the family of services initiative. Identified 16 prospective locations for new mobility hubs allowing for easy transfer between conventional and specialized transit (paratransit) services, based on criteria such as number of connecting routes and proximity of trip generators. Identified the first Wheel-Trans registrants to participate in the pilot, based on criteria such as type of disability, trip frequency, and travel patterns.

Comprehensive Operational Review of TTC Community Bus*, Toronto, Ontario (Task Lead), 2016

Performed a full day ride-along of Community Bus service to understand the performance of Community Bus routes and to engage with riders, collecting feedback. Developed improvements to existing route alignments. Suggested new routes to serve the underserved parts of Toronto, using paratransit trip origin-destination data as a basis. Created ridership estimates for existing and proposed routes based on service frequency, population, and points of interest along the route.

Transit Master Plan*, Kitchener, Ontario (Task Lead), 2016

Analyzed Grand River Transit's operating data to understand its current state of operations and to identify trends for consideration in the Transit Master Plan. Developed design guidelines for bus stops and passenger facilities. Developed methodology to expand service into rural areas. Examined need for additional facilities. Developed strategies to leverage new LRT service to increase bus ridership along with related impacts to bus service. Reviewed benefit-cost implications for proposed Master Plan objectives.

* denotes projects completed with other firms

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory - Toronto (Wellington St), Ontario

Transit Services Review*, Oakville, Ontario (Task Lead), 2014 – 2015

Reviewed performance of Oakville Transit's conventional and specialized transit operations in the form of a route-by-route analysis of cost per trip and cost per hour. Participated in public outreach to understand user experience. Identified opportunities to improve network efficiency and effectiveness. Built a 5-year forecast model in Excel to estimate the growth of the operation (revenue hours, trips, FTEs, fleet size) and determine capital and O&M cost impacts. Evaluated alternatives to ensure alignment with Oakville's internal capabilities.

Smart Mobility

Smart Stations for Transport for New South Wales, Sydney, New South Wales (Analyst), 2019

Developed novel concepts for Smart Stations in Sydney and environs based on state of the art practices in wayfinding, navigation, information, and crowd management. Helped build a business case for TfNSW leadership to pilot new strategies to bring train stations into the 21st century.

Citi Tampa Campus Shuttle and TDM Study, Tampa, Florida, United States (Senior Analyst), 2019

Citi's expanding campus in Tampa required a fresh analysis to provide employees with comfortable and efficient mobility from parking structures to main office buildings and other points of interest. Researched into peer and innovative campus shuttle concepts in operation and assisted with the conceptual design of a shuttle circulating Citi's campus.

Study of Best Practices Regarding Alternatives to Traditional Fixed Route Transit Service, Bakersfield, California (Task Lead), 2018

Undertook a peer and best practices review of alternative and innovative transit service delivery strategies, such as TNCs and microtransit. Evaluated these strategies for applicability in Bakersfield, focusing on operational viability, financial benefits, and impact to service quality. Prepared an action plan with regards to policy updates and strategies to obtain buy-in and acceptance of recommendations.

First/Last Kilometre Options, Edmonton, Alberta (Task Lead), 2018

Identified target neighbourhoods in Edmonton that are lacking in fixed-route transit service and could most benefit from first/last kilometre alternative service options. Shortlisted service delivery strategies for consideration based on the characteristics of each neighbourhood such as population, land use, and proximity to the nearest Edmonton Transit Service (ETS) transfer hub. Developed proposed operating parameters and undertook preliminary costing based on these parameters. Documented the methodology for identifying neighbourhoods and identifying service delivery strategies in the form of tools which ETS can use for future decision-making. Included a discussion of next steps prior to facilitate ETS' ability to implement these options effectively and efficiently.

* denotes projects completed with other firms

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory - Toronto (Wellington St),
Ontario

Transit Operations

Winnipeg Transit Master Plan, Winnipeg, Manitoba (Task Lead), 2019-2020

Developing a future-proofed short term and 20-year long-range master plan for Winnipeg Transit. This \$2.6M all-encompassing study includes, but is not limited to, routing optimization for 550 buses, development of service layers, battery electric bus (BEB) transition planning, fare review, technology review, infrastructure review, alternative service delivery strategies, marketing review, and paratransit review. Brian's focus is on tasks related to route analysis optimization and innovative service delivery strategies, and he is overseeing work related to fare analysis and the appropriateness of shared autonomous vehicles.

Travel Training Pilot Preparation, Execution, and Analysis, Toronto, Ontario (Deputy Project Manager), 2018-2019

Assisting the Toronto Transit Commission with the development of a Travel Training program targeted at encouraging specialized transit (paratransit) users to ride conventional transit services. Assisted with implementing the program in the form of a pilot. Developing program materials such as user surveys, program content, participant report cards, communications and marketing plans, and more. Evaluating user costs and benefits and agency costs and benefits for travel training. Leading the development of a business case which will highlight measures such as payback period and benefit-cost ratio, and integrate these results with qualitative considerations.

Assessment of Opportunities and Challenges - Transit Service Operations, Whistler, British Columbia (Cost Modeler), 2018

Developed an Excel-based model to forecast Whistler Transit annual costs and revenues under different organizational structures. The end goal was to provide a financial comparison of the Resort Municipality of Whistler (RMOW) operating the service in-house, RMOW contracting out the service directly, or continuing with the current model whereby BC Transit is responsible for managing and contracting out the service. Documented cost model assumptions and vetted them with Whistler Transit. Contributed to narrative to that addresses the qualitative and management considerations in addition to the financial considerations.

Customer and Community Survey, Bakersfield, California (In-field Supervisor), 2017

Prepared materials including a sampling plan, survey questions, surveyor training materials, and marketing material content. Trained survey delivery team and acted as an in-field supervisor for customer and community surveying to assess the public perception of Golden Empire Transit services. Engaged with riders and non-riders at transfer points. Supervised the survey data compilation and data analysis for the conventional transit, paratransit, and community surveys. Supervised the report preparation and assisted in building the recommendations.

Operations & Maintenance Contract Review*, York Region, Ontario (Project Coordinator), 2013

Prepared a service contractor "report card" for evaluation of contractor performance against key metrics. Revised the Region's operations and maintenance hourly cost model for functionality and usability.

* denotes projects completed with other firms

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory · Toronto (Wellington St), Ontario

Paratransit / Accessible Transit

Wheel-Trans Eligibility Process Review, Toronto, Ontario (Project Manager), 2018-2019

Reviewed discrete components of the specialized transit eligibility process including the application, evaluation, and appeal processes, as well as processing time and functional assessments. Provided recommendations for improving the existing eligibility process. Established an industry-consistent Quality Assurance program to ensure consistency among the admissibility of program applicants.

Wheel-Trans Cross Boundary Travel Study, Toronto, Ontario (Deputy Project Manager), 2019

Oversaw the analysis of Wheel-Trans trip data involving trips that traversed the City of Toronto's border, entering the neighbouring regions. Reviewed existing and prospective locations for transferring from Wheel-Trans to neighbouring paratransit services. Crafted data-driven recommendations with regards to the appropriateness of providing cross-border service and how these trip needs are best serviced.

Review of Rear and Side Loading Contracted Vehicles, Toronto, Ontario (Lead Analyst), 2018

Conducted surveys and targeted interviews with peer agencies and vehicle outfitters on the subject of rear versus side loading vehicles. Prepared a pros and cons list culminating in recommendations aimed at guiding future contracting activities with third-party taxi contractors.

Comprehensive Operational Review of TTC Wheel Trans*, Toronto, Ontario (Project Coordinator), 2015-2016

Met with stakeholders within the TTC Wheel-Trans (specialized transit) department, as well as with the Advisory Committee on Accessible Transit, to understand current operations and identify opportunities for improvement. Prepared a data request and reviewed the data received for relevance in operations and financial forecasts.

Review of Specialized Transit Industry Practices*, Toronto, Ontario (Task Lead), 2014 – 2015

Conducted interviews and surveys with transit service managers across Canada to understand the current state of specialized transit operations in Canada. Analyzed findings and extracted the top 15 operational areas of significance. Supported the analysis in the preparation of data tables, agency case studies, a detailed legislation review, and a glossary of industry terms. Established a process to add operational topics in the future. Assisted with industry engagement and the development of a user guide for improving operations in the 15 operational areas.

** denotes projects completed with other firms*

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory · Toronto (Wellington St), Ontario

Accessible Transportation Master Plan*, Peel Region, Ontario (Project Coordinator), 2012 – 2014

Analyzed Peel Region's historical specialized transit operations and finance data and identified trends and cost drivers. Reviewed transit demand forecasts for appropriateness and feasibility. Created a user-friendly and customizable Excel forecast model to evaluate the operational and financial impact of three different alternatives. Discussed an action plan for implementing the alternative shown to be most favourable in terms of forecasted gross costs and cost per trip. Led a tutorial session to clarify details of the forecast model before handing the model over to the Region.

Mobility Plus Best Practice Review*, York Region, Ontario (Project Coordinator), 2013

Prepared a survey for eight unique specialized transit agencies across North America. Reviewed findings and identified industry best practices and other important operational considerations. Supplemented the analysis with a literature review. Identified implications for York Region.

Transportation Planning

Niagara-on-the-Lake Transportation Master Plan, Niagara-on-the-Lake, Ontario (Deputy Project Manager), 2020

Assisting with project management tasks for this study which involves assessing needs and opportunities and developing multi-modal solutions for the transportation network, including roads, active transportation, and transit. Leading technical service delivery related to transit, and

assisting with analysis related to traffic, travel demand, policy, and active transportation. Given the tourist draw of Niagara-on-the-Lake, of careful consideration in this project is balancing the needs of local residents and tourists, and considering related economic impacts.

Iqaluit Transportation Master Plan, Iqaluit, Nunavut (Task Lead), 2019-2020

Analyzing background data including transportation needs related to roads, vehicles, parking, transit, taxis, active transportation, and snowmobile routes. Leading the feasibility study for transit or an alternative shared mobility concept in the City of Iqaluit, taking into consideration the city's northern climate as well as the impact of recent investments in the airport, aquatic centre, deep-sea port, small-craft harbour, and new developments. Assisting with stakeholder engagement, road needs analysis, roadway classification, financial analysis, and other elements of transportation planning.

Transit Infrastructure Design

Winnipeg Transit Bus Stop Accessibility Assessments, Winnipeg, Manitoba (Deputy Project Manager), 2019-2020

Created bus and transitway stop evaluation criteria, for use in a thorough accessibility audit of Winnipeg Transit assets and City of Winnipeg property with regards to family of services implementation. Prepared the auditing approach, trained the audit team, and supervised auditing activities. Oversaw the development of indices to score each stop in terms of accessibility, and oversaw the classification of stops and the preparation of report cards. Currently developing targeted recommendations as well as an implementation plan.

* denotes projects completed with other firms

Brian Putre MBA, B.E.Sc.

Senior Consultant and Team Lead, Transit Advisory · Toronto (Wellington St), Ontario

User Accessibility Review for the TTC Service Delivery Group, Toronto, Ontario (Task Lead), 2017

Created subway station, bus stop, and Wheel-Trans stop evaluation criteria, for use in a thorough accessibility audit of Toronto Transit Commission and City property with regards to family of services implementation. Prepared the auditing approach, performed audits, and supervised auditing activities. Assisted in the development of indices to score each subway station and bus stop in terms of accessibility. Met with Toronto's Advisory Committee on Accessible Transit to refine the approach and help inform the recommendations. Assisted in the development of recommendations and audit report cards.

Economic Development

Professional Fellowship*, Lusaka, Zambia (Senior Advisor to the CFO), 2015 - 2016

Created an operations and financial forecast model for Rent to Own, a social enterprise that catalyzes business growth in rural Zambia through providing productive assets to Zambian entrepreneurs. Evaluated business growth strategies in terms of operational viability and anticipated financial performance. Participated in discussions with partners and prospective investors. Created a pricing model which allows the organization to set its prices with more confidence and ease. Contributed to grant proposals.

** denotes projects completed with other firms*

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

David brings exceptional attention to detail and extensive research and analytical experience to consult and respond to the needs of clients on a variety of transit, transportation, and urban mobility projects. David's background includes a unique combination of projects throughout North America and around the globe. David has participated in a series of projects dedicated to improving transit planning and operations with his holistic appreciation of land use and transportation networks. David immerses himself in projects and uses data analytics augmented by first-hand observations and qualitative data to truly understand the underlying challenges and opportunities that face transportation providers. Whether it's developing transit planning and operations reviews, studying customer satisfaction models, or designing fare structures and policy, David is a firm proponent of providing fair and equitable mobility for the communities he serves.

EDUCATION

Master of Urban Planning, McGill University, Montreal, Quebec, 2016

PhD, Neuroscience, McGill University, Montreal, Quebec, 2014

BSc, Physiology, McGill University, Montreal, Quebec, 2007

CERTIFICATIONS & TRAINING

Vehicle Innovation Center -- Electric Bus Essentials Training, New Flyer, Anniston, Alabama, 2019

Institute for Transit Operations Planning, Las Vegas, Nevada, 2018

Workplace Hazardous Materials Information System (WHMIS) Training, Toronto, Ontario, 2016

Accessibility for Ontarians with Disabilities Training, Toronto, Ontario, 2016

AWARDS

2015 Davies Prize – Third Place for Best Site Plan, Planning Studio

2015 Master's Award – SSHRC Joseph Armand Bombardier Canada Graduate Scholarship

2010 Doctoral Award – CIHR Banting and Best Canada Graduate Scholarship

PROJECT EXPERIENCE

Transit Planning

AVTA Integrated Mobility Plan, Antelope Valley, California (Deputy Project Manager), 2019

AVTA provides transit service for the Antelope Valley, as well as commuter service to and from Los Angeles. With a difficult terrain for transit, as well as new challenges including health and social equity issues, AVTA has retained Stantec to develop an integrated mobility plan to improve not only transit service but also mobility generally in the region as a way to ameliorate health indicators and quality of life. David is leading tasks including the analysis of the current market and mobility conditions, visioning, and supporting other tasks including policy and land use analyses, and stakeholder outreach, among others.

** denotes projects completed with other firms*

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

Winnipeg Transit Master Plan, Winnipeg, Manitoba (Transit Consultant), 2019-2020

Winnipeg Transit is embarking on a new transit master planning process for a top-to-bottom review of its services, organization, policies and practices, and how transit can be better leveraged to usher in a new vision of a healthy and prosperous Winnipeg. David is working across many tasks, including the in-depth review of current market and transit conditions, developing best practices and white papers on various transit-related topics, as well as lending his experience in corridor planning and development. David also reviewed Winnipeg Transit Plus, the paratransit service of Winnipeg Transit, and led stakeholder engagement to develop buy-in and refine the implementation strategies for improving the efficiency and customer experience of Transit Plus.

GTrans Line-by-Line Analysis of Transit Services, Gardena, California (Task Lead), 2018

David reviewed route profiles and GTrans' operating environment as well as connectivity with Los Angeles Metro. David led the review of the performance of the agency's routes, developed a market and latent demand analysis, as well as led a sketch planning session with agency staff. With robust stakeholder outreach, the outcome was a phased, actionable and sensible approach to reorganizing GTrans' network as well as new policies to foster mobility around the South Bay.

Fredericton Transit Strategic Plan, Fredericton, New Brunswick (Task Lead), 2018

David analyzed and mapped market characteristics and operating data. Prepared and assisted in in-field stakeholder and public engagement activities. Reviewed the City's geography, demographics, and land use as a basis for evaluating the feasibility of express routes, Sunday service, Park and Ride lots, and partnership opportunities, as well as the impacts of transit hub relocation. Also developed policy recommendations related to fares, community partnerships, and alternative service delivery.

Moving Forward Together Corridor Route Review, Halifax, Nova Scotia (Analyst), 2018

Developed an existing conditions and market report based on updated sociodemographic information. Assessed and recommended service design standards for policies regarding reliability, among others, for high-frequency corridor routes.

Transit Master Plan, Whitehorse, Yukon (Task Lead), 2017-2018

Assisting in the preparation of Whitehorse Transit's very first Transit Master Plan. Reviewed past studies commissioned by the City to ensure transit objectives are in alignment with other mandates. Analyzed current conditions related to active transportation in the City, and developed recommendations aimed at improving the interface between cycling and public transit.

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

Southern Maine Regional Transit Development Plan (RTDP), Greater Portland, Maine (Task Lead), 2017

David developed a coordinated regional transit plan for seven transit agencies in Southern Maine exploring the broadened role technology and mobility as a service will play in the future. The transit plan includes a variety of service modes including mass transit, ferry, heavy passenger rail and community volunteer organizations. David led the analysis of the market characteristics of the region, as well as of the seven service providers. He also conducted stakeholder engagement activities, including on-board rider engagement; developed recommendations and service concepts to improve transit service and regional integration; and authored a public-facing report highlighting major findings and recommendations aimed at improving regional transit.

Transit Route Optimization and Terminal Concept Plan, Thunder Bay, Ontario (Transit Planner), 2017-2019

To provide sustainable and effective mobility for one of the largest cities in Northern Ontario, Thunder Bay Transit Services is reviewing its current bus routes, scheduling, operations, and terminal facilities. The Plan involves a route-by-route analysis based on archived AVL-APC data, which David has been leading, as well as a thorough background review, ridership demand forecasting, stakeholder engagement, and the development of financial and implementation plans. Currently leading the development of a new route network and schedule. With a redesigned network and fresh delivery approach, Thunder Bay Transit will be in a position to deliver impactful service while reducing costs.

Service Design Standards and Standard Operating Procedures Review*, Oakville, Ontario (Analyst), 2016

This project will provide Oakville Transit a review of its current service standards and operating procedures, and provide updated standards. David completed an in-depth review and evaluation of current service standards at Oakville Transit, conducted a peer review of service standards, and analyzed labor and scheduling practices.

Grand River Transit Business Plan*, Waterloo Region, Ontario (Analyst), 2016

In this project that aims at developing a business plan for GRT, David helped develop a TSP implementation guide, and reviewed a report on GRT's current fare policies and recovery ratio goals and strategies.

Higher-Order Transit Corridors*, Halton Region, Ontario (Analyst), 2016

The Halton Region is planning to improve transit service provision by identifying new transit corridors and upgrades to intermodal GO stations. David helped analyze and prepare data related to service design that led to ridership forecasts.

Study of Best Practices Regarding Alternatives to Traditional Fixed Route Transit Service, Bakersfield, California (Analyst), 2018

David is assisting in a peer and best practices review of alternative and innovative transit service delivery strategies, such as TNCs and microtransit. Evaluating these strategies for applicability in Bakersfield, focusing on operational viability and impact to service quality. Preparing an action plan with regards to policy updates and strategies to obtain buy-in and acceptance of recommendations.

** denotes projects completed with other firms*

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

Paratransit / Accessible Transit

TTC Wheel-Trans Travel Training Pilot, Toronto, Ontario (Background Analysis Lead), 2018

The TTC's Wheel-Trans program selected Stantec to conduct a travel training pilot, an important component of its Family of Services delivery model. Travel training will help individuals who use door-to-door specialized service learn to use conventional TTC services, enabling spontaneous travel. David is leading initial tasks involving the review of background information regarding strategy identification and program development and also supporting the development of the business case for travel training.

User Accessibility Review for the TTC Service Delivery Group, Toronto, Ontario (Analyst), 2017

David assisted in creating subway station, bus stop, and Wheel-Trans stop evaluation criteria for use in a thorough accessibility audit of Toronto Transit Commission and City property regarding family of services implementation. Prepared the auditing approach, performed audits, and supervised auditing activities. Assisted in the development of indices to score each subway station and bus stop in terms of accessibility. Participated in a focus group to refine the approach and help inform the recommendations. Developed layout of report cards and drafted portions of the final report and action plan.

Wheel-Trans Comprehensive Operational Review*, Toronto, Ontario (Analyst), 2016

This Comprehensive Operational Review (COR) of TTC's Wheel-Trans ensures that the agency is compliant with the Accessibility for Ontarians with Disabilities Act by January 1, 2017. Additionally, the project includes reviewing the eligibility process, service design and delivery, organization, fare payment and technology functions of the Wheel-Trans program. David analyzed and compared peer agency contracts for the brokered taxi paratransit service. Additionally, David supported the review of Community Bus routes with a focus of diverting door-to-door paratransit riders to this alternate mode.

Transit Operations

Santa Barbara MTD Facilities Master Plan, Santa Barbara, California (Operations Planner), 2019

To develop a robust and comprehensive facilities master plan, MTD retained Stantec to develop a forward-thinking facilities master plan to future-proof the agency, particularly due to ZEB requirements from the State of California. David is providing transit operations planning expertise to help the team design facilities that account for current and future transit demand and supply.

Arlington BRT Corridor - MBTA Boston BRT, Boston, Massachusetts (Transit Operations Analyst), 2018

In the Greater Boston Area, the MBTA is launching pilot projects to improve bus operations by implementing BRT-type strategies. David is analyzing and interpreting data related to bus operations along a corridor in Arlington, MA to determine whether and how the interventions have improved bus operations.

** denotes projects completed with other firms*

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

Customer and Community Satisfaction Surveying, Bakersfield, California (Task Lead), 2017

Assignment to undertake customer and community satisfaction surveying on both conventional and paratransit services with the goal of improving ridership and cost-recovery for the agency. Scope of work also included public outreach with elected officials and community leaders. David developed survey material, trained surveyors, as well as acted as an in-field supervisor of surveyors. Reviewed final report and developed recommendations to improve customer satisfaction.

Smart Mobility

Smart Stations -- TfNSW, Sydney, Australia (Analyst), 2019

David developed novel concepts for Smart Stations in Sydney based on state of the art practices in wayfinding and navigation. Helped build a business case for TfNSW leadership to pilot new strategies to bring train stations into the 21st century.

Edmonton First-Last Kilometre Challenge, Edmonton, Alberta (Analyst), 2018

By removing nearly half of its bus routes, ETS is looking for ways to provide mobility to areas that will see the removal of bus service. David participated in the initial identification of locations and neighborhoods that would be orphaned due to service removal. David also participated in concept development for alternative service delivery.

Golden Empire Transit District (GET Bus) - Study of Best Practices Regarding Alternatives to Traditional Fixed Route Transit Services, Bakersfield, California (Analyst), 2018

David assisted in a peer and best practices review of alternative and innovative transit service delivery strategies, such as TNCs and microtransit. Evaluated these strategies for applicability in Bakersfield, focusing on operational viability and impact to service quality. Prepared an action plan with regards to policy updates and strategies to obtain buy-in and acceptance of recommendations.

Development Assessments

Union Square Development, Somerville, Massachusetts, US (Analyst), 2018-2019

The development of a new mixed-use site with multiple buildings will impact travel to and from the study site, located in Union Square in Somerville. David led the innovative analysis of bus passenger activity, loads, and MBTA service standards to understand the impact of the proposed development on transit operations and how they may impact MBTA service delivery standards.

Asset Management

Wheel-Trans Fleet Planning Study, Toronto, Ontario (Analyst), 2018

With the growing demand for specialized transit service and part of an on-call contract, the TTC has retained Stantec to develop a fleet plan that is adapted to its evolving customer needs and service delivery models. David led the initial analysis and guided the development of the methodology for vehicle forecasting and drafted the final recommendation.

** denotes projects completed with other firms*

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

Fleet Management Plan*, Sarnia, Ontario (Analyst), 2016

By evaluating Sarnia Transit's current fleet, management will be given necessary information on how to improve fleet acquisition and optimal bus retirement age. David helped develop the lifecycle financial model, performed data analysis and co-authored the report to recommend the optimal age of retirement and a fleet plan.

Asset & Fleet Management*, Toronto, Ontario (Analyst), 2016

The goal of this project is to provide TTC bus managers with information on their current fleet, as well as propose a new lifecycle for financial sustainability. David's role in this project included report revision.

Consulting Services

Citi Campus Shuttle and TDM Study, Tampa, Florida (Deputy Project Manager), 2019

Citi's expanding campus in Tampa required a fresh analysis to provide employees with comfortable and efficient mobility from parking structures to the main office buildings. David led the analysis and conceptual design of service alternatives for a shuttle, while also acting as DPM overseeing other phases of the project and meeting with clients.

Transit Review and Strategic Plan, Elliot Lake, Ontario (Consultant), 2018

The City of Elliot Lake retained Stantec to guide them through a process of reviewing existing contracted transit services and to develop a robust stakeholder engagement approach to inform residents about transit and new mobility options. David developed content regarding alternative service delivery, vehicle models, and transit planning principles that were used to guide discussions and ultimately produce a report that provided the City with options and alternatives for more effective and attractive mobility for its mainly elderly and retired community.

** denotes projects completed with other firms*

David Verbich Ph.D

Team Lead, Transit Advisory · Los Angeles, California

PUBLICATIONS

Lead author. Bang for the buck: Toward a rapid assessment of urban public transit from multiple perspectives in North America. *Transport Policy*, 55, 2017.

Lead author. Public transit fare structure and social vulnerability in Montreal, Canada. *Transportation Research Part A: Policy and Practice*, 96, 2017.

Lead author. Have they bunched yet? An exploratory study of the impacts of bus bunching on dwell and running times. *Public Transport*, 8, 2016.

Lead author. The pursuit of satisfaction: Variation in satisfaction with bus transit service among riders with encumbrances and riders with disabilities using a large-scale survey from London, UK. *Transport Policy*, 47, 2016.

Co-author. The cost of equity: Assessing accessibility by transit and social disparity using total travel cost. *Transportation Research Part A: Policy and Practice*, 91, 2016.

Michele Colley M.A.

Transit Advisory Consultant · Toronto (Wellington St), Ontario

Michele has experience developing multi-modal transportation solutions for a variety of transportation and transit planning projects. She has performed a variety of transit planning exercises including examining transit demand and route performance, reviewing peer agency standards, evaluating network alternatives, and engaging with the public. Her background in geography and transportation planning allows her to see how transit fits within the greater transportation context, and she contributes her understanding of the interplay between land use, transit, roads, parking, and active transportation to each assignment.

EDUCATION

Honours Bachelor of Arts in Geography,
Geographic Information Systems and History,
University of Toronto, Toronto, Ontario, 2014

Masters of Arts in Geography, University of
Toronto, Toronto, Ontario, 2016

PROJECT EXPERIENCE

Transit Planning

City of Winnipeg Transit Master Plan, Winnipeg,
Manitoba, Canada

Conducted a system-level review of Winnipeg Transit's operating data and compared Winnipeg's performance measures to its peers. Evaluated route-level performance of existing services and proposed realignments based on cellular mobility data, APC counts, demographic data and land use information to better match transit service with demand. Provided recommendations related to Mobility as a Service (MaaS), integration of accessible and conventional transit, and alternative service delivery strategies.

AVTA Integrated Mobility Plan, Antelope Valley,
California

Analyzed automated passenger counting (APC) data to understand stop-level activity, conducted a market analysis, and developed route profiles for local services. Redesigned existing local and commuter routes to improve the efficiency of service. Engaged with Bus Operators, Customer Service Representatives and AVTA staff to understand the challenges and visions of each transit service. Provided recommendations for the integration of land use and transportation to ensure future developments are designed with transit at the forefront.

Toronto Transit Commission Family of Services
Expansion, Toronto, Ontario

Assessed conventional transit bus, subway and streetcar stops across the TTC system to identify optimal transfer locations from Wheel-Trans vehicles to the conventional system. While embedded at the transit agency for this project, she worked with multiple agency departments to develop a ranking system for transfer stop feasibility. Feasibility was based on customer experience and accessibility, as well as Wheel-Trans and conventional vehicle operations that would minimize conflicts. This assignment is part of a wider effort to integrate specialized transit services with conventional service as part of the Wheel-Trans Transformation Program.

** denotes projects completed with other firms*

Michele Colley M.A.

Transit Advisory Consultant · Toronto (Wellington St), Ontario

Toronto Transit Commission Travel Training Pilot, Toronto, Ontario

Developed metrics to evaluate the TTC travel training pilot program, which aimed to empower individuals with disabilities and mobility challenges to take conventional transit services through one-on-one training. Engaged with the community and Wheel-Trans customers during ride-alongs to promote the travel training program. Conducted an industry scan to review peer strategies for travel training and determine the resources required for implementation of a permanent program at the TTC.

Bangor Transit Study, Bangor, Maine

Proposed route-level modifications based on existing data and customer feedback to improve system productivity. Developed recommendations to enhance the rider experience, such as increasing frequency along key corridors, eliminating flag-stop service and introducing fixed stops, simplifying route alignments, and making route nomenclature more intuitive.

GTrans Line-by-Line Analysis of Transit Services, Gardena, California

Analyzed and mapped data from on-board satisfaction surveys, origin-destination data, regional travel surveys, and demographic data to identify issues with the agency's operations and to understand existing and future transit demand. Performed line-by-line route analysis of manual passenger count data, including validating data to help provide a high level of confidence. These data informed recommendations for route and network-level improvements.

Okotoks Local Transit Plan, Okotoks, Alberta

Conducted an evaluation of local transit service options for new transit service in Okotoks, including fixed-route and on-demand options.

Developed a Fare Strategy and Marketing Strategy for the preferred on-demand transit option and Shared Autonomous Vehicle (SAV) Plan.

Alternative Service Delivery Strategy, Edmonton, Alberta

Conducted peer best practice review of alternative service delivery strategies to understand industry innovations in service delivery methods, potential partners, funding, and lessons learned from transit agencies across North America.

Fredericton Transit Strategic Plan, Fredericton, New Brunswick

Analyzed online survey data to reveal components of customer satisfaction and design recommendations aimed at growing ridership.

Operations and Maintenance

York Region Transit Contract Review, York Region, Ontario

Updated the Contract and Standard Operating Procedures Manual (SOP) for the RFI and RFP procurement processes for York Region Transit's Operations and Maintenance Contract (North Division). Coordinated between agency departments such as Capital Assets, Operations, Transit Management Systems, Transit Enforcement and Security, Customer Service, and Mobility Plus to ensure the documents addressed comments from a variety of business lines. Provided recommendations based on industry best practices in regards to performance metrics, operations and contract language. Participated in RFI sessions with contractors and assisted YRT with responding to questions from contractors.

** denotes projects completed with other firms*

Michele Colley M.A.

Transit Advisory Consultant · Toronto (Wellington St), Ontario

Transportation Planning

Keele Finch Plus Planning Study *, Toronto, ON (Transportation Planner)

Conducted transportation planning activities for the Keele Finch Plus Planning Study, a study to facilitate growth around the proposed Finch West LRT and Finch West Subway Station. Duties included an assessment of the existing transportation conditions and policy context, GIS analysis of pedestrian connectivity, and input into the development and refinement of transportation network options.

Scarborough Centre Transportation Master Plan *, Toronto, ON (Transportation Planner)

Responsible for analysis and written reports, including the quantitative multi-modal assessment, qualitative evaluation of network alternatives, implementation plan, and final Scarborough Centre Transportation Master Plan (SCTMP) document. Also responsible for preparing public consultation materials and engaging with residents, agencies and key stakeholders to address concerns about proposed changes.

Transportation

Gender Differences in the Commute to School and Work *, Toronto, Ontario

Conducted Master's research thesis titled Gender Differences in the Commute to School and Work through Time and Space in the Greater Toronto and Hamilton Area. Analyzed Transportation Tomorrow Survey (TTS) data, conducted spatial analysis in ArcGIS and R, synthesized gender and transportation literature and presented at conferences.

School Travel Trend Reports *, Greater Toronto and Hamilton Area, Ontario

Analyzed transportation data in collaboration with Metrolinx to inform policies surrounding school and work travel. Provided data and text for GTHA School Travel Trends Reports (region-wide and municipality-specific) for dissemination to Metrolinx employees and policy makers of regional municipalities in the Greater Toronto and Hamilton Area.

PUBLICATIONS

Colley, M and Buliung, R. (2016) . Gender differences in school and work commuting mode through the life cycle: exploring trends in the Greater Toronto and Hamilton Area, 1986-2011. , 2016.

** denotes projects completed with other firms*

Samantha Squires

B.A., M.A.

Transit Advisory Analyst · Toronto (Wellington St), Ontario

With an extensive background in economic theory, Samantha has broad research experience spanning economic policy analysis and the evaluation of provincial economic indicators in a wide range of industries including fisheries and agriculture, forestry and mining. She has also developed an interest in, and affinity for, transit economics as best demonstrated through her evaluation of cost-benefit analysis for light rail transit decisions specific to Crown corporations and local municipalities. In carrying out these economics analyses, she has honed her skills working with Microdata and econometric statistical software in a variety of capacities. Samantha has recently been involved in multiple public sector initiatives on behalf of federal government departments. She is well-rounded, pairing her analytical abilities with a strong background in marketing and communications from her experiences developing an online, public-facing economic dashboard for the Province of New Brunswick.

EDUCATION

Bachelor of Arts (Honours) - Economics, St. Thomas University, Fredericton, New Brunswick, 2018

Masters of Arts - Economic Policy, McMaster University, Hamilton, Ontario, 2019

PROJECT EXPERIENCE

Financial Analysis

Riverside Transit Agency Zero Emission Bus Analysis and Rollout Plan, Riverside, California (Analyst)

Development of "base case" financial analysis with use of CNG-fueled buses and operations to 2040, including forecasting capital investments and operating expenses. Development of alternative financial analysis for Zero Emission Bus (ZEB) rollout and fleet transition from CNG to 100% fuel-cell electric vehicles from 2020 to 2040, including a phasing plan of buses according to ICT and CARB regulations.

Golden Gate Bridge Highway & Transportation District Zero Emission Bus Rollout Plan and Analysis Services, San Francisco, California, (Analyst), 2020

Undertaking financial analysis to determine lifecycle costs to 2060 for GGBHTD Transit's transition to 100% Zero-Emission Buses under CARB's ICT regulations.

Transit Service Planning

City of Winnipeg Transit Master Plan, Winnipeg, Manitoba, Canada

Assisting in developing Winnipeg's first 25-year Transit Master Plan. Created training materials for bus stop auditors evaluating accessibility of transit infrastructure. Supervising data collection which will enable Stantec to develop efficient and innovative paratransit strategies for the City of Winnipeg and eventually implement a Family of Services (FOS) delivery model.

Saint John Transit Operational Audit, Saint John, New Brunswick, Canada

Conducted an analysis of Saint John Transit's key performance indicators in comparison to peer agencies for the Operational Audit. Transit indicators included those related to revenue hours, ridership, cost recovery and operating expenses. Examined differences in performance as a result of demographic and socioeconomic conditions within the service areas.

Transit Systems and Systems Integration

TTC Corporate Camera Strategy & Delivery, Toronto, ON

Support for TTC CCSD project. Developing business cases and conducting cost-benefit analyses for multiple initiatives to assess societal and operational impacts of CCTV implementation.

* denotes projects completed with other firms

Samantha Squires B.A., M.A.

Transit Advisory Analyst · Toronto (Wellington St), Ontario

Fare Media & Policy

Airdrie Transit Revenue Strategy, Airdrie, AB

Currently assisting with the strategy and development of university and employer transit pass programs for the City of Airdrie. This includes analyzing stakeholder feedback and ridership data to develop goals, distribution plans, and evaluation strategies.

Economic Development

BoostNB Economic Dashboard*, Fredericton, New Brunswick (Research Assistant, Writer), 2018

Established a dashboard of economic indicators for the province of New Brunswick using publicly available data. Was a key member of the first BoostNB team, successfully developing, populating and launching BoostNB.com to provide annual trends and status on specific economic goals outlined in the 2016 New Brunswick Economic Growth Plan. Wrote reports and led specific areas of research for goals on interprovincial migration, firms in export trade, export values, labour productivity, and employment rates for youth, Aboriginal and First Nations. Also spear-headed the creation of indicators for status of natural resource sectors of interest including forestry, fisheries, agriculture and mining.

Transportation Analysis and Investigation

Ontario Light Rail Transit Decisions*, Fredericton, New Brunswick

Completed undergraduate economics honours research project titled Ontario Light Rail Transit Decisions Based on Cost-Benefit Analysis (CBA). Investigated the criteria for a successful light-rail transit (LRT) presence in Southwestern Ontario, focusing on ex-ante business cases and evaluation methods through Multiple Account Analysis and other CBA strategies. Analyzed the

necessary economic and financial assumptions for proper use of CBA as a tool for environmental decisions and proper allocations of resources. Evaluated the importance of implementing systems to achieve goals of efficiency, job creation, land value uplift and other long-term microeconomic effects within already-populated urban environments including Hamilton, London, and Kitchener-Waterloo.

Federal Government

Canada's System of Environmental-Economic Accounting (SEEA)*, Ottawa, Ontario, Fisheries and Oceans Canada, 2019

Performed research and analysis for Canada's contributions to the United Nations Ocean Accounts Partnership. Examined methods used internationally and regionally for valuing ecosystem activity and trade-offs, to be applied in the quantification of Canada's Marine Ecosystem Goods and Services (EGS). Collected fish stock biomass estimates and models across regional fishing areas over the past four decades by surveying science reports and advisories within the Canadian Science Advisory Secretariat (CSAS). The valuation of EGS and their complex benefits to human welfare will be included in Canada's System of Environmental and Economic Accounts (SEEA), an international accounting system used for economic and sustainability decision-making. The accounts will provide an analytical framework for integrated policy analysis and provide information to the public with respect to economic indicators, and market and non-market services provided by oceans.

* denotes projects completed with other firms

As a landscape architect and urban planner, Mark has a keen sense for the land. With over 15 years of experience, Mark has developed strong leadership and project management skills, and is particularly skilled at managing client relationships. He has extensive knowledge and experience with the Green Building/LEED process which has moved to the forefront of environmentally conscious development from small retail sites to large public institutions. Additionally, his land planning expertise allows him to provide early feasibility analyses in conjunction with concept planning, and results in designs that can be successfully executed in the real world. Mark's project experience is extremely diverse, including master planned communities, land use studies, streetscapes, parks, and cemeteries throughout Texas and the Southwest U.S.

EDUCATION

Master of Science in Land and Real Estate Development, Texas A&M University, College Station, Texas, 2009

Bachelor of Landscape Architecture, Texas A&M University, College Station, Texas, 2008

REGISTRATIONS

Licensed Landscape Irrigator #21061, State of Texas

Texas Certified Nursery Professional #5149, State of Texas

Registered Landscape Architect #2980, State of Texas

MEMBERSHIPS

Leadership Development Class Graduate, Real Estate Council of San Antonio, 2017

Member, Real Estate Council of San Antonio

Member, Urban Land Institute

PROJECT EXPERIENCE

Single Family Residential

Cottonwood Creek, San Marcos, Texas

Phase III of a 471-acre master-planned community located 5 miles southeast of Texas State University in San Marcos, Texas. This project included entry signage monumentation, secondary signage, native streetscape plantings, an amenity center with Junior Olympic pool, children's park with playscape and extensive hike and bike trails that wind their way through the tree-covered community.

Estancia, Austin, Texas

Estancia Hill Country is a ±594-acre site located west of Interstate Highway 35 (IH-35) at FM 1327 (Puryear Road) Austin, Travis County, Texas. This tract consists of ±737 single family lots and 1,550 multi-family units with over 200 acres of commercial, office and retail. The project scope includes conceptual planning, cost estimates, preliminary planning, zoning [Planned Unit Development/Public Infrastructure District (PID)], site development planning, subdivision, and construction documents for all residential, multi-family and commercial sites.

The Meadows, Seguin, Texas

Mark was involved in the development of landscape architectural construction documents for this residential subdivision in New Braunfels. The project scope included design of the entry feature, perimeter wall, and small community park.

Streetscapes

South Flores Streetscape, San Antonio, Texas

Stantec provided landscape architectural and hardscape design for approximately a one-quarter mile portion of South Flores Street near downtown San Antonio. The project is adjacent to HEB headquarters and the historic Commander's House (part of the City of San Antonio park system). The streetscape design provides separate lanes for cyclists and pedestrians, with the buffer areas in between landscaped with native plant species. The design also incorporates an historic wall and vegetative swale components to capture runoff.

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

CD Urban Planning

Livable Centers Study for the International Management District, Houston, Texas (Planning & Urban Design)

With Mark on the team as Planning & Urban Design lead, Stantec is conducting a study and developing a plan to further the goals of the Livable Centers program in the International Management District (IMD). For this study, a major focus is the safety and mobility of the IMD area along the Bellaire Boulevard corridor. In collaboration with the Houston-Galveston Area Council (H-GAC), we are working to determine how to make the area safer, improve the flow of traffic, and how to make it all work within a shared multimodal system of buses, bikes, and pedestrians. Improvements taken into consideration include wider sidewalks for pedestrians, enhanced lighting, increased medians for pedestrian-landing zones, and an overall enhancement of safety features.

Parks & Recreation

Teravista Parks & Open Spaces, Georgetown, Texas (Project Manager)

80 acres of Parks, 8 miles of Trails
5 acre Recreation Center, 1400 Acre Community
As Project Manager, Mark developed the master plan, lotting plans, and design guidelines, as well as designing new neighborhood sections, pocket parks, streetscapes, two model home parks, and the major entry at Westinghouse Road. The 5 Acre Wildflower Park Resident's Club was heavily influenced by sustainable design principles, including rainwater harvesting for irrigation, a rain garden to treat stormwater runoff, and extensive native plantings. The Recreation Center includes an impressive swimming complex with a lap pool, splash pool, and drop shot sports pool, as well as a fitness center, gathering room and pavilion, amenity pond, and amphitheater.

Phil Hardberger Park Trail Improvements, San Antonio, Texas (Project Manager)

Phil Hardberger Park is a 311-acre park and natural area located in north-central San Antonio that includes trails, playscapes, dog parks, picnic facilities, basketball courts, an outdoor classroom, Phil Hardberger Urban Ecology Center, and an overlook at Salado Creek. Mark managed the development of a new one-mile trail through the park. It was a natural surface in most locations and was modified to either stabilized decomposed granite or StaLok for rain protection. In addition to the trail improvements, the project included trail signage and markers and a larger monument sign to direct vehicle traffic inside the park. The trail renovations are a continuation of ongoing improvements to the park.

Violet Crown Regional Trail System, Austin, Texas (Landscape Architect)

Stantec was the prime consultant and served as trail visionaries, landscape architects, and project engineers for a 30-mile regional trail. The effort initially began with helping the Hill Country Conservancy put their vision on paper and ultimately resulted in completion of the first 13-mile phase of the trail. The efforts included facilitating input from multiple municipal jurisdictions including the City of Austin Parks and Recreation Department and Travis County EMS, Fire, and Search and Rescue. Additional efforts included design, documentation, and coordination of trail signage for Phase I. Mark contributed as one of the trail designers and landscape architects.

Belterra Parks & Open Spaces Project*, Austin, Texas

22.3 acres of Parks, 660 acres of Open Space
5 miles of Trails, 9.3-acre Recreation Center
Belterra's open space network was carefully designed to preserve buffers for wet-weather creeks and sensitive natural areas. The multi-phase development consists of three neighborhood parks, a 9.3-acre community recreation center, and approximately 5 miles of trails.

* denotes projects completed with other firms

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

City of San Marcos Parks, Recreation and Open Space Master Plan, San Marcos, Texas

Mark assisted with the development of the City of San Marcos Parks, Recreation, and Open Space Master Plan, adopted in 2010. The plan included stakeholder meetings, community input, existing facility reviews, and level-of-service assessment. In addition, the Stantec team provided “quality assessments” of individual park facilities to help inform the priorities of park equipment, repairs, and replacement. The normal city-wide planning effort, combined with specific park-related facility assessments, created a park plan useful on multiple levels.

District 1 and 6 Park Improvements, San Antonio, Texas (Project Manager)

Mark assisted with the improvements of five parks throughout San Antonio: Mario Farias Park, West End Park, Acme Park, Cuellar Park, and Levi Strauss Park. They are all located in Council Districts 1 and 6. The improvements to the parks included playgrounds, shelters and pavilions, trail renovations and additions, parking, and other site amenities. The development of the parks was made possible through the 2012 City of San Antonio’s Bond Program. The improvements were completed at the end of 2015.

Chulavista Laguna Chapala Project*, Guadalajara, Jalisco, Mexico

1100 Acres, 150 Acres of Open Space
Chulavista Laguna Chapala is an Active Adult Community at Lake Chapala of approximately near Laguna Chapala in Guadalajara, Jalisco, Mexico. The site assessment of this project was key in determining the opportunities and constraints of the site’s existing conditions relative to the development objectives. The significant onsite and offsite views of this project made it key to respect the natural resources found on site. The proposed plan includes landscape and ecosystem restoration, trails, and view observatories that capture the picturesque view of Laguna Chapala.

City of Seguin Parks, Recreation, Open Space and Trails Master Plan, Seguin, Texas (Project Manager/Lead Planner)

Mark was responsible for overseeing the Plan that included parks, recreation, trails, open spaces, potential partnerships, and grant opportunities. The initiative follows Texas Parks and Wildlife Department’s (TPWD) master plan guidelines to create a clear path for park needs, improvements and organization. The Plan includes an inventory and assessment of all existing parks, trails, facilities, programs, and ordinances; recommendations for parks, trails, facilities, and ordinances; proposed future parks, recreational facilities, and/or hike and bike trail linkages; evaluation of the economic impact of parks and the Guadalupe River, including the Walnut Branch. The Plan was unanimously approved and adopted by the Seguin City Council in March of 2020.

Falcon Pointe Parks & Open Spaces Project*, Pflugerville, Texas (Project Manager)

64 acres of Parks, 12 miles of Trails
6.5-acre Recreation Center, 710 Acre Community
As Project Manager, Mark planned and designed the parks and open space amenities that serve the residents. Mark was one of the designers for the 6.5-acre Resident’s Club at Falcon Pointe, which is only open to residents and includes a clubhouse and large pavilion, three swimming pools a sand volleyball court, tennis courts, a basketball court, playgrounds, picnic pavilions, open play areas, and an amphitheater. Nearby, the 25-acre Central Park offers an 18-hole disc golf course and amenity pond for residents.

* denotes projects completed with other firms

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

Caliterra Nature Trails & Treehouse Park Project*, Dripping Springs, Texas (Project Manager/Designer)

250 acres of Parks, 300 acres of Open Space
6 miles of Trails, 10-acre Recreation Center
Caliterra, a 592-acre master planned community located off Ranch Road 12 and Highway 290, is a stewardship project in which nearly half of the 592 acres have been preserved as open space. As Project Manager/Designer of this project, Mark executed all design phases of this \$8 million project, ranging from master planning to construction documents. The project includes a 1-acre accessible tree house park, 6 miles of networked trail systems, and a 10-acre recreation and welcome center.

Ecosystem Restoration

University of Texas San Jacinto - Waller Creek Corridor Restoration Master Plan, Austin, Texas

13 Acres, 1 Mile of Creek Restoration
This plan articulates the vision for the pedestrian interaction with natural elements found on the southern edge of the University of Texas in downtown Austin. The restoration of Waller Creek has provided natural relief from the dense urban district that surrounds it. Public input indicated interest in pedestrian gathering areas, prairie restoration, opportunities for nature play, and incorporation of public art. Through a series of four primary functions (Regulation Functions, Habitat Functions, Production Functions, and Information Functions), the design team, together with the Lady Bird Johnson Wildflower Center, was able to provide recommendations which provide balance between human health, well-being, and the economic costs and benefits associated with sustainable practices and environmental concerns.

Rock Creek Phase I and Phase II, Bexar County, Texas (Landscape Architect)

Rock Creek is approximately one-mile-long and is in the middle of a well-established neighborhood in San Antonio. The design explored several erosion control methods to effectively reduce and control creek bank erosion. The methods used included natural channel design, limestone block walls, and other more conventional forms of stabilization. The result was a mix of natural limestone walls and native landscape to secure adjacent properties from further erosion. In addition to these improvements, large sections of invasive and unwanted plant species were cleared from the creek and replaced with native trees and grass mixes for additional soil protection and to foster a healthy creek environment. Mark assisted with design development and construction for the project.

Corporate / Office

CPS Energy Headquarters, San Antonio, Texas (Principal Landscape Architect)

Located along the San Antonio Riverwalk, CPS Energy is renovating two former AT&T buildings at 530 McCullough Avenue and adding a parking garage with retail. The scope of work entails exterior modifications to the 11- and 14-story buildings including the removal of the existing facade materials and recladding the structures with a glass and metal panel skin. Mark was responsible for the development of landscape architecture construction documents for site, grading, planting design, and detailing. The landscape design incorporates native plant material and grasses to reduce the amount of required permanent irrigation. The project is currently seeking LEED Gold status. The Stantec team provided grant writing services and secured a \$100,000 rebate from the San Antonio River Authority.

* denotes projects completed with other firms

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

CPS Energy Data Center, San Antonio, Texas

As part of Stantec design team for new CPS Energy Data Center, Mark was responsible for the development of landscape architecture construction documents for site, grading, planting design and detailing. The landscape design incorporates native plant material and grasses to reduce the amount of required permanent irrigation. The project was awarded LEED Silver status.

Institutional

The DoSeum Parking Expansion, San Antonio, Texas

Mark was on the Stantec Landscape Architecture Team responsible for the development of aesthetic treatments for The DoSeum Parking Lot Expansion. The project proposed an addition of 52 parking spaces, the design focus of this project was to highlight two bio-retention areas capturing approximately 18,047 sq. ft. of drainage area and treating a total maximum volume of 6,484 cu. ft. - 3.5 times the total target volume! These features serve as demonstration gardens highlighting the importance of Low Impact Development (LID) features and design tools used in order to treat storm water runoff. The Stantec Landscape Architecture Team was able to provide grant writing services and secure The DoSeum with a rebate of \$74,000 provided by the San Antonio River Authority.

Briscoe Western Arts Museum, San Antonio, Texas

A longstanding River Walk landmark—the San Antonio Library from 1930 until 1968 and then the Hertzberg Circus Museum until 1996—became the home for the Dolph and Janey Briscoe Western Art Museum. The museum celebrates the art, people, and history of the great American West, with an emphasis on San Antonio and the South Texas region. The renovation provided almost 58,000 square feet of state-of-the-art gallery and exhibition areas on four floors, while respecting the building's historic architecture. Stantec's landscape architecture studio, with Mark on the team, was responsible for the schematic design and design development of the sculpture garden along the San Antonio Riverwalk.

Commercial / Retail Development

Principal BMW and MINI Dealership, San Antonio, Texas (Project Manager)

Stantec provided landscape and irrigation design services for a 25-acre BMW and MINI Dealership. This project included a landscape plan utilizing native plant species for trees, screening, entry/monument sign enhancement, and grass seed in disturbed areas. The site was irrigated with a mix of temporary and permanent irrigation.

Infinity Dealership, Boerne, Texas (Project Manager)

Stantec provided landscape and irrigation design services for a five-acre Infinity Dealership. This project included a landscape plan utilizing native plant species for trees, screening, entry/monument sign enhancement, and grass seed in disturbed areas. The site was irrigated with a mix of temporary and permanent irrigation.

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

HEB Grocery Stores – Various Locations (Project Manager)

Mark provides landscape design services for numerous (15+) new HEB stores and existing store expansions. The landscape design ranges from parking lot improvements to full site design for 100,000 square foot (plus) stores. HEB projects utilize native plant material, appropriate for their location, and drip irrigation. Several of the more recent new stores, listed below, have used close coordination with adjacent neighbors to develop successful solutions: Boerne, Texas; Schertz, Texas (HEB SA-26); San Antonio, Texas (HEB SA-46) – this store also includes an outdoor café, with a fountain feature, outdoor play area, and a small stage; and McAllen, Texas – existing palm trees have been preserved and relocated on the property.

Chick-Fil-A Restaurants – Various Locations (Project Manager)

Mark provided landscape and irrigation design services for various (25+) Chick-Fil-A restaurants throughout the State of Texas. The landscape design utilizes native plant material, appropriate for their location, and drip irrigation to create a comfortable, inviting environment for customers. The Stantec team has provided survey, landscape and site civil services for over 100 sites throughout Texas, as well as New Mexico, Oklahoma, Arkansas and Louisiana.

EchoPark Automotive – Various Locations (Project Manager)

Mark has provided landscape and irrigation design services for various (5+) EchoPark Automotive Service Dealerships. The projects are located throughout the Southcentral region of the State of Texas. The landscape design utilizes native plant material, appropriate for their location, and drip irrigation to create a comfortable, inviting environment for customers. The Stantec team has provided survey, landscape and site civil services for EchoPark Automotives in New Braunfels, San Antonio, and Boerne.

BlueWave Car Wash – Various Locations (Project Manager)

Mark has provided landscape and irrigation design services for various (10+) BlueWave Car Washes. These projects vary in size from one to three acres and are located throughout Texas. The landscape design utilizes native plant material, appropriate for their location, and drip irrigation to create a comfortable, inviting environment for customers. The Stantec team has provided survey, landscape, and site civil services for over 50 sites throughout Texas.

HEB Arsenal, San Antonio, Texas

Stantec is currently working with HEB Grocery Company on their downtown campus redevelopment – the Arsenal. The Arsenal has been their headquarters since 1984. It was originally established in 1859 to supply munitions and arms to the frontier forts of Texas. Over time, HEB has purchased additional properties and recently purchased Main Street right of way from the City. With the closure of Main Street and the compilation of the various properties, their campus will be approximately 25 acres in downtown San Antonio. The services we are providing on the project include surveying, traffic engineering, civil engineering and landscape architecture. The Stantec Landscape Architecture team continues to provide master planning services as well and landscape architecture services on a continual bases.

Healthcare

Titan Senior Living, Corpus Christi, Texas

Stantec provided site civil and landscape design for a +/-5 acre senior living facility. The project included landscape architecture and landscape irrigation services. The landscape design utilizes native plant material, appropriate for their location, and drip irrigation to create a comfortable, inviting environment for community members.

* denotes projects completed with other firms

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

Dell Medical School at University of Texas*, Austin, Texas (Project Manager)

As a project manager of the design team, the University of Texas Dell Medical School expansion has been one of the most interesting, yet complex, projects that Mark has experienced. Located in Austin, Texas, this project broke ground in early 2014 and is expected to see the first phase of completion this fall. The project calls for a \$334 million plan to construct a medical school at The University of Texas at Austin. Implementation of Phase I of the plan would not require removal of the Erwin Center, but a long-term proposal calls for the relocation of the venue in six to 15 years. As part of the landscape architecture team, Mark coordinated and discussed items that effected the proposed landscape architecture and irrigation. In the early design process, Mark participated in the LEED and SITES design criteria including saving over 1,700 caliper inches of Heritage Live Oaks on site (over 160 trees). Through coordination, communication, and technical execution, Mark developed concepts and strategies to make the construction operative on a sustainable and effective site.

St. Anthony's Garden*, Mandeville, Louisiana

St. Anthony's Gardens is a planned senior living facility located on a heavily wooded site in Mandeville, Louisiana. Phase I of the project will feature independent living apartments and a health care residence with assisted living and memory care facilities. Mark worked with architect Perkins + Will on the final site plan for the community, which features beautiful flower gardens, wooded trails, and multi-use outdoor spaces. The community focuses on creating a connection with nature, promoting social interaction, and providing a relaxing yet invigorating environment for seniors to call home.

Guadalupe Regional Medical Center, Seguin, Texas

Serving as one of the last remaining city-county owned hospitals in Texas, Guadalupe Regional Medical Center is home to over 750 employees and 250+ penitents. Renovations for this project included remodeling 65,000 square feet and adding 141,000 square feet. The \$120 million construction budget expanded patient capacity and provided exterior renovations for a new and modern look. The hospital is fully licensed, accredited and certified with an emergency room and doctors on-site 24 hours a day, seven days a week. The landscape concept focused on specific features that provide patients and visitors a helping hand when it comes to healing and reducing the stress that is involved with having surgery. As one of the Landscape Architects on the project, Mark designed the exterior landscape as well as two of these healing features: The sculpture garden adjacent to the hospital lobby and a "garden of reflectance" adjacent to the hospital entry tower. This project required quite a bit of creative problem solving; working with the architects and engineers on the integration of a gardens within courtyards (drainage, pedestrian access, etc.), as well as meeting the client's budget. The project is currently seeking LEED for Healthcare silver certification.

Longhorn Village*, Austin, Texas

Located in Steiner Ranch, a master planned community in the scenic Texas Hill Country, Longhorn Village offers a service-oriented retirement lifestyle unlike any other in Central Texas. Developed in association with the University of Texas at Austin's Ex-Student Association, this Continuing Care Retirement Community (CCRC) delivers a variety of housing and recreation options and on-site healthcare services to reflect the individual needs of residents. As part of the design team, Mark participated in the schematic design, design development, and construction administration phases of the model-home villages within this community.

* denotes projects completed with other firms

Mark Maldonado PLA

Project Manager - Landscape Architecture & Planning - Central Texas · 15 Years of Experience

Academic

St. Edward's University*, Austin, Texas

As part of the local Landscape Architecture team, Mark worked with St. Edward's in support of the Master Plan by Sasaki Associates, which seeks to design the ceremonial and monumental spaces that define the image of the University and to create enjoyable outdoor spaces for learning, living, athletics, gathering, and dining. Mark worked on many projects on the St. Edward's campus, including the renovation of Doyle Hall, Hunt LeMans Johnson Residential Village, Moreau and Dajurie Residence Halls, the Natural Science Center Phases I and II, and multiple athletic/recreational fields and parking enhancements throughout the campus.

Rodriguez Elementary School*, Seguin, Texas

As part of the local Landscape Architecture team, Mark provided landscape and irrigation design services for the 12-acre site development Rodriguez Elementary School. The Design Build project included a landscape plan utilizing native plant species for trees, screening, entry/monument sign enhancement, and grass seed in disturbed areas. The project scope also included a ¼ Mile walking trail, ADA compliant playground, and raised gardens for the science classes. The site was irrigated with a mix of temporary and permanent irrigation.

Autism Treatment Center of San Antonio, San Antonio, Texas

Stantec provided landscape architectural and hardscape design for the construction of +/- 21,000 SF treatment facility. The one-story building consists of offices, classrooms, meeting spaces and flex spaces. The proposed landscape is design to promote "Sensory Friendly" spaces as well as incorporating special needs design for all to enjoy. The landscape includes beautiful flower gardens, trails, and multi-use outdoor spaces. The community focuses on creating a connection with nature, promoting social interaction, and providing a relaxing yet invigorating environment for all to call home.

Center for Applied Science & Technology (CAST) High School, San Antonio, Texas

The CAST High School project is a renovation of two buildings on the existing Fox Tech High School campus (one of the few inner-city schools of downtown San Antonio) for use as a Charter High School for the newly formed Center for Applied Science & Technology (CAST). The renovation involved the complete gut and renovation of 48,000 SF of buildings, a new pedestrian plaza and courtyard. The pedestrian plaza and courtyard design was heavily influenced by sustainable design principles, including rainwater harvesting for irrigation, a rain garden to treat storm water runoff, and extensive native plantings. Catering to STEM Education for high school students, the courtyard design incorporates outdoor classroom amphitheater, independent study areas, and strategically placed group learning opportunities. This project opened to students in 2017 and is seeking LEED certification.

Seguin High School*, Seguin, Texas

As part of the local Landscape Architecture team, Mark provided landscape and irrigation design services for various phases of development Seguin High School. The Design Build project included a landscape plan utilizing native plant species for trees, screening, entry/monument sign enhancement, and grass seed in disturbed areas. The site was irrigated with a mix of temporary and permanent irrigation.

* denotes projects completed with other firms

Hassan is a versatile Transportation Engineer with experience in transportation planning and traffic engineering, transit planning and operations, Transportation Demand Management (TDM), Special Events transportation, parking management, as well as developing mobility plans for mixed-use developments.

Prior to joining Stantec, Hassan served as the Transportation Demand Manager with the Ottawa Sports and Entertainment Group (OSEG) for the redeveloped Lansdowne and TD Place: a mixed-use, sports and entertainment district in Ottawa, Ontario. Hassan was responsible for the implementation and oversight of all transportation, shuttle, and parking infrastructure and services, including the development of an integrated pedestrian and parking wayfinding program for the site.

With limited on-site and on-street parking available, several innovative TDM strategies were implemented to accommodate Special Events transportation demands in advance of the successful debut of the CFL's Ottawa REDBLACKS in 2014, and the 2015 FIFA Women's World Cup Tournament. The Lansdowne redevelopment's success is an example of a vibrant, mixed-use, sports and entertainment district in established urban neighborhoods.

Prior to joining OSEG, Hassan was a member of the City of Ottawa's Rail Implementation Office where he was responsible for providing traffic engineering and management support for the construction of Ottawa's \$2.13 billion Light Rail Transit (LRT) system known as the Confederation Line.

Hassan's previous consulting experience includes undertaking and managing Traffic Impact Studies, Community Transportation Plans, multi-modal microsimulation modeling and Environmental Assessments (EA).

EDUCATION

B.Eng. (Civil) - Concentration in Management,
Carleton University, Ottawa, Ontario, 2008

M.Eng., (Civil Engineering), Carleton University,
Ottawa, Ontario, 2012

REGISTRATIONS

Professional Engineer #100138305, Professional
Engineers Ontario

PROJECT EXPERIENCE

Transit

**Tunney's Pasture Station Bus Operating Review,
Ottawa, Ontario (Project Manager)**

The Confederation Line, Ottawa's first phase of LRT, is slated to open for revenue service in 2018. The new LRT service will result in significant changes to bus routes and customer travel patterns. A key aspect of the Confederation Line service delivery is the introduction of intermodal transfer points at several transfer hubs. OC Transpo engaged Stantec to develop VISSIM microsimulation models to assess and understand future bus operating conditions at Tunney's Pasture

station, a key BRT-LRT transfer station.

The project seeks to confirm and verify proposed transit service routings and platform designs at the two transfer stations.

Hassan is responsible for overall project management and technical direction of the project. This project will assist in verifying transit station designs for service platforms and layup areas, as well as develop a transit service strategy for both stations that continues to provide a high Level of Service on Day 1 of Confederation Line Revenue Service.

**Hurdman and Blair Station Bus Operating Review,
Ottawa, Ontario (Project Manager)**

The Confederation Line, Ottawa's first phase of LRT, is slated to open for revenue service in 2018. The new LRT service will result in significant changes to bus routes and customer travel patterns. A key aspect of the Confederation Line service delivery is the introduction of intermodal transfer points at several transfer hubs. OC Transpo engaged Stantec to develop VISSIM microsimulation models to assess and understand future 2018 bus operating conditions at two key BRT-LRT transfer stations:

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Hurdman Station and Blair Station. The project seeks to confirm and verify proposed transit service routings and platform designs at the two transfer stations.

Hassan is responsible for overall project management and technical direction of the project. This project will assist in verifying transit station designs for service platforms and layup areas, as well as develop a transit service strategy for both stations that continues to provide a high Level of Service on Day 1 of Confederation Line Revenue Service.

2018 OC Transpo Downtown Transit Operating Requirements Study, Ottawa, Ontario (Project Manager)

The first phase of Ottawa's LRT system, the Confederation Line, is slated to open for revenue service in 2018. A key aspect of the Confederation Line service delivery is the introduction of intermodal transfer points at bus-LRT hubs. As part of the City's 2018 Bus Network Strategy, the connections between downtown Gatineau and Ottawa were contemplated for both transit service providers in the National Capital Region: OC Transpo and the Société de transport de l'Outaouais (STO).

Stantec was engaged by OC Transpo to undertake an operational review of planned OC Transpo and STO service to Lyon Station, a downtown transfer point connecting passengers to/from Gatineau to the new LRT system.

As part of the project, a VISSIM microsimulation model was developed to assess multi-modal operations for the on-street bus platforms. As part of the project, planned platform designs were assessed to confirm if they can adequately accommodate projected passenger and bus service demands in mixed-traffic conditions. Road network, traffic signal, and platform design improvements modifications were identified and recommended as part of this project.

Hassan was responsible for overall project management and technical direction of the project.

Laurier Avenue Cycling Safety Review, Ottawa, Ontario (Project Manager)

Stantec was engaged by Mobycon and the City of Ottawa to assist with the Laurier Avenue West Corridor Safety Review. Stantec's scope of work included the completion of intersection capacity analyses along the Laurier Avenue corridor, between Bronson Avenue and Elgin Street. Detailed intersection analyses were completed to evaluate alternative signal timing schemes aimed at improving pedestrian and cycling safety, particularly for cyclists using the dedicated bicycle lanes along the corridor.

City of Ottawa Confederation Line – Ottawa Light Rail Transit (OLRT) Project*, Ottawa, Ontario (Engineer - Traffic Management, Design & Implementation)

The Confederation Line is the first stage in Ottawa's future rail network. The 12.5-kilometre electric light rail system replaces existing diesel powered buses, providing rapid transit between Blair Station in the east and Tunney's Pasture in the west. The route includes 13 stations and a 2.5-kilometre tunnel that will alleviate congestion in the downtown core. As a member of the City of Ottawa's Rail Implementation Office (RIO), Hassan was responsible for providing engineering and project management support to the implementation of traffic management measures. This included the implementation of traffic management and detour measures to ensure mobility during construction activities, with an emphasis on maintaining a high level of service for the City's Transitway Bus Rapid Transit (BRT) system.

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Aurora GO Station Pedestrian Flow Assessment, Toronto, Ontario (Transportation Engineer)

Stantec was retained by Metrolinx to conduct a pedestrian flow assessment for the Aurora GO Station in order to verify that the proposed station design is able to accommodate projected. The pedestrian flow assessment was aimed at determining if a single pedestrian tunnel will have sufficient capacity to serve projected passenger demands. The study also assessed circulation and stairway levels of service using first principles and the methodologies outlined in the Transit Capacity and Quality of Service Manual (TCRP 100). The results of the pedestrian flow assessment are intended to inform the station design process.

Metrolinx Grade Separation Traffic Studies, Toronto, Ontario (Transportation Engineer)

As part of Metrolinx's ongoing Regional Express Rail expansion the Stouffville Line is currently being double-tracked between Scarborough Junction and Highway 7. As part of the corridor expansion, Metrolinx has identified the need to reduce the number of road and rail at-grade crossings along the corridor to enhance safety, on time performance and operational flexibility/reliability. Most of the crossings along the corridor are not grade separated, and a need has been identified to address this issue as road usage and rail service is expected to expand within the next 10 years. As part of the need for grade separated crossings, Stantec was selected to design 8 grade separated crossings along the Uxbridge subdivision. In addition, Stantec is to design the connection of the Uxbridge sub and Kingston sub through the Scarborough Junction start Corvette Ave. to the Scarborough GO Station building, as well as east to west from Brimley Ave to Kennedy Road. Hassan is the lead traffic engineer overseeing the Traffic Impact Analysis (TIS) reports assessing transportation impacts and traffic management requirements associated with the various design and construction staging options.

Centrepointe Town Centre Transportation Plan*, Ottawa, Ontario (Transportation Planner)

The City of Ottawa initiated a strategic real estate development project through its Real Property and Asset Management group to create a long-term development concept for a suburban Town Centre on the Centrepointe Town Centre (CTC) lands. Hassan's role was to help identify transit, road, and active system network elements required to support the addition of almost 4 million square feet mixed-use development to the CTC, leveraging the existing and future plans for the Baseline Rapid Transit station. A Transportation Master Plan was completed to identify the transportation system improvements required to address existing community concerns and facilitate further expansion of the CTC. The TMP prepared Travel Demand Forecasts, a Transit Operations Strategy, a Road Network Strategy, an Active Modes Strategy, and a Parking Policy. The Transit Operations Strategy was integrated with coincident design work for the Baseline Rapid Transit Station.

Active Transportation

Glebe BIA Pedestrian Data Collection Program, Ottawa, Ontario (Project Manager)

Stantec was engaged by the Glebe Business Improvement Area (BIA), a non-for-profit organization that represents and supports more than 370 diverse businesses in the historic Glebe neighbourhood of Ottawa, to advise in the development of an automated pedestrian counting program along Bank Street, a traditional mainstreet that forms the spine of the vibrant neighbourhood. The project scope included the design of the data collection and procurement program, implementation and oversight of the data collection process, and the completion of annual data summary reports for review by the BIA Board of Directors for the years 2017 to 2019.

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Central Experimental Farm Internal Circulation and Walkway Review, Ottawa, Ontario (Project Manager)

Stantec was engaged to undertake a review of internal roadway circulation and walkways at the Crown owned offices located in the Central Experimental Farm area of Ottawa. This project was initiated by Brookfield Global Integrated Solutions (BGIS) on behalf of Public Works Government Services Canada (PWGSC) to identify opportunities for improvements to circulatory pathways and surface parking within the property grounds. The project was initiated in response to the Occupational Health and Safety (OHS) committee to provide a review of internal circulation pathways and parking facilities. The study reviewed existing field conditions and planned improvements to provide recommendations on pedestrian and vehicle access and circulation, pavement markings and signage, fire and emergency access, as well as the location and number of surface parking spaces. A part of the study, a number of short-term and long-term improvements were identified.

Design Treatments for Bicycles and Buses on Arterial and Collector Roads: A Recommended Practice*, Ottawa, Ontario (Transportation Planner)

Establishing guidelines for specific design treatments to resolve and minimize conflicts between bicycle facilities and public transportation movement on arterial and collector roadways. The document identifies the range of existing design treatments on arterial and collector roadways, and recommends a guideline for the implementation of design treatments for the provision of bike and bus facilities within arterial and collector roadway corridors based on existing traffic and roadway characteristics. Activities on this project included assisting in the research of state-of-the-art and best practices on bicycle facilities.

Byron-Tyndall-Gladstone Cycling Corridor Improvement Study*, Ottawa, Ontario (Transportation Planner)

A transportation corridor assessment was undertaken on behalf of the City of Ottawa to identify opportunities to improve the Byron Avenue, Tyndall Avenue, and Gladstone Avenue corridor as a viable cross-town cycling route. In general these streets are cycling-friendly and permit a long distance cycling route connecting residents in the west end to the downtown core. However, a number of challenges to cyclists exist in getting between Gladstone and Byron due to the offset arrangement of the intersections and the need to make left turn maneuvers in heavy traffic. The study included the development of innovative intersection and roadway design treatments that provide for cycling friendly measures for improved guidance to cyclists and motorists. The proposed measures were geared at improving cyclist visibility and comfort in moving between Byron and Gladstone. As part of the study, intersection operational analyses were undertaken in Synchro to determine the projected level of service of the intersection to general traffic based on the proposed intersection and roadway modifications, a number of roadway cycling improvements ranging from cycling lanes, roadway pavement markings, and bike boxes at intersections were considered. Functional designs were developed to confirm feasibility of implementing the options within a constrained right-of-way. Responsibilities included project coordination, liaising with key City staff to ensure that the proposed designs are acceptable, undertaking the Synchro intersection operational analysis, and development of preliminary concept design.

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Strategic Transportation Master Planning

Jubail Industrial City Master Plan Update*, Royal Commission of Jubail & Yanbu, Kingdom of Saudi Arabia (Transportation Planner)

Jubail Industrial City (JIC) is the largest industrial city in the Middle East with a robust petrochemical based industry that accounts for 12% of GDP generation for the Kingdom of Saudi Arabia. The 2010 Jubail Industrial City (JIC) Master Plan Update was undertaken on behalf of the Royal Commission of Jubail & Yanbu in order to identify the infrastructure required to support the projected growth of JIC by the 2030 year horizon. As part of the Master Plan Update, a Transportation Master Plan (TMP) volume was developed to identify the transportation infrastructure required to support the projected growth. A long-range transportation demand model was developed using TransCAD to project 2030 travel demands. The model was used to identify key infrastructure investments required to meet the future mobility and access demands of JIC. The TMP also addressed transportation policy focused on incident and risk management, emergency evacuation, roadway safety, traffic calming, urban design, as well as alternative modes of transportation.

Transportation Policy Studies

City of London Access Management Guidelines*, London, Ontario (Transportation Planner)

The City of London initiated a review of the City's Official Plan in 2006. This undertaking prompted the City to develop Access Management Guidelines. The project included a critical review of the Draft Guidelines to recommend amendments and text revisions reflecting the state-of-the-art in Access Management research and literature. Additionally, the project included drafting an Access Control By-Law for the City.

Transportation Modeling

2500 St Laurent Transportation Brief, Ottawa, Ontario (Project Manager)

Stantec was engaged to complete a Transportation Impact Study in support of a proposed office development in Ottawa, Ontario.

Highway 7/8 Detailed Design*, Kitchener/Waterloo, Ontario (Transportation Planner)

Lead modeler for the transportation impact assessment portion for a highway detailed design project in Kitchener-Waterloo, Ontario. As part of the overall project, a VISSIM microsimulation model was developed in order to assess anticipated traffic operations on the highway and ramp terminal intersections under various re-construction staging scenarios, as well as the ultimate design. The study area encompasses five interchanges and 12 ramp terminal intersections along a 7 km section of the provincial highway.

Navaho Drive Extension*, Ottawa, Ontario (Transportation Planner)

A preliminary and detailed design of the Navaho Drive extension was initiated on behalf of the City of Ottawa in the Centrepointe community. The scope of work included microsimulation modelling of the Navaho Drive extension as a transit-only link to provide secondary transit access to Baseline Transitway Station. A number of traffic control strategies, including transit-priority features were developed and assessed for nearby intersections leading to the Baseline Transitway Station. Detailed modelling of mixed, urban traffic was undertaken using the PTV VISSIM microsimulation package.

King Edward Avenue Transportation Study*, Ottawa, Ontario (Transportation Planner)

Provided technical support for the transportation impact assessment portion of a multi-disciplinary study initiated as a result of community pressure to assess the potential to reduce King Edward Avenue from a six-lane arterial roadway to a four-lane cross-section. Construction activities had artificially restricted the number of travel lanes and the community sought to assess community and traffic impacts related to alternative roadway configurations. Responsibilities included microsimulation modelling for motorist, transit, cycling and pedestrian traffic. PTV's VISSIM software was used for this undertaking.

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Transportation Impact Assessments

Canadian Nuclear Laboratories (CNL) Plant Road Transportation Study, Chalk River, Ontario (Project Manager)

Stantec was engaged by Canadian Nuclear Laboratories (CNL) to complete a traffic study for Plant Road within the Chalk River Laboratories site. The traffic study assessed current traffic demands as well as planned site activity to identify roadway and intersection access improvements. The traffic study also included a sightline assessment to verify sight distance requirements.

2179 Calypso Street Transportation Study, Limoges, Ontario (Project Manager)

Stantec was engaged to complete a due diligence review for a proposed mixed-use development near the town of Limoges, Ontario. A transportation review was initially completed to assess the potential development density that can be supported from a transportation infrastructure point of view. Intersection and roadway capacity analyses were completed to identify development density thresholds that can be supported.

2140 Baseline Road Transportation Impact Assessment, Ottawa, Ontario (Project Manager)

Stantec was engaged to complete a Transportation Impact Study in support of a proposed mixed-use student residence development in the CentrepoinTE community of Ottawa, Ontario. The transportation study was completed in accordance to the City of Ottawa's TIA guidelines and included a multi-modal level of service analysis (MMLOS) to accommodate all modes of transportation.

801 Ralph Hennessey Transportation Review, Ottawa, Ontario (Transportation Engineer)

Stantec was engaged to complete a Transportation Brief in support of a proposed residential development in the Riverside South community of Ottawa, Ontario. The transportation brief assessed the adequacy of a proposed site access near the intersection of Ralph Hennessey Road and Earl Armstrong Road.

295 Moodie Drive Due Diligence Review, Ottawa, Ontario (Project Manager)

Stantec was engaged to complete a due diligence review for a proposed mixed-use development in Ottawa, Ontario. The project assessed the potential development density that can be supported from an infrastructure and site servicing point of view. Intersection and roadway capacity analyses were completed to identify development density thresholds that can be supported.

800 Ralph Hennessey Transportation Impact Assessment, Ottawa, Ontario (Project Manager)

Stantec was engaged to complete a Transportation Impact Study in support of a proposed residential development in the Riverside South community of Ottawa, Ontario. The transportation study was completed in accordance to the City of Ottawa's TIA guidelines and included a multi-modal level of service analysis (MMLOS) to accommodate all modes of transportation.

Rosewater Development Transportation Impact Study, Kemptville, Ontario (Transportation Engineer)

Stantec was engaged to complete a Transportation Impact Study in support of a site plan application for a commercial development in Kemptville, Ontario. The proposed development, which features more than 280,000 ft² of commercial retail space, is situated on County Road 43 close to the Highway 416 interchange. The transportation study included consultation with the Ministry of Transportation of Ontario (MTO) and required supplemental analyses and a design review of the existing roundabout on County Road 43. Subsequent to the transportation study, Stantec was engaged to complete the preliminary and detailed design of roadway improvements on County Road 43 in support of the commercial development.

** denotes projects completed with other firms*

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Petawawa Pines Transportation Study, Ottawa, Ontario (Transportation Engineer)

Stantec was engaged to complete a transportation study in support of a proposed quarry near the Town of Petawawa. The transportation study was completed in support of an Official Plan and Zoning Amendment application for a proposed mineral aggregate quarry. The transportation study assessed the anticipated transportation impacts associated with the proposed development on the transportation network.

Halfmoon Bay West Transportation Study, Ottawa, Ontario (Transportation Engineer)

Stantec was engaged by Mattamy Homes to complete a Transportation Impact Assessment in support of the proposed residential development of Halfmoon Bay West in the growing south Ottawa community of Barrhaven. The TIA study builds on the Transportation Master Study (TMS) completed by Stantec in support of the Barrhaven South Urban expansion Study Area Community Design Plan (CDP). In addition to the completion of the TIA, the project team provided recommendations on new residential and collector roadway cross-sections including pedestrian and cycling facilities based on the City of Ottawa's Building Better and Smarter Suburbs guidelines.

Quinn's Point 2 Transportation Impact Assessment, Ottawa, Ontario (Transportation Engineer)

Stantec was engaged by Minto Communities to complete a Transportation Impact Assessment in support of the proposed residential development of Quinn's Point 2 in the growing south Ottawa community of Barrhaven. The TIA study builds on the Transportation Master Study (TMS) completed by Stantec in support of the Barrhaven South Urban expansion Study Area Community Design Plan (CDP). In addition to the completion of the TIA, the project team provided recommendations on new residential and collector roadway cross-sections including pedestrian and cycling facilities based on the City of Ottawa's Building Better and Smarter Suburbs guidelines.

Juliada Holdings Transportation Impact Assessment Peer Review, Ottawa, Ontario (Transportation Engineer)

Stantec was engaged by the Town of Arnprior to complete a technical review of the proposed Juliada Holdings Subdivision in the former Arnprior Agriculture Fairgrounds lot. The technical review was completed by Stantec's multidisciplinary team and included reviews for the draft plan of subdivision, general service and design brief, stormwater management report, geotechnical study, engineering drawings, and transportation impact study. As the lead Transportation Engineer, Hassan was responsible for completing the peer review on behalf of the Town of Arnprior.

Saint Anthony's Coptic Monastery Master Plan, Perth, Ontario (Transportation Engineer)

Stantec was engaged by Saint Anthony's Coptic Orthodox Monastery to undertake a Transportation Review in support of the Master Plan for the Coptic Monastery located at 608 Miners Point Road in Perth, Ontario. The Saint Anthony Coptic Orthodox Monastery Master Plan was initiated to guide the development of the site in a naturally sensitive and culturally significant manner to meet the current and future needs of residing monks. The Monastery's Master Plan considers a 50-year build out horizon to grow the existing facility to a larger functioning and self-sufficient site. The monastery consists of a 274-acre site within Tay Valley Township and borders Murphy's Point Provincial Park. The Saint Anthony Monastery will be the first monastery established in Canada to serve Canada's Coptic community. The monastery will have the capacity to accommodate up to 50 monks by 2068 who will reside on the monastery grounds living in a sustainable and self-sufficient community. As part of the transportation review, the site access and transportation impacts of the proposed project were assessed and addressed through an extensive public consultation process.

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

5331 Fernbank Road Transportation Impact Assessment, Ottawa, Ontario (Project Manager)

Stantec was engaged to complete a Transportation Impact Study in support of a proposed mixed-use commercial development in the Stittsville community of Ottawa, Ontario. The transportation study was completed in accordance to the City of Ottawa's TIA guidelines and included a multi-modal level of service analysis (MMLOS) to accommodate all modes of transportation.

1145 Carp Road Transportation Impact Assessment, Ottawa, Ontario (Project Manager)

Stantec was engaged to complete a Transportation Impact Study in support of a proposed residential and commercial development in the Stittsville community of Ottawa, Ontario. The transportation study was completed in accordance to the City of Ottawa's TIA guidelines and included a multi-modal level of service analysis (MMLOS) to accommodate all modes of transportation.

Environmental Assessments

Highway 113 Environmental Assessment*, Halifax, Nova Scotia (Transportation Planner)

An Environmental Assessment was initiated on behalf of the Nova Scotia Transportation and Public Works (NSTPW) for the proposed Highway 113 facility in the vicinity of the Halifax peninsula. The proposed highway with an approximate length of 10 km would address the future regional transportation needs for the Province as well as the Halifax Regional Municipality. Responsibilities included providing technical and analytical support. Activities included analyzing regional future transportation demands in order to determine anticipated roadway levels of service.

Hickory Street Pedestrian Bridge Environmental Assessment*, Ottawa, Ontario (Transportation Planner)

An Environmental Assessment (EA) was undertaken on behalf of the City of Ottawa in support of the construction of a multi-use (pedestrian and cycling) crossing of the O-Train corridor near Hickory Street. The recommended plan for the construction of the new bridge supported the City of Ottawa's transportation objectives to foster healthy communities by promoting active transportation through enhanced cycling and pedestrian connectivity. Construction of the \$1.5M bridge at Hickory Street was recommended as an opportunity with existing and planned land uses, connects directly to the Carling Rapid Transit station, while providing excellent new pedestrian and cycling connections between the two communities on either side of the O-Train trench. The EA study examined alternative solutions to a bridge at the recommended location, including a review and evaluation of alternative crossing locations. Responsibilities included project management and coordination, stakeholder engagement, identifying and documenting impacts and opportunities associated with the project, developing evaluation criteria, and writing major components of the EA document.

Stadiums, Sports Planning, and Special Events NHL 100 Classic, Ottawa, Ontario (Project Manager)

The Ottawa Sports and Entertainment Group engaged Stantec to develop the transportation and TDM plan for the unique NHL 100 Winter Classic game at TD Place. With limited on-site parking available at the venue, a transportation plan and communications plan was developed with heavy emphasis on transit and off-site park and shuttle services. The transportation plan leveraged the previous success of the transportation services developed for the venue.

* denotes projects completed with other firms

Hassan Madhoun M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

La Machine Traffic Management Plan, Ottawa, Ontario (Project Manager)

Ottawa 2017, which is responsible for organizing unique, world-class events in celebration of Canada's 150th years of confederation, engaged Stantec to develop the Traffic Management Plan in support of La Machine, an international world-renowned urban French production. The show, which spanned one week, required the rolling closure of many streets in the downtown core to facilitate the production and to accommodate large crowds. The Traffic Management Plan adopted a unique visual format that assisted the production company, approvals agencies, all levels of government, emergency and protective services, as well as other stakeholders in understanding the transportation impacts as a result of rolling road closures. The visual document served as the guiding document for all stakeholders in developing all tactical and operational plans for the unique, once-in-a-lifetime event.

2016 NBA All-Star Game*, Toronto, Ontario (Transportation Advisor)

Engaged by SP+Gameday as a Transportation Advisor, Hassan assisted in the development, implementation and execution of transportation services for the 2016 NBA All-Star Game in Toronto. This included developing VIP shuttle bus queue management for post-game egress, facilitating and coordinating VIP drop-offs at various venues, and assisting with dispatching and curbside management.

105th Grey Cup, Ottawa, Ontario (Project Manager)

The Ottawa Sports and Entertainment Group engaged Stantec to develop the transportation and TDM plan for the 105th Grey Cup Festival and Game for the Canadian Football League (CFL). With limited on-site parking available at the venue, a transportation plan and communications plan was developed with heavy emphasis on transit and off-site park and shuttle services. The transportation plan leveraged the previous success of the transportation services developed for the venue.

CFL Ottawa REDBLACKS, Ottawa, Ontario (Transportation Demand Manager)

Hassan was responsible for the implementation and oversight of all transportation and parking infrastructure and services as part of the revitalization of Lansdowne and TD Place: a mixed-use, sports and entertainment redevelopment in downtown Ottawa, ON. The new redevelopment features a refurbished 24,000 seat CFL football stadium, a 10,000 seat arena, two condominium towers and townhomes with 288 units, 360,000 sq.ft of commercial retail and office space, and an 18-acre urban park.

Due to physical constraints in and around the site and overwhelming opposition by community and stakeholder groups, several innovative Transportation Demand Management (TDM) strategies were developed and successfully implemented to accommodate day-to-day as well as Special Events transportation demands in advance of the successful debut of the Ottawa REDBLACKS CFL Football game. This included enhanced transit and dedicated off-site park and shuttle services, as well as programs fostered to promote active modes of transportation for event goers.

Due to the limited footprint of the venue, heavy emphasis was placed on the management of pedestrian and passenger queues for ingress and egress and working with local approvals authorities and transit agencies to ensure operational success.

2015 FIFA Women's World Cup*, Ottawa, Ontario (Transportation Demand Manager)

The 2015 FIFA Women's World Cup engaged Hassan to develop the transportation and TDM plan for the 2015 FIFA Women's World Cup games at Lansdowne Stadium in Ottawa. With limited on-site parking available at the venue, a transportation plan and communications plan was developed with heavy emphasis on transit and off-site park and shuttle services. The transportation plan leveraged the previous success of the transportation services developed for the venue.

* denotes projects completed with other firms

Hassan Madhoun

M.Eng., P.Eng.

Associate, Transportation · 13 Years of Experience

Urban Mixed Use Development

Redevelopment of Lansdowne and TD Place*, Ottawa, Ontario (Transportation Demand Manager)

Hassan was responsible for the implementation and oversight of all transportation and parking infrastructure and services as part of the revitalization of Lansdowne and TD Place: a mixed-use, sports and entertainment redevelopment in downtown Ottawa, ON. The new redevelopment features a refurbished 24,000 seat CFL football stadium, a 10,000 seat arena, two condominium towers and townhomes with 288 units, 360,000 sq.ft of commercial retail and office space, and an 18-acre urban park.

Due to physical constraints in and around the site and overwhelming opposition by community and stakeholder groups, several innovative Transportation Demand Management (TDM) strategies were developed and successfully implemented to accommodate day-to-day as well as Special Events transportation demands in advance of the successful debut of the Ottawa REDBLACKS CFL Football game, and the 2015 FIFA Women's World Cup Tournament.

The Lansdowne redevelopment project has proven to be overwhelmingly successful, and is an example of a successful and vibrant sports and entertainment redevelopment in established urban neighborhoods. Hassan was also responsible for overseeing the procurement and implementation of parking equipment and management services, including the development of parking policy and operational plans for a mixed-use development.

Hassan also served as a special projects advisor at the venue and was responsible for overseeing special projects such as the development and implementation of an integrated pedestrian and parking wayfinding system, as well as evaluating site branding.

PUBLICATIONS

Lansdowne Revitalization - TMD Strategy to Accommodate Transportation Demands at the New Stadium at TD Place. ACT Canada Sustainable Mobility Summit, 2016.

* denotes projects completed with other firms

Luxmi has worked on various transit and multi-modal transportation projects to determine innovative solutions- with an ultimate goal of crafting transit and urban mobility networks that are equitable, resilient and sustainable. Her skill set lies in a diverse range of analyses related to transit, paratransit, active transportation, and passenger vehicles. Tasks completed include performance and data analyses, transit network planning and evaluation, stakeholder engagement, peer agency reviews and developing transportation demand management strategies. Her previous work in transportation planning and traffic engineering allows her to plan and design for all road users while understanding how transit fits into the larger transportation context.

EDUCATION

Bachelors of Applied Sciences (Civil Engineering),
Queen's University, Kingston, Ontario, 2016

MEMBERSHIPS

Member, Institute of Transportation Engineers
(Canada & US)

Engineer-In-Training, Professional Engineers
Ontario

PROJECT EXPERIENCE

Transit Planning

City of Winnipeg Transit Master Plan, Winnipeg,
Manitoba, Canada (Analyst)

Completed various analyses related to the development of an all-encompassing short and long-range master plan for Winnipeg Transit. Involved in the completion of a white paper detailing the potential for service integration within Winnipeg Transit. Also involved in tasks related to route optimization and the redesign of local and community transit routes in Winnipeg utilizing innovative service delivery strategies where appropriate.

Bangor Transit Study, Bangor, Maine, United
States (Analyst)

Assisted in the completion of the Transit Study final report. Involved in devising the needs assessment as well as the development of short and long-term recommendations. The study was focused on route and resource optimization including leveraging technology and the deployment of alternative service delivery strategies.

Route Optimization and Terminal Concept Plan,
Thunder Bay, Ontario (Analyst)

Collaborated on a study which considers the optimization of the existing bus network in Thunder Bay based on bus route analyses and stakeholder feedback. Performed a network evaluation using a set criterion to determine a preferred network and detailed the proposal of alternative on-demand service in low ridership areas. Prepared stakeholder engagement materials including project website content as well as open house posters, handouts and surveys. Assisted in summarizing key analyses and recommendations in a final report for submission to Thunder Bay Transit staff.

Saint John Transit Operational Audit, Saint John,
NB (Analyst)

Stantec is working with Saint John Transit to provide an Operational Audit of their existing transit service. The review will consider all components of service including routing, fare structure and collection, operational expenses and revenues, customer service standards and organizational structure. The intent is to provide an all-encompassing review of the service to realize efficiencies and build a more resilient, connected and equitable transit system. Luxmi is responsible for analyzing existing datasets, engaging the public and key stakeholders and developing service recommendations.

Luxmi Shanmuganantha B.A.Sc., E.I.T.

Transit Advisory Analyst · 4 Years of Experience

St. Thomas Transit Strategic Plan, St. Thomas, Ontario, Canada (Analyst)

Completed analyses and subsequent write-ups related to the development of a Strategic Plan for St. Thomas Transit. The plan was focused around route optimization, alternative service delivery strategies and capital investment needs. Involved in various elements of the scope of work including existing conditions analyses related to system performance and productivity, long-term strategy and visioning, sketch planning and route development, network evaluation and the final report preparation.

AVTA Integrated Mobility Plan, Antelope Valley, California (Analyst)

Performed system, route and stop level analyses to understand the current performance of the commuter bus service. Identified challenges and opportunities for service improvement to better meet commuter needs. Conducted a peer review to understand how AVTA services compare to peer agencies based on ridership, service productivity and financial performance.

Review of Autonomous Emergency Braking Systems and Development of a Pilot Program, York Region, Ontario (Analyst)

Collaborated on a study which looks to input Autonomous Emergency Braking (AEB) technology on York Region Transit vehicles to improve the safety of transit riders and other road users. A market scan is being completed to identify viable technologies for use in a pilot program, including discussions with technology providers and peer agencies to understand the feasibility of implementation. Upon selection, a pilot program will be developed.

Smart Stations- TfNSW, Sydney, Australia (Analyst)

Developed innovative concepts for Smart Stations in Sydney as part of a business case for TfNSW leadership to pilot new technologies. Investigated the feasibility of in-platform LED lighting to management pedestrian flow and improve wayfinding. Contacted technology providers to determine local system applicability.

Paratransit / Accessible Transit

TTC Wheel-Trans Call Centre Review, Toronto, Ontario, Canada (Analyst)

In response to high wait times experienced by specialized transit customers utilizing the Wheel-Trans contact centre, the use of contacted third-party services was investigated to meet this demand. Completed a literature review to explore industry best practices related to contact centre management.

Jeremy is a Transit Advisory Analyst in the Transit Advisory group based out of Stantec's Toronto office. Jeremy has been involved with a variety of transit projects in Canada and the US, working on behalf of public transit agencies and private-sector clients. Coming from a mechanical engineering background, he is a strong advocate for technical analysis as a method to examine and improve transit systems. His unique range of experience includes technical advisory and management consulting projects for high-speed rail, LRT, commuter rail, and buses.

EDUCATION

Bachelor of Applied Science (Mechanical Engineering), Queen's University, Kingston, Ontario, 2018

MEMBERSHIPS

Engineer-in-Training, Professional Engineers Ontario

PROJECT EXPERIENCE

Transit Planning

City of Winnipeg Transit Master Plan, Winnipeg, Manitoba, Canada (Transit Advisory Analyst)

Assisting in the developing of Winnipeg's first 25-year Transit Master Plan. Preparing a fare review report to analyze Winnipeg Transit's current fare structure and recommend modifications, taking into account alignment with peer agencies and local context. The report spans across fare pricing, transfer policy, park-and-rides, low-income passes, and smart-card strategy. Conducted a review of Winnipeg Transit's organizational structure.

GO Electrification Transit Project Assessment Process (TPAP)*, Toronto, Ontario (Summer Intern - Environmental Programs & Assessments)

Analyzed noise & vibration data along the rail corridor. Assisted in project coordination duties and attended project meetings with consultants. Participated in organizing community engagement initiatives to solicit feedback on the project.

Strategic Transportation Master Planning

Niagara-on-the-Lake Transportation Master Plan, Niagara-on-the-Lake, ON, Canada (Transit Advisory Analyst)

Stantec is working with the Town of Niagara-on-the-Lake to develop a multi-modal transportation master plan that will assist the community in leveraging a variety of different mobility options to accommodate growth over the next ten years. One of the major components of this study is the spread-out nature of Niagara-on-the-Lake's urban settlements that are all connected by regional arterial roads. Stantec will be developing a suite of Automobile, Transit, Cycling, Pedestrian, and Smart Mobility Infrastructure recommendations to enhance connectivity and access across the community. To inform our analysis, our team will be leveraging cell tower origin-destination metadata through the Streetlight Data platform to give our team a more granular look at corridor usage, as well as quantifying the mobility impacts of tourism on the network.

Transit Service Planning

TTC Travel Training Implementation Plan, Toronto, Ontario (Transit Advisory Analyst)

Supported the development of an implementation plan to expand the existing Travel Training program at the TTC. Performed data analysis to model the resourcing and cost requirements for a variety of travel training scenarios.

* denotes projects completed with other firms

Jeremy Cohen

B.ASc, EIT

Transit Advisory Analyst · 2 Years of Experience

Transit Systems and Systems Integration

Fredericton Transit CCTV/APC Advisory, Fredericton, New Brunswick, Canada (Transit Advisory Analyst)

Conducted a market scan of existing CCTV (closed-circuit television) and APC (automatic passenger counter) systems for Fredericton Transit, including innovative integrated CCTV-APC systems which utilize video analytics. Interviewed peer transit agencies who have recently implemented CCTV and APC systems on their experiences and lessons learned. Assessed existing technologies to recommend an optimal configuration to the client based on feasibility, functionality, and resource availability.

Driver Safety System Pilot for York Region Transit, York Region, Ontario (Transit Advisory Analyst)

Overseeing a pilot project at York Region Transit involving the implementation of a Driver Safety System onto a segment of its bus fleet. The system utilizes a camera to detect bus operator fatigue or distraction. Interfacing between the client and vendor to define the project requirements and milestones.

TTC Corporate Camera Strategy & Delivery, Toronto, Ontario (Transit Advisory Analyst)

Supporting the TTC's CCTV modernization program. Gathering project requirements across departments, and creating business process analysis documentation. Developing business cases to analyze the financial and societal benefits of each project. Interviewing and surveying global peer transit agencies to inform TTC's CCTV strategy. Supporting the TTC with research into innovative technologies such as video analytics, machine vision, collision warning, automatic licence plate reading (ALPR).

Transit Fleet

OCTA ACCESS Fleet Analysis, California (Fleet Analyst)

Supporting the fleet analysis of OCTA paratransit fleet and operations, to propose a forward-looking fleet mix for future procurements.

Mobility Management

Fathom Five Marine National Park Visitor Centre and Mobility Strategy, Tobermory, ON, Canada (Transit Advisory Analyst)

Stantec is working with Parks Canada to make improvements to the Visitor's Centre, Parking Lot, and Lookouts within the Fathom Five Marine National Park in Tobermory, Ontario. This work includes developing and evaluating options for access to/from the park, improved design elements to mitigate vehicle/pedestrian conflicts within the Visitor Centre parking lot, as well as enhance the public realm. Throughout this study several engagement sessions were held with Parks Canada teams, supported by field visits.

It is anticipated that this project will explore opportunities to leverage travel demand management (TDM), Parking Pricing, and active transportation/transit connections to mitigate the over-utilization of on-site parking spaces. Linking with this will be the development of a variety of conceptual designs for accommodating additional parking on-site as well as recommendations for enhancing the park's existing trails and lookout docks to improve the visitor experience at the park. Jeremy is involved in TDM activities, including the design of parking pricing and park shuttle systems.

High Speed Rail

Team Japan Technical Advisory*, Dallas, Texas (Engineer-in-Training)

Provided regulatory advisory to Team Japan, a rolling stock consortium supplying Shinkansen bullet trains to the Texas Central High-Speed Rail system planned between Dallas and Houston. Created and managed a database of US passenger rail regulations and requirements to enable requirements management for the design phase. Responded to the client's compliance queries related to their rolling stock systems. Advised on rolling stock signage requirements and FRA regulatory submittals. Performed costing and project management activities.

* denotes projects completed with other firms

Jeremy Cohen B.ASC, EIT

Transit Advisory Analyst · 2 Years of Experience

Light Rail Transit Design

Eglinton Crosstown LRT Operational Planning*, Toronto, Ontario (Engineer-in-Training)

Developed the failure management strategy to continue revenue service during degraded operations. Considered transportation engineering principles and considerations based on the unique design of the system to catalogue all possible opportunities for single track operations and/or LRT shuttle operations. Contributed content related to wayside signage and pocket track signalling for the operational Rule Book. Updated TTC standard operating procedures to consider differences between subway/streetcar and ECLRT operations.

REM LRT Operational Planning*, Montreal, Quebec (Engineer-in-Training)

Analyzed operational data to understand the impacts of several emergency scenarios, such as platform overcrowding, and train evacuation. Developed an Excel model to determine the duration of train rescue manoeuvres across the entire system. Created a financial model from the service agreement between the client and operator to estimate the financial penalties for common operational issues. Developed a briefing paper and technical analysis on the connection with the Exo commuter rail system and delivered key recommendations to the operator.

Passenger Rail Transit

Fuel Consumption Testing*, Toronto, Ontario (Engineer-in-Training)

Performed fuel consumption testing on multiple occasions to determine the effectiveness of an oil additive on fuel efficiency and locomotive engine performance. Directed the client's maintenance personnel to administer the test and follow proper testing procedure. Recorded data from the locomotive's on-board diagnostics system and analyzed it for the final report.

Static Rail Vehicle Testing*, Raleigh, North Carolina (Engineer-in-Training)

Participated in a 'lean test' for NCDOT, a static vehicle test used to certify refurbished rail cars for increased speeds and cant deficiencies on the mainline tracks, in accordance with FRA regulations. Set up hydraulic and electro-mechanical testing apparatus. Oversaw the test and ensured that the test procedure was adhered to. Verified measurements and data obtained by a subcontractor. Contributed to the final report explaining the analysis and findings.

COMMUNITY INVOLVEMENT

Cohort Member, YouthfulCities Future City Builders, Hamilton, Ontario, Canada 2019

** denotes projects completed with other firms*

Amanda brings a diverse background—ranging from spatial analysis, nonprofit work, and land use planning—to provide a truly comprehensive viewpoint to transit analysis and consulting. A recent graduate of USC's Master of Urban Planning program, Amanda has had the opportunity to analyze transit and urban mobility projects in both professional and academic settings. During her graduate studies, Amanda spent time working with the Los Angeles County Metropolitan Transportation Authority (LA Metro), where she gained firsthand experience in both transit asset management planning and mobility corridors planning, assisting with feasibility studies and environmental reviews for future transit lines in Los Angeles County. Amanda brings her public-sector experience to her current role to respond to the needs of clients on a range of transit, transportation, and urban mobility projects, focusing on community and responding to the unique needs and contexts of each community she provides services to. She approaches every project with a focus on equity, sustainability, resiliency, and providing more transit mobility options to the communities she serves.

EDUCATION

MA, Urban Planning (Concentration: Transportation Planning & Sustainable Land Use Planning), University of Southern California, Los Angeles, California, 2019

BA, Geography (Concentration: Urban Geography, Cultural Geography, Human-Environment Interactions, and GIS), University of North Texas, Denton, Texas, 2015

CERTIFICATIONS & TRAINING

Transit Asset Management (Tier I Agencies), National Transit Institute, Los Angeles, California, 2017

MEMBERSHIPS

Member, Los Angeles Chapter, Women in Transportation (WTS), 2018-Present

Member, Los Angeles Chapter, Young Professionals in Transportation, 2017-Present

Member, AICP Candidate Program, California Chapter, American Planning Association, 2017-Present

AWARDS

2014 Outstanding Community Partner, Keep Denton Beautiful, City of Denton

2017 2017 Dean's Merit Award, Sol Price School of Public Policy Graduate Scholarship

2015 Terry Jordan Award for Cultural Geography, University of North Texas Department of Geography

PROJECT EXPERIENCE

Transit Planning

AVTA integrated Mobility Plan, Antelope Valley, California (Analyst)

AVTA provides transit service for the Antelope Valley, as well as commuter service to and from Los Angeles. With a difficult terrain for transit, as well as new challenges including health and social equity issues, AVTA has retained Stantec to develop an integrated mobility plan to improve not only transit service but also mobility generally in the region as a way to ameliorate health indicators and quality of life. Amanda is assisting with tasks including the analysis of current routes, DAR service, policy conditions, land use analyses, and stakeholder outreach, among others.

Winnipeg Transit Master Plan, Winnipeg, Manitoba (Analyst)

The city of Winnipeg is in the process of a systemwide redesign to better fit its transit services with the dynamic and growing Winnipeg population. To help ensure that these transit services are serving the Winnipeg community in the best way possible, Amanda is assisting on multiple tasks including a comprehensive route-by-route review of existing conditions and developing and assessing concepts for new route and transit corridor development.

Amanda McDaniel MPL

Transit Advisory Analyst · 1 Years of Experience

Griffith Park Aerial Transit System Feasibility Study, Los Angeles, California (Analyst)

To help provide additional transportation options and reduce congestion in and around the popular tourist destination of Griffith Park in Los Angeles, Stantec was retained by the Los Angeles Department of Recreation and Parks to complete an Aerial Transit System feasibility study. Amanda brought her detail-oriented analysis skills to assist in developing ridership projections for the proposed system.

Zero Emissions Buses

Santa Monica Big Blue Bus Charging Infrastructure Project, Santa Monica, California (Transit Advisory Consultant)

Developing electric charging infrastructure strategy to ensure Big Blue Bus operations are not affected by the switch to battery electric buses.

OCTA Zero Emission Bus Rollout Plan On-Call Services, Orange, California (Transit Advisory Consultant)

Develop all-encompassing ZEB rollout plan that considers all business aspects of a transition to either battery electric buses or hydrogen fuel cell electric buses in compliance with the California Air Resources Board's Innovative Clean Transit mandate. Plan includes facilities review, routing review, developing power requirements, determining the optimal mix of battery electric versus hydrogen fuel cell electric buses, undertaking financial analysis and providing an implementation plan that transitions the agency to full ZEB by 2040.

Anaheim Transportation Network Route by Route Power Modeling Services, Anaheim, CA (Transit Advisory Consultant)

Establishing power and charging requirements for a 100-battery electric bus operation that serves Disneyland and associated resort support areas.

Riverside Transit Agency Zero Emission Bus Analysis and Rollout Plan, Riverside, California (Transit Advisory Consultant)

Develop all-encompassing ZEB rollout plan that considers all business aspects of a transition to either battery electric buses or hydrogen fuel cell electric buses in compliance with the California Air Resources Board's Innovative Clean Transit mandate. Plan includes facilities requirements review, routing review, establishing power requirement needs, determining the optimal mix of battery electric versus hydrogen fuel cell electric buses, undertaking financial analysis and providing an implementation plan that transitions the agency to full ZEB by 2040.

Transit Operations

Santa Barbara MTD Facilities Master Plan, Santa Barbara, California (Analyst)

To develop a robust and comprehensive facilities master plan, MTD retained Stantec to develop a forward-thinking facilities master plan to future-proof the agency, particularly due to ZEB requirements from the State of California. Amanda is assisting the team design a facility that will meet current and future transit demand through comprehensive analysis of the MTD's existing conditions, transit markets, industry trends, and relevant regulations.

Customer and Community Satisfaction Surveying, Bakersfield, Bakersfield, California (Analyst)

This project involved customer and community satisfaction surveying on both conventional and paratransit services with the goal of improving ridership and cost-recovery for the agency. The scope of work also included public outreach with elected officials and community leaders. Amanda assisted with surveyor training in-field supervisor of surveyors, and supervision of data entry. Amanda led tasks including peer-agency review and analysis of data for both fixed-route and dial-a-ride paratransit service.

John N. Gobis advises clients in both the public and private sectors on issues of strategy, marketing, organization, and operations. He has 40 years of experience developing public private- partnerships for transportation and infrastructure projects. Gobis' experience in service design and delivery includes short and long-range transit plans, comprehensive operational analyses, competitive contracting, and developing innovative service concepts.

Gobis has developed an effective working relationship with Stantec having successfully completed countless assignments with us—and the specific team members assigned to this project. Relevant project experience includes: Revenue generation from non-tax, non-toll, and nonfee sources; Advanced fare and toll payment system development and implementation; Transportation demand management; Organization and formation of transportation agencies; Public transportation marketing; Innovative transportation service program development

John has a contractor arrangement with Stantec Consulting Services Inc.

EDUCATION

Bachelors of Humanities, Providence College,
Providence, Rhode Island

Land Use Planning,
Lincoln Institute of Land Policy, Cambridge, MA

PROJECT EXPERIENCE

Massachusetts Bay Transportation Authority
(MBTA), Transit Advertising, Alternative Sources
of Stable Sustainable Funding, Boston, MA,
Project Manager

John led two projects that created more stable and sustainable sources of local revenue from out of home advertising and technology-driven management of the agency's 45,000 parking spaces. He championed home advertising program advancements that will generate an estimated \$1billion in alternative revenues over 15 years.

Central Indiana Regional Transportation,
Indianapolis Mayor's Task Force, Indianapolis, IN,
Governance Subject Matter Expert

John provided advice to policymakers in Central Indiana on the formation of a regional transportation authority and the best methods to earn public support for this governance model.

LYNX Strategic Plan, Orlando, FL,
Consultant/Author

John developed a strategic plan that identified how transit could be improved to play a larger role. He had a critical role in developing Tri-County Transit into what today is LYNX, a regional transit service provider.

Houston Metro Strategic Plan, Houston, TX,
Transit Support

John supported the operational, financial, as well as political response to DART's service expansion into 15 suburban cities around Dallas.

New Jersey Transit, Fare Policy, Next Generation
Fare Payment and Revenue Collection System,
Newark, New Jersey, Program Consultant

John advised New Jersey Transit, on design, development, and deployment of its Next Generation Fare Payment and Revenue Collection system that offers multiple fare payment options that best fitted the profiles of the riders of the agency's commuter rail, subway, light rail, commuter bus, local bus and paratransit services.

Peter is a tenured transportation professional with over 40 years of progressive experience in transit, paratransit, intercity coach, airport shuttle bus service, and vehicle manufacturing. Some of his responsibilities have included new service implementation, vehicle specifications, establishment of professional standards and practices, long range fleet and lifecycle planning as well as directing work forces. Through his activities at Orion Bus Industries and in the Metrolinx Joint Procurement Initiative, he is very conversant with fleet profiles, propulsion types, vehicle configuration and legislative compliance in addition to maintenance routines. Peter is one of the few established persons in the industry with experience at middle and senior management levels in both operations and fleet positions. This enables him to recognize the interaction and relationship between two key functional components of a transit system including dispatching, vehicle staging and service line functions. Being conversant in both these areas has assisted his participation in Collective Agreement negotiations. This direct hand-on experience is complemented by having served two terms as a Director of the Ontario Public Transit Association. In his current role with Stantec, he actively participates in meetings and webinars of the Canadian Urban Transit Research and Innovation Consortium (CUTRIC).

EDUCATION

B.A., Geography, York University, Toronto, Ontario, 1975

Business Administration Certificate, Ryerson University, Toronto, Ontario, 1982

CERTIFICATIONS & TRAINING

Customer First Program, Gray Coach Lines, Toronto, Ontario, 1986

Defensive Driving, Ontario Safety Council, Toronto, Ontario, 1986

Class BZ Ontario Driver's License current, Ministry of Transportation, Mississauga, Ontario, 2001

Light Rail Vehicle Operation, Toronto Transit Commission, Toronto, Ontario, 1974

HART Equal Opportunity/Employment Equity Program, Toronto Transit Commission, Jackson's Point, Ontario, 1989

Supervisory Identification Program, Humber College, Toronto, Ontario, 1982

Joint Health and Safety Committee Training, Durham Region, Whitby, Ontario, 2014

Productivity and Performance Enhancement, Toronto Transit Commission, Toronto, Ontario, 1988

Effective Transit Management, Canadian Urban Transit Association, Orillia, Ontario, 1991

Accessibility for Ontarians with Disabilities Training, Stoney Creek, Ontario, 2016

Introduction to ISO 9000/Internal Auditor Training, Durham College, State University of New York, Oriskany, New York, 1999

Effective Supervision for Gray Coach Lines Staff, Toronto Transit Commission, Toronto, Ontario, 1987

Vehicle Electrician's Course, Toronto Transit Commission, Toronto, Ontario, 1977

Workplace Hazardous Materials Information System (WHMIS) Training, Stoney Creek, Ontario, 2016

MEMBERSHIPS

Member, Canadian Urban Transit Association

Director, Ontario Public Transit Association

Peter Chatoff B.A.

Senior Transit Technologist · 45 Years of Experience

PROJECT EXPERIENCE

Paratransit / Accessible Transit

TTC Wheel-Trans Inauguration of First Community Bus Route*, Toronto, Ontario (Operations Supervisor)

Prepared routing guide, timing points, stop placement locations, farebox handling and operating procedures for the initial Community Bus route in Toronto.

TTC Wheel-Trans Takeover*, Toronto, Ontario (Operations Supervisor)

Effectuated the smooth transition of former contractor staff and para-transit service delivery to direct TTC control. Ensured that personnel were trained and complied with TTC operating practices and performance standards, including assisting in creating initial and successor labour agreement with Local 113, Amalgamated Transit Union for this work group. Managed operation from improvised facilities until Lakeshore Garage was ready for occupancy.

Transit Fleet

Whitehorse Transit, Transit Master Plan, Whitehorse, Yukon (Fleet Lead)

Review of vehicle propulsion systems, development of an asset management plan and a review of maintenance practices.

Thunder Bay Transit, Review of Maintenance Department, Thunder Bay, Ontario (Fleet Lead)

A review of maintenance practices including fleet servicing, work processes, staffing configuration, capital asset strategy, Collective Agreement parameters and compliance to legislated mandates. One-on-one interviews were undertaken with both management and bargaining unit represented staff.

Cornwall Transit, Transit Master Plan, Cornwall, Ontario (Fleet Lead)

Review of vehicle propulsion systems and development of an asset management plan. cursory review of maintenance practices and lifecycle.

Fredericton Transit, Strategic Plan, Fredericton, New Brunswick (Fleet Lead)

Review of vehicle propulsion systems, development of an asset management plan and a review of maintenance practices.

Sarnia Transit, Development of Asset Management Plan*, Sarnia, Ontario (Fleet Lead)

A complete fleet condition audit of the entire Sarnia Transit fleet (conventional and para-transit) and recommendations for future fleet profile.

Toronto Transit Commission, Optimum Lifecycle Determination Analysis*, Toronto, Ontario (Fleet Lead)

Fleet condition audits of a representative sample of the TTC's 1800+ conventional bus fleet and recommendations for future fleet profile and lifecycle recommendations.

Transit Windsor, Development of Asset Management Plan*, Windsor, Ontario (Fleet Lead)

Vehicle condition audit on a revenue fleet cross-section and an analysis of procedures, practices and facility outfitting. One-on-one interviews were conducted with both management and bargaining unit represented staff including skilled trades. Recommendations for enhancement to hierarchy, processes and fleet planning compiled.

Transfer of Local Route Services from GO Transit to Regional Jurisdiction*, York Region, Ontario (Fleet Coordinator)

Coordinated the fleet component of the transfer of Yonge Street and Bayview Avenue local route services from GO Transit to Regional jurisdiction and contractor operation. Ensured ownership, legislated sale of vehicle aspects, graphics and logo changes and garage allocation of units were completed in an abbreviated time frame. Procured additional spare bus units as interim contingency for service overload until institution of VIVA BRT parallel services.

* denotes projects completed with other firms

Peter Chatoff B.A.

Senior Transit Technologist · 45 Years of Experience

New Airside Shuttle Bus*, Toronto, Ontario (Manager, Airport Operations)

Set up and operated a new airside shuttle bus service following Transport Canada safety and security protocols operated on a 24/7 service profile basis including terminal to apron placed aircraft passenger and flight crew transportation.

Coach Life Cycle Scheme*, Toronto, Ontario (Equipment Supervisor)

Coordinated a new 10 year cost validated coach life cycle scheme eliminating mid-life refurbishment and reducing spare ratio and yielding a higher resale value of retired vehicles through an aggressive marketing initiative.

VIVA Bus Rapid Transit Vehicles*, York Region, Ontario (Assistant Manager Operations and Fleet Supervisor)

Represented York Region Transit in the design and construction of the initial fleet of VIVA Bus Rapid Transit vehicles, including factory inspections and commissioning for service and ensuring compliance to applicable legislated standards in Ontario.

Highway 2 BRT Route*, Durham Region, Ontario (Deputy General Manager, Maintenance and Equipment)

As the person responsible for fleet specifications, as part of the Metrolinx funded BRT route created to operate in Durham Region on Highway 2 effective July 1, 2013, developed the unique configuration and upmarket features for the dedicated BRT "PULSE" fleet to operate this service. Sought out input from stakeholders and used the Metrolinx Transit Bus Joint Procurement Initiative process to optimize price and features. In addition, acted as a key team member to effect the expansion of the Ajax bus garage and create a new maintenance facility to replace the facility in Oshawa.

GTAA Bussing Facility*, Toronto, Ontario (Manager, Airport Operations)

As the person in charge of the contracted shuttle bus service provider to the Greater Toronto Airports Authority provided key input into the design, layout and equipping of the new GTAA Bussing Facility.

Metrolinx Transit Bus Joint Procurement Initiative*, York Region and Durham Region, Ontario (Steering Committee Chair)

As the representative of York Region and subsequently Durham Region chaired the Steering Committee that included representatives of various Ontario transit systems that pooled technical knowledge and input towards creating specifications and procuring various types of urban transit buses, effecting more common features and designs, effecting better pricing and other favourable tangible terms of sale. This strengthened the buying power of the participating municipalities, provided an open and fair competitive process to the industry and developed a better quality end product for customers. In tandem participated on the Technical Committee.

Fleet Acquisition / Turnover Plan*, Durham Region, Ontario (Deputy General Manager Maintenance and Equipment)

Created a multi-year fleet acquisition/turnover plan and associated capital budget projections, merging the assumed fleets from local municipalities into a regional agency. Established mid-life refurbishment points for conventional vehicles defining scope of work and corresponding shorter life cycles and replacement schemes for non-revenue and specialized services units. In tandem fleet standards were raised and light duty vehicles eliminated from fixed route service. Set up specification standards for revenue and non-revenue vehicles and harmonized maintenance routines to a higher than legislated standard. Performed in-plant inspections and quality control exercises.

* denotes projects completed with other firms

Appendix B

Project Experience and References



ANTELOPE VALLEY INTEGRATED MOBILITY PLAN

Cost: \$363,000

Schedule: December 2018-Ongoing

Team: Sasha Pejic, David Verbich, Michele Colley,
Amanda McDaniel, Luxmi Shanmuganantha

Reference

Macy Neshati, Executive Director and CEO

Antelope Valley Transit Authority

42210 6th Street West, Lancaster, CA 93534

661-729-2229 | mneshati@avta.com

Plan Adoption

The plan was adopted by the AVTA Board of Directors in February 2020. Our contract was subsequently expanded to provide implementation support services.

Description

We are completing a comprehensive study of transportation and mobility in the Antelope Valley, a region with high vulnerability indices at the northern border of Los Angeles County. AVTA provides fixed route and paratransit services across a sprawling landscape, serving two urban cities and a large rural area. The overarching vision is to develop a multi-faceted approach to expanding mobility choices for

residents of Antelope Valley—making transit and other services more useful to more people for more trips.

We have worked with AVTA to develop a paratransit plan that includes co-mingling paratransit trips with on-request trips taken by users of all abilities residing in rural areas. We have also developed RFPs and assisted in procuring a new vendor for paratransit and on-request (microtransit) service set to go live later this year. The proposed service follows a family of services approach that integrates fixed-route services with curb-to-curb services, enabling greater travel flexibility by delivering the right service on a trip-by-trip basis.

Our review of the fixed-route system involved meeting with senior management and engaging frontline staff, meeting with riders and non-riders, and developing strategies and initiatives to address stagnating ridership. The plan, Mobility Forward, was adopted in February 2020 and is now in the implementation stages, with Stantec taking a lead role in program management.

The planning process involved a Title VI analysis, outreach including ridealongs, pop-ups, open houses, and online surveys and resources (see: <http://avtamobilityplan.fyi/>). Furthermore, Stantec will leverage our design strategies and engagement and stakeholder tools that we've honed on this project for El Metro's COA.

GTRANS LINE-BY-LINE ANALYSIS OF TRANSIT SERVICES

Cost: \$246,000

Schedule: 2017-2018

Team: Sasha Pejic, Brian Putre, David Verbich,
Michele Colley

Reference

Ernie Crespo, Director, Transit

GTrans

13999 S. Western Avenue, Gardena, CA 90249

310-965-8888 | ecrespo@gardenabus.com

Plan Adoption

The plan was adopted by the Gardena City Council in September 2019.

Description

Stantec's Transit Advisory and Transit Planning teams collaborated on a line-by-line analysis, similar to a COA, for GTrans, the municipal transit agency for Gardena, California. GTrans provides local service and connections to neighboring municipalities, including service to downtown Los Angeles.

Operating five routes, GTrans provides over 12,400 daily rides. We also analyzed current paratransit service performance and rider satisfaction.

Stantec audited each bus route by studying

performance data, conducting manual rider counts and onboard customer satisfaction surveys, to determine the performance of each route by segment, time of day, and direction. Furthermore, we also studied alternative service delivery methods for routes that do not operate on weekends and holidays, as well as analyzed business cases for new services, such as local service to the new NFL stadium.

In addition to operations, we conducted focus group meetings with riders and non-riders, held pop-ups around the community, and held operator workshops to uncover pain points and opportunities based on the values of the larger community.

As a result, we developed a five-year service plan that rationalized service provision, tailoring service products based on demand and aligning with future growth and development in Gardena and Los Angeles. The plan was adopted in September 2019 and GTrans had started implementing Stantec's recommendations; however, due to Covid-19, the implementation has been temporarily halted.

WINNIPEG TRANSIT MASTER PLAN

Cost: \$1,900,000

Schedule: 2018-Ongoing

Team: Sasha Pejcic, Brian Putre, Michele Colley,
Luxmi Shanmuganatha, Jeremy Cohen,
Samantha Squires, David Verbich, Amanda
McDaniel

Reference

Kevin Sturgeon, Senior Transit Planner

Winnipeg Transit, Service Development Division

421 Osborne Street, Winnipeg, MB R3L 2A2

204-986-5737 | ksturgeon@winnipeg.ca

Description

With a growing population driving ever increasing congestion, the City of Winnipeg launched a transit master plan, along with a new transportation master plan, to develop resilient travel options now and for 20 years into the future. These plans aim to align with densification, reduced dependence on private automobile use, and an attractive quality of life.

Stantec was retained to develop a comprehensive and visionary transit master plan that will contribute to the overall transportation landscape of Winnipeg, helping attract and retain residents and economic opportunities. The project consists of two major phases, including:

- **Phase 1** – A detailed and exhaustive analysis of existing conditions, including a transit market review, analysis of anonymized cell phone data to fully appreciate travel demand across the region, analysis of transit operations data to uncover strong and weak elements of the current system and the development of white papers on industry state-of-the-practice that will underlie the development of phased recommendations
- **Phase 2** – Develop business cases, design guidelines, and preliminary engineering work to design a rapid transit network for the heaviest demand corridors in Winnipeg. This may result in BRT-type services, LRT, or some combination to deliver more reliable and frequent service to the densest areas of Winnipeg.

Other areas of study included paratransit operations, microtransit opportunities, infrastructure, land use, fleet, technologies, transit service guidelines and scheduling.

Taken together, the Transit Master Plan will lay out a 20-year roadmap for the development and maturation of Winnipeg's transit system, including active transportation and new mobility modes that will help Winnipeg become a truly sustainable city.

Appendix C

Preliminary Project Schedule



TASK	EI Metro Comprehensive Operational Analysis Project Schedule								
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9
Project Management and Administration	A								
Task 1: Stakeholder Engagement			c	B		c		c	
Task 2: Background Data Analysis									
Task 3: System Efficiency and Effectiveness Review			C, a						
Task 4: Gaps Analysis					D				
Task 5: EI Metro Network Plan						b			
Task 6: Supporting Recommendations						E			
Task 7: Implementation Plan							F, d, e		
Task 8: Scheduling and Run Cutting								G	
Final Report & Recommendations									H, f

Deliverables

- A Kickoff Meeting
- B Stakeholder Engagement and Onboard Surveys Summary Report
- C Existing Conditions and Peer Review Report (tasks 2 and 3)
- D Gaps Analysis Report
- E EI Metro Network Plan and GIS Geodatabase
- F Draft Final Report and Recommendations and Implementation Plan (tasks 6 and 7)
- G Run Cuts and Schedules
- H Final Report and Recommendations Submission

Presentations

- a Technical Committee presentation 1
- b Technical Committee presentation 2
- c Public presentations
- d Final Technical Committee presentation
- e Final Policy Committee presentation
- f Final Laredo Mass Transit Board presentation

RFQ MPO COMPREHENSIVE OPERATIONAL ANALYSIS (COA) OF EL METRO

RFQ FY20-055



EL METRO
LAREDO



in association with:



JULY 20, 2020

TABLE OF CONTENT

COVER LETTER	1
SECTION 1: GENERAL STATEMENT OF FIRMS QUALIFICATIONS	2-3
SECTION 2: TEAMS QUALIFICATIONS.....	4-5
SECTION 3: KNOWLEDGE AND EXPERIENCE	6
SECTION 4: COMPARABLE PROJECTS.....	7-9
SECTION 5: APPROACH	10-12
SECTION 6: SCHEDULE & AVAILABILITY	13
SECTION 7: FAMILIARITY WITH GEOGRAPHIC AREA	14-15
SECTION 9: RESUMES	



TBPE Registered Firm No. F-17744

www.parracompany.com

July 20, 2020

Mr. Eddie Bernal
El Metro Transit
401 Scott Street
Laredo, TX 78040

RE: Laredo MPO Comprehensive Operational Analysis

Dear Mr. Bernal:

Parra & Co is pleased to submit our team qualifications for your consideration for the Laredo MPO Comprehensive Operational Analysis. We have partnered with national transit/transportation consultant **Nelson\Nygaard** and have assembled a strong local team composed of **Able City** for Urban Planning and Public Involvement, **LAN** for Transit Support, and **Liquid Studio Group** for website public outreach. Our team has produced over 40 successful COAs including:

- + Comprehensive Operational Analysis, Corpus Christi Regional Transportation Authority
- + Torrance Transit Comprehensive Operational Analysis, City of Torrance
- + Long Beach Transit Comprehensive Operational Analysis
- + Comprehensive Operational Analysis, Livermore Amador Valley Transit Authority
- + Comprehensive Operational Analysis, Foothill Transit

Further, we also have the local pulse and understanding of challenges and plans that Laredo has for the future. Some of our team's local projects include:

- + Viva Laredo Comprehensive Plan / Bike Laredo / Re-Code Laredo
- + El Metro Google Transit Route Implementation
- + El Metro Transit Grant Intergovernmental Coordination Assistance
- + Laredo MPO Urban Transportation Study 2040 MTP Update
- + Laredo MPO Travel Demand Model Update
- + El Metro New Operation & Maintenance Facility

Our team has the knowledge of Laredo and the current plans and has the national best practices to assist the City. Further, our team has a shared common goal: **Make Your Success Our Mission**. I can be reached for any questions you may have either via email at ejparra@parracompany.com or via telephone at 956-231-5252.

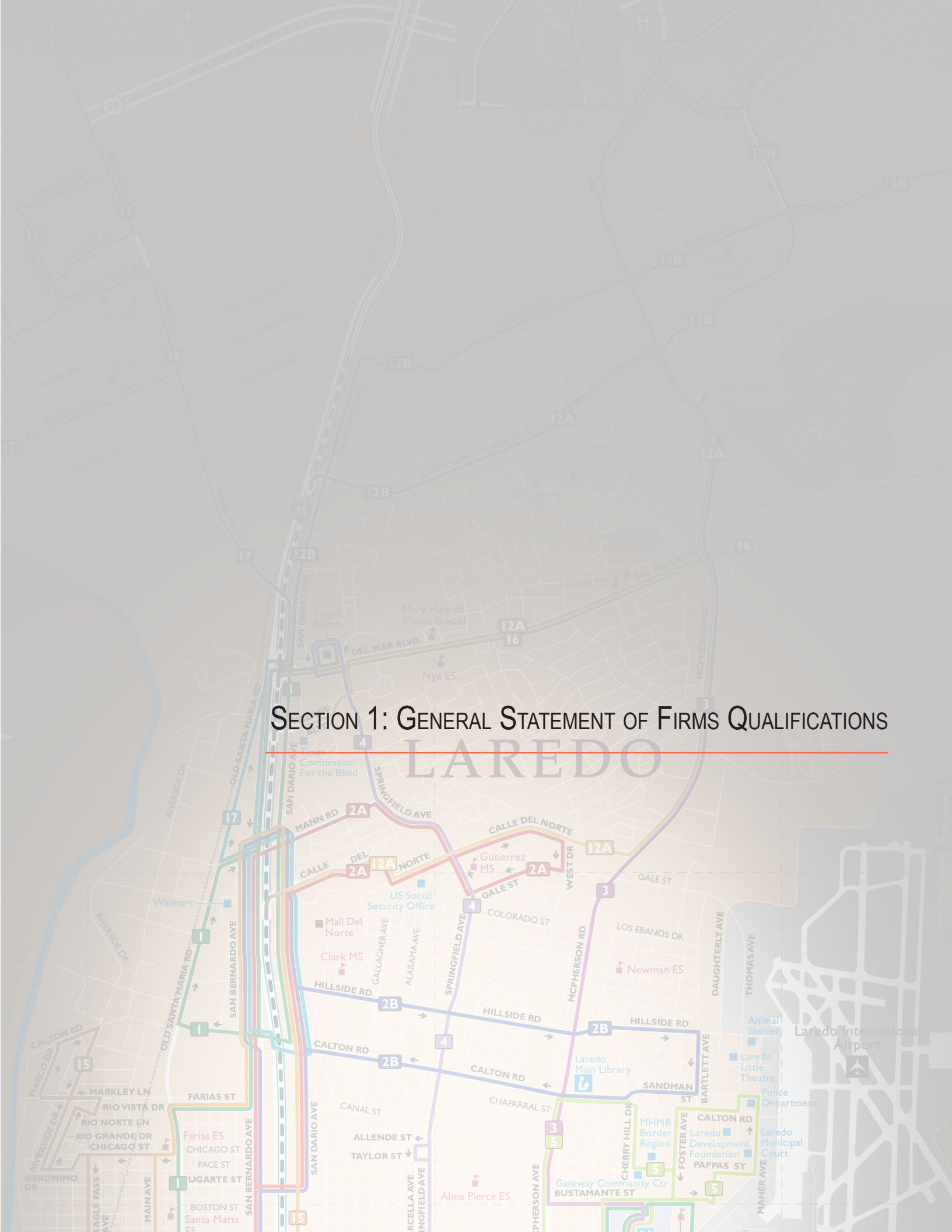
Yours truly,

A handwritten signature in blue ink, appearing to read "Eduardo J. Parra", written over a light blue circular stamp or watermark.

Eduardo J. Parra, PE, LEED AP BD+C
CEO / Principal Engineer
Parra & Co., LLC
TBPE Firm Registration No. 17744

SECTION 1: GENERAL STATEMENT OF FIRMS QUALIFICATIONS

LAREDO



Lead Firm:	Parra & Co., LLC
Address:	6010 McPherson Road. Ste 300 Laredo, TX 78041
Phone Number:	832.623.3447
Contact Person:	Eduardo J. Parra, P.E., LEED BD+C



Parra & Co., LLC (Parra & Co) is a Family-Owned Texas based Civil Engineering consulting firm with a strong emphasis in project management and client service. Our team has over 130 years of combined experience, and we have served as prime consultants for projects for the City and El Metro Transit in a total of ten projects over the last five years. Prior to Parra & Co, Eduardo Parra oversaw multiple projects for the Laredo MPO, including the Urban Transportation Study 2040 MTP Update and the Travel Demand Model Update as well as the design of the upcoming El Metro New Operations and Maintenance Facility to be located at Jacaman and Barlett. Parra & Co is registered with the Texas Board of Professional Engineers under the Firm Number F-17744 and we were recently named part of the Top 25 Civil Engineering Firms in San Antonio by the San Antonio Business Journal. Parra & Co has maintained a local presence in Laredo almost since the inception of the firm, collocated now with our partners of LAN and Liquid Studio at 6010 McPherson Road to better serve the City, the MPO, and El Metro Transit.

Our promise: our team will provide you with a highly personable service with an emphasis on developing a deep understanding of your needs to create a positive impact for Laredo. The service you receive from Parra & Co goes beyond what any other consulting firm provides. Eduardo Parra will serve as your ONE point-of-contact every step of the way, making your success our mission.

Sub - Consultant:	Nelson\Nygaard Consulting Associates
Address:	811 First Avenue, Suite 610 Seattle, WA 98101
Phone Number:	206.357.7526
Contact Person:	James Gamez



Transit planning is at the core of Nelson\Nygaard’s practice. Their national and international experience covers all types of transit, from the largest and most complex transit systems to small, rural and university systems. They specialize in redesigning existing services to make them more effective, developing new services such as BRT, and crafting transit plans that set practical strategies to move transit from today into the future. Their approach is comprehensive, collaborative, and creative. Working together, they help identify needs and opportunities to develop practical plans that communities will embrace. Nelson\Nygaard recently completed the Comprehensive Operational Plan for the Corpus Christi MPO and will bring the same experts to Laredo for this project.

Sub - Consultant:	Able City
Address:	118 Broadway St. Ste #529, San Antonio, TX 78205
Phone Number:	210.912.5929
Contact Person:	Mario Peña AIA, AICP, CNU-A



Able City is an architecture and urban design firm from Laredo with 70 years of combined experience. Able City provides creative and practical urban planning solutions for their clients in the public and private sector. Guided by stakeholder involvement, Able City develops sustainable communities, cities, and neighborhoods. As a multi-disciplinary firm, they specialize in placemaking on all scales, from community master planning, campus planning, park design, transit, streetscaping, and neighborhood development. Able City is the author of the Viva Laredo Plan and have been assisting VIA Transit in San Antonio with their Unified Development Code Assessment and Station Area Planning. This knowledge will strengthen the development of the Laredo MPO COA to make sure we have local knowledge input incorporated into each deliverable.

Sub - Consultant:	Lockwood, Andrews & Newnam, Inc. (LAN)
Address:	6010 McPherson Road. Suite 300 Laredo, TX 78041
Phone Number:	956.229.6325
Contact Person:	Russell Ford



Meeting 21st century transportation challenges requires not only technical prowess, but also listening to our clients and involving all stakeholders for input on issues and desired outcomes. LAN provides a full range of transit services and delivers solutions to complex challenges with a team of devoted professionals. LAN focuses on making the best use of available funding to create solutions to improve mobility more effectively and safely, while considering potential impacts to the communities in which we live and work. LAN recently completed the Traffic Signal Synchronization for the City.

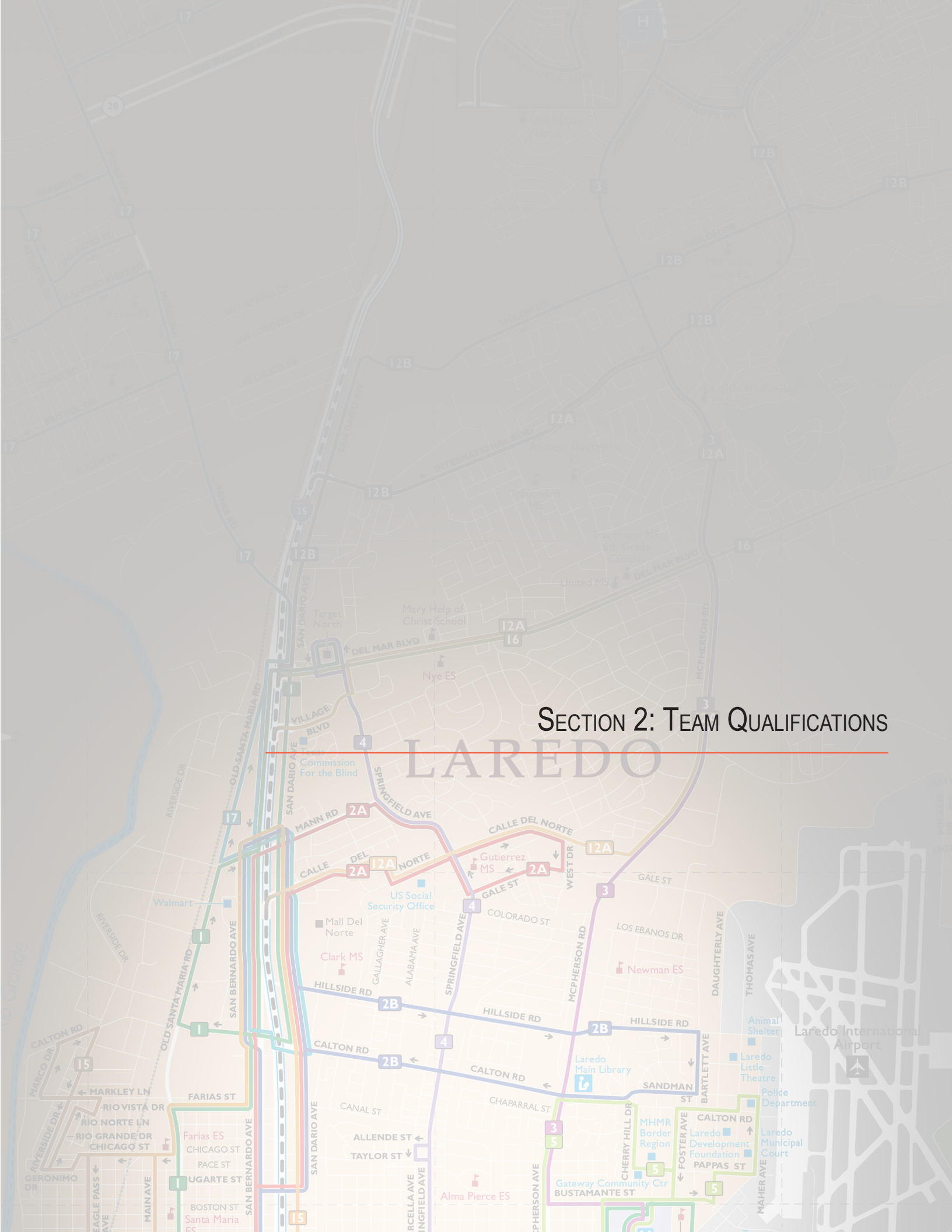
Sub - Consultant:	Liquid Studio Group
Address:	6010 McPherson Road. Suite 300. Laredo, TX 78041
Phone Number:	956.568.0762
Contact Person:	Gene Belmares



Liquid Studio Group is Laredo-based hybrid creative agency with a full complement of services. They specialize in digital marketing and advertising using inbound marketing strategies, websites, and social media to promote our client’s products and services. Liquid Studio Group also handles all manner of traditional media and advertising. Additionally, Liquid Studio Group provides public relations and communications services. Liquid Studio Group created and maintains the El Metro Transit website and the Webb County RMA website and will be available to create a website for the public outreach of the MPO COA.

SECTION 2: TEAM QUALIFICATIONS

LAREDO





PARRA & CO
Eduardo J. Parra,
P.E. LEED BD+C

RESPONSABILITIES

1. Project Management
2. Ridecheck / Survey Lead
3. Existing Conditions Report
4. Capital Recommendations Lead
5. Report Development Lead

- Texas Licensed Professional Engineer with over 20 years of experience
- Directed over a dozen projects in Laredo for either the City, El Metro, or the MPO within the past ten years, including:
 - Project Manager – El Metro Google Transit Route Implementation
 - Project Manager – El Metro Transit Grant Assistance
 - Project Manager – El Metro Transit Grant Intergovernmental Coordination Assistance
 - Principal in Charge – Laredo MPO Urban Transportation Study 2040 MTP Update
 - Principal in Charge – Laredo MPO Travel Demand Model Update
 - Project Director – El Metro New Operation & Maintenance Facility

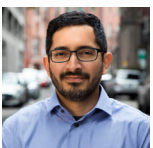


NELSON NYGAARD
Thomas Wittmann

RESPONSABILITIES

1. Transit / Transportation Planning
2. Quality Control
3. Existing Conditions Report Lead
4. Service Recommendations Lead
5. Runcut Lead

- Transit/Transportation Specialist with over 20 years of experience
- Led over 30 Comprehensive Operational Analysis across the nation, including:
 - Long Beach Transit Comprehensive Operational Analysis, Long Beach Transit Authority
 - Comprehensive Operational Analysis, Livermore Amador Valley Transit Authority
 - Comprehensive Operational Analysis, New Orleans Regional Planning Commission
 - Comprehensive Operating Analysis, City of Huntsville
 - Pierce Transit Network Plan, Tacoma



NELSON NYGAARD
James Gamez

RESPONSABILITIES

1. Transit / Transportation Planning
2. Existing Conditions Report Lead
3. Service Recommendations Lead
4. Runcut Lead

- Transit/Transportation Specialist with over 15 years of experience
- Led ten Comprehensive Operational Analysis across the nation, including:
 - Comprehensive Operational Analysis, Corpus Christi Regional Transportation Authority
 - Cedar Park Transit Feasibility Study, City of Cedar Park
 - CityLink Comprehensive Operational Analysis, Greater Peoria Mass Transit District
 - San Marcos Five-Year Transit Plan, Capital Area Rural Transportation System



able.city

Mario A. Pena, AIA,
AICP, NCARB,
CNU-A

RESPONSABILITIES

1. Urban Planning
2. Public Involvement Lead
3. Urban Design Best Practices Lead

- Architect & Urban Planner with over 16 years of experience, most of it focused in Laredo with projects that include:
- Viva Laredo Comprehensive Plan
- Bike Laredo
- Re Code Laredo
- El Metro Palomino Hub
- El Metro Transit Center Redesign LEED Silver
- R.E.AL. Transit Multi-modal Facility Public Safety
- VIA UDC Assessment and Review
- San Antonio UDC Assessment and Review
- Laredo Building and Land Development Code
- Viva Laredo Comprehensive Plan
- UISD Transportation Facility
- Airport Federal Inspection Station



lan Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

Suki Hay, PE
Traffic Engineer

RESPONSABILITIES

1. Capital Recommendations

- Civil Engineer with over 30 years of experience specializing in traffic engineering including transportation planning, traffic modeling and signal designs including:
- Laredo Traffic Signal Synchronization Project
- Denton Downtown Square, Curb Extensions/Signals/ADA upgrades/APS



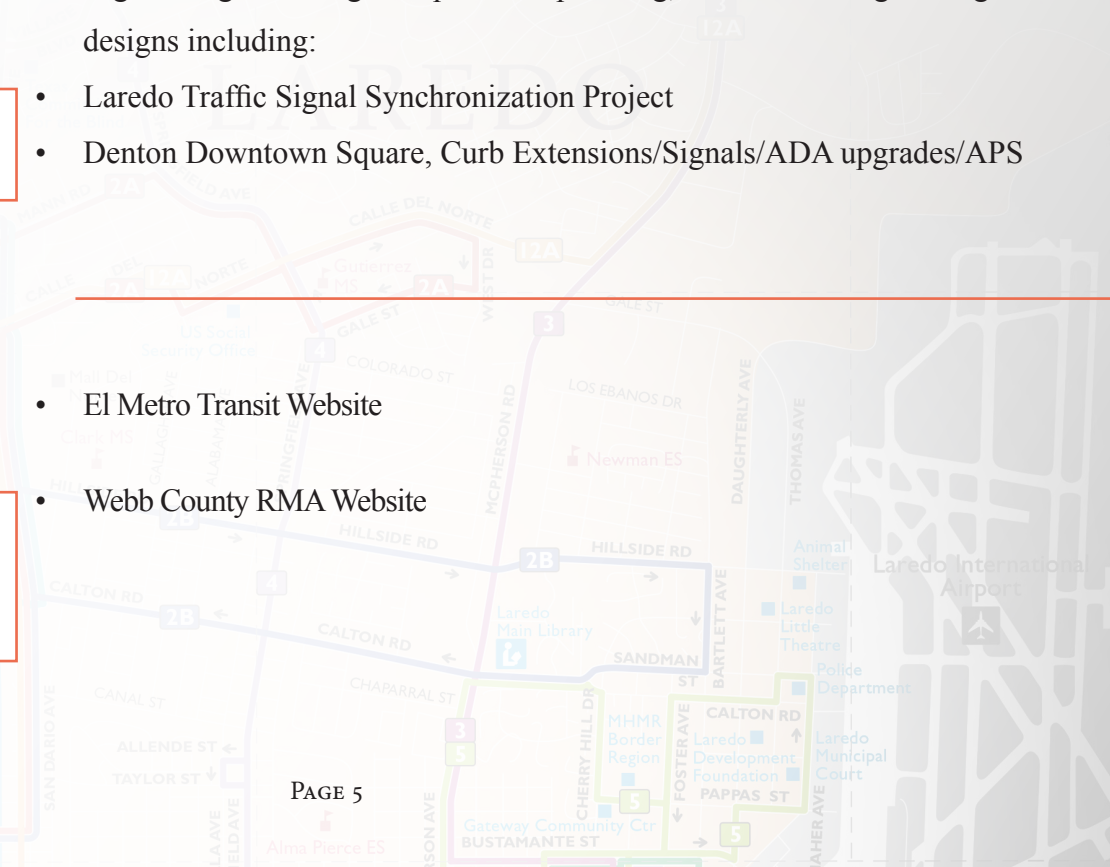
liquid
STUDIO GROUP

Gene Belmares

RESPONSABILITIES

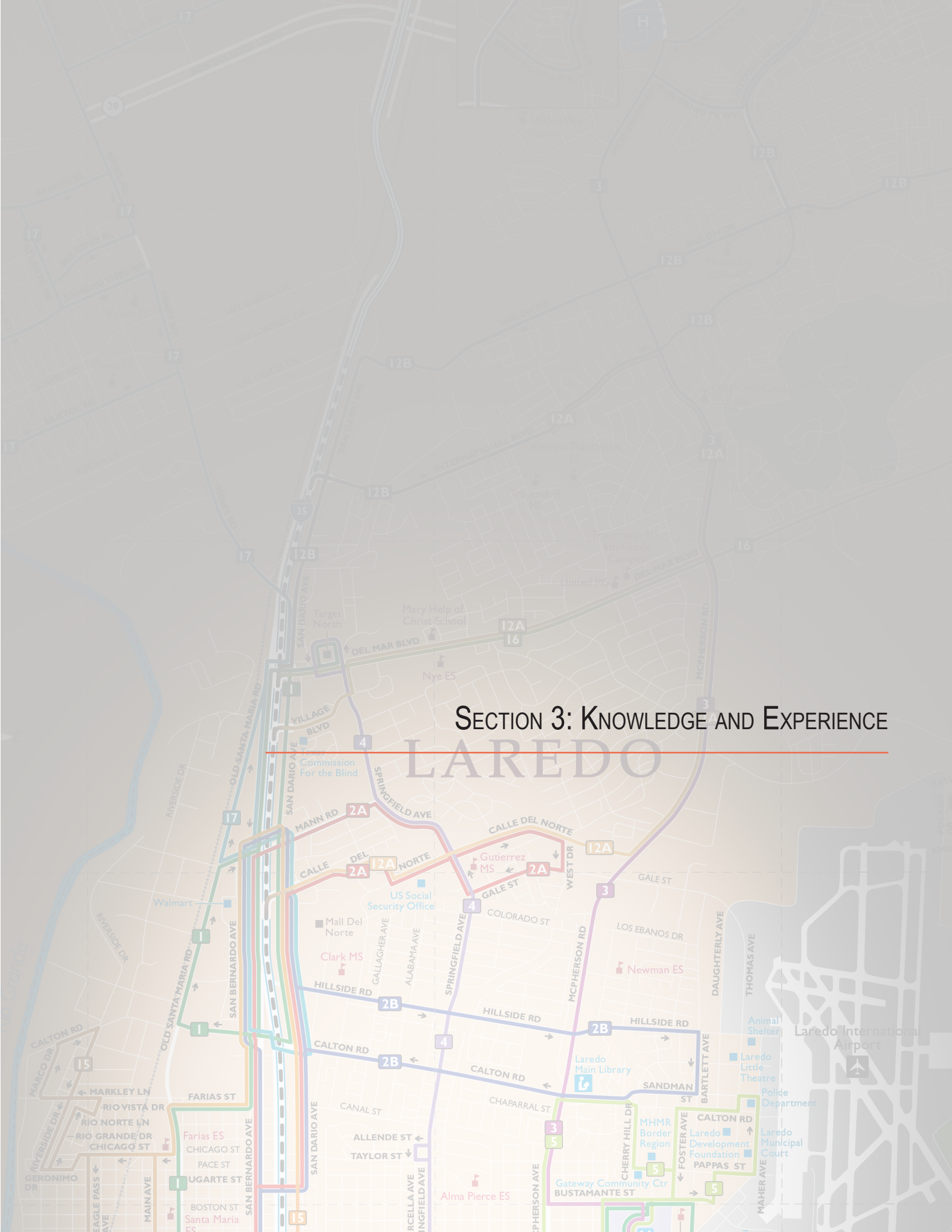
1. Website Development as part of Public Outreach

- El Metro Transit Website
- Webb County RMA Website



SECTION 3: KNOWLEDGE AND EXPERIENCE

LAREDO



Parra & Co is pleased to present our team to the City, MPO, and El Metro for the Comprehensive Operational Analysis (COA). Our team has produced over 40 successful COAs including:

- Comprehensive Operational Analysis, Corpus Christi Regional Transportation Authority (Corpus Christi, TX) 2015–2016
- Torrance Transit Comprehensive Operational Analysis, City of Torrance (Torrance, CA) 2018–2019
- Long Beach Transit Comprehensive Operational Analysis, Long Beach Transit (Long Beach, CA) 2016–2018
- Comprehensive Operational Analysis, Livermore Amador Valley Transit Authority (Livermore, CA) 2015–2017
- Comprehensive Operational Analysis, Foothill Transit (West Covina, CA) 2013–2014
- Reimagine SamTrans, SamTrans (San Mateo, CA) 2019-Ongoing

Moreover, we also have the local pulse and understanding of challenges and plans that Laredo has for the future.

Some of our team's local projects include:

- Viva Laredo Comprehensive Plan
- Bike Laredo
- Re-Code Laredo
- El Metro Google Transit Route Implementation
- El Metro Transit Grant Intergovernmental Coordination Assistance
- Laredo MPO Urban Transportation Study 2040 MTP Update
- Laredo MPO Travel Demand Model Update

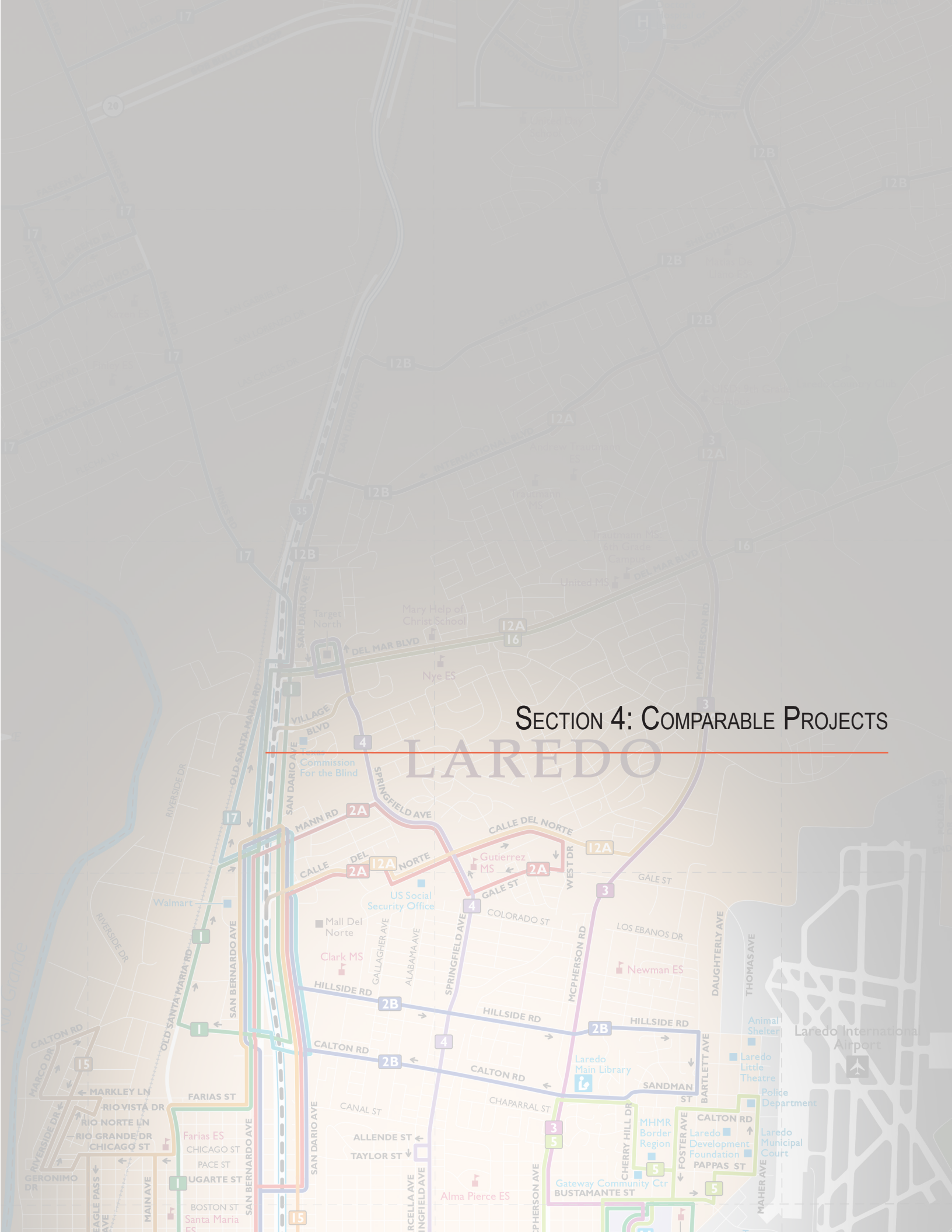
- El Metro New Operation & Maintenance Facility

Further, four out of five of our team members have a local presence in Laredo, with the only exception being our national transit expert Nelson Nygaard. This allows for superior knowledge of the area and issues affecting Laredo and the richness of national best practices. This is important, especially during a pandemic, where a learning curve of not having a good local understanding will be steeper.

For example, one item that will likely be affected in the project is the ridership survey. Given the pandemic, the ridership has change over the last few months bot truly representing what it needs to be. Our team understands that the survey results will highlight areas/destinations/corridors with the highest transit demand in terms of essential employees and residents with limited mobility, but not necessarily a true number for ridership. One idea to be explored is to compare survey results with historical ridership by route, Census socio-economic characteristics and Census employee travel patterns to draw some conclusions. Given that our team assisted El Metro with recently updating all the routes for the Google Transit project, we can also incorporate that data. The goal is to have a study that truly represents the needs of Laredo, incorporates its uniqueness as a border city, and accounts for the situation that the pandemic presents. Our team has the local knowledge and local and national expertise to make this project a success.

SECTION 4: COMPARABLE PROJECTS

LAREDO



PARRA & CO EL METRO TRANSIT LAREDO INTO GOOGLE TRANSIT

Parra & Co provided Project Management and direction between the City of Laredo, El Metro Transit, Google, and Sub-consultant Team.

Together with the team, Parra & Co provided data creation and formatting services to prepare the GTFS files for submittal to Google. Also, provided formatting in accordance with Google’s GTFS specifications:

El Metro Transit provides bus service in the City of Laredo, Texas. The system currently consists of 22 routes. El Metro’s plan was to provide their system data to Google in GTFS format so that it could be accessible through Google Maps and Google navigation apps. For delivering the final product, Parra & Co visited with El

Metro Transit staff to collect current routes and stops, prepared the schedule and stops data into GTFS format, and assisted in the submittal to Google, as well as all communications with Google. The goal of the project was to have the routes schedules for El Metro Transit Laredo into Google Transit.

PROJECT OWNER: El Metro Transit

CONTACT: Claudia San Miguel,
1301 Farragut. Laredo, Texas. 78040 / 956-795-2288

STATUS OF THE PROJECT: Completed • **WAS IT COMPLETED ON TIME?** Yes • **WAS IT COMPLETED ON BUDGET?** Yes • **DATE OF COMPLETION:** 2019



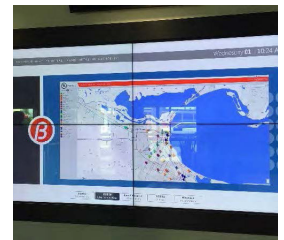
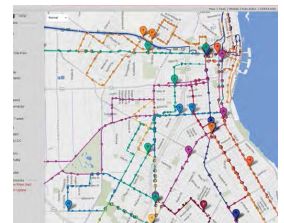
N NELSON NYGAARD CORPUS CHRISTI COA

In July 2015, the Corpus Christi Regional Transportation Authority (CCRTA) initiated a comprehensive analysis of its entire bus system, titled Transit Plan 20/20. The first element of the study was an Existing Conditions Report that evaluated population and employment characteristics, service design and ridership. The densities and distribution of population segments students, and employees was also examined. The report also included a review of peer transit agencies to identify deficiencies and opportunities for improvement. The primary intent of the existing conditions report was to highlight existing

strengths and weaknesses of the CCRTA system and provide a foundation for service recommendations.

PROJECT OWNER: Corpus Christi Regional Transportation Authority

CONTACT:
Gordon Robinson, AICP, PMP
Director of Planning
Direct: (361) 903-3483
Office: (361) 289-2712
grobinson@ccrta.org



STATUS OF THE PROJECT: Completed • **WAS IT COMPLETED ON TIME?** Yes • **WAS IT COMPLETED ON BUDGET?** Yes • **DATE OF COMPLETION:** September 2016



**STARTRAN TRANSIT
DEVELOPMENT PLAN**

Nelson\Nygaard conducted a comprehensive analysis of transit service in Lincoln as part of the StarTran Transit Development Plan (TDP). The purpose of the study was to review all transit services and system performance to develop service alternatives to make the system more efficient, flexible, and customer-oriented, including an assessment of sites in downtown Lincoln for implementation of a new transfer center and possible expansions into new areas or markets. The study also included ridership analysis, an update of service standards and policies, on-line web surveys, stakeholder interviews, public outreach, employee input, field work, assessment of background conditions

and market research, and development of three service scenarios.

PROJECT OWNER: StarTran (City of Lincoln)
710 J Street
Lincoln, NE 68508

CONTACT:
Mike Davis - Transit Manager
402-441-7185
mjdavis@lincoln.ne.gov

STATUS OF THE PROJECT: Completed • **WAS IT COMPLETED ON TIME?** Yes • **WAS IT COMPLETED ON BUDGET?** Yes • **DATE OF COMPLETION:** April 2016



**UNIFIED DEVELOPMENT
CODE ASSESSMENT AND
STATION AREA PLANNING**

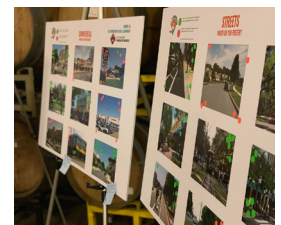
The team conducted a general assessment of the existing Unified Development Code, with a significant emphasis on recommendations and station area planning typologies for transit oriented development. This body of new code amendments will integrate a set of logical development codes into the existing UDC, to enable future TOD implementation, and will be the basis for the set of VIA recommendations to the City of San Antonio, for consideration, as the City moves forward with the adoption of the 2020 Unified Development Code amendments. These amendment recommendations will offer the necessary TOD implementation template for

all future Rapid Transit Corridors that are implemented throughout a future system plan and address the transformation of a vehiclecentric City into a region that embraces public transit as a tool to manage the exponential growth expected by 2040.

PROJECT OWNER: Via Metropolitan Transit

CONTACT: Chritine Vina
123 N Medina St., San Antonio,
TX 78207 / 210-299-5907

STATUS OF THE PROJECT:
Ongoing • **WAS IT COMPLETED ON TIME?** Ongoing • **WAS IT COMPLETED ON BUDGET?** Ongoing • **DATE OF COMPLETION:** Ongoing





**TRAFFIC SIGNAL
SYNCHRONIZATION
PROJECT - LAREDO, TX**

LAN, with Suki Hay, PE as Project Manager conducted the synchronization of seven corridors of 80 traffic signals city-wide to improve travel efficiency for its growing population and trade along key corridors in Laredo. Suki led the effort to prepare AM, PM, mid-day and weekend time of day (TOD) plans to reduce congestion, beginning with Mines Road (FM 1472), which is the most congested transportation corridor connecting the border crossings into Mexico. The City of Laredo operates 254 signals consisting of both Naztec TS1 and TS2 controllers with

the eventual phase out to all TS2 type controllers.

PROJECT OWNER: City of Laredo

CONTACT: Robert Peña

5512 Thomas Avenue. Laredo, TX 78041

956.795.2550, x1284

STATUS OF THE PROJECT: Completed • **WAS IT**

COMPLETED ON

TIME? YES • WAS

IT COMPLETED ON

BUDGET? Yes • DATE

OF COMPLETION:

2019



**WEBB COUNTY – CITY
OF LAREDO REGIONAL
MOBILITY AUTHORITY**

Liquid Studio Group is actively involved in the creation and management of the City of Laredo Regional Mobility Authority’s website for dissemination of information, developing and managing their social media platforms as well as assisting in Public Relations tasks such as crafting press releases, communications pieces, and general broadcasting of news and information.

In addition the firm is currently involved in Stakeholder Meetings and Community Outreach for the Webb-COL RMA. We are actively involved in acquiring meeting space, contacting elected officials, stakeholders, community organizations, and the

general public in conjunction with the RMA’s North Laredo Transportation Study. Future tasks will include collecting data, comments, demographics, and compiling said data for our client, the RMA/HNTB. This work authorization will continue for 6 months as we will continue to take input for Northwest Laredo’s transportation infrastructure project planning.

PROJECT OWNER: Webb County – City of Laredo Regional Mobility Authority

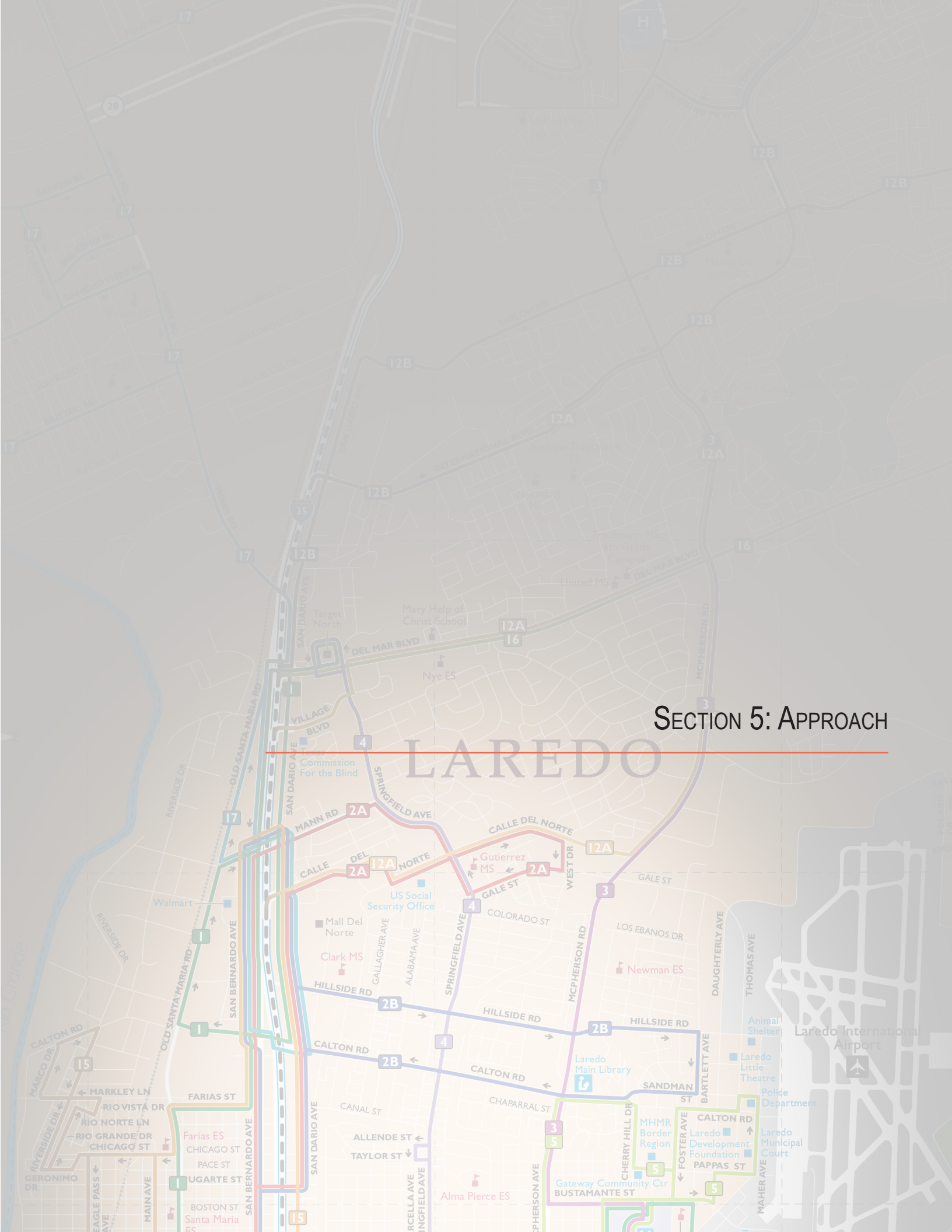
CONTACT: City of Laredo Regional Mobility Authority
216 W Village Blvd Suite 202

Laredo, Texas 78041 / 956-717-1300

STATUS OF THE PROJECT: Ongoing • **WAS IT COMPLETED**

ON TIME? Ongoing • WAS IT COMPLETED ON BUDGET?

Ongoing • DATE OF COMPLETION: Ongoing



SECTION 5: APPROACH

LAREDO

Parra & Co understands that The City of Laredo continues to experience meaningful growth and changes in land use and demographic patterns resulting in some system inefficiencies and unmet transit service demand. On September 19, 2017, the City of Laredo adopted the Viva Laredo Comprehensive Plan, that contains the much-needed reduction on auto dependence and an improved transit service. In order to take a step forward to fulfill this ideal and very possible future, the Parra & Co team offers its expertise and total support to the City to continue materializing this plan.

METHODOLOGY FOR COLLECTION AND EVALUATION OF DATA

As a starting point in our analysis of existing fixed-route services, we will summarize service hours, miles, ridership and costs for the most recent five years. The purpose of this analysis is to assess the efficiency and effectiveness of the system as a whole. Stop level ridership data provided by El Metro will be used to create system and route ridership maps.

Detailed profiles will be developed for each El Metro route based on available data. Route profiles typically consist of the following:

- Description of the route's alignment & service patterns
- Span of service (hours of operation) and headways by time of day
- Average ridership by day, time period, and segment
- Charts depicting passenger loads by time period, segment, and direction
- Ridership maps depicting boarding and alighting activity

- Productivity measures such as passengers per hour and passengers per trip
- Schedule adherence by trip
- Stop spacing and average speed
- An overall assessment of the strengths and weaknesses of the route

Our team will also conduct a detailed field review of every route and stop in the El Metro and evaluate service in terms of route design, system design, and facilities. We will also evaluate the system terms of coverage, connectivity, route spacing, service duplication and passenger facilities

THE UNIQUENESS OF A "PULSE" SYSTEM CURRENTLY OPERATIONAL. DISCUSSION OF POTENTIAL "GRID" SYSTEM

El Metro's current route network has a radial structure, with every route serving the El Metro Transit Center. We will develop a range of alternative route networks that may include new crosstown routes, secondary hubs, and a hybrid radial-grid structure to better serve existing and potential riders, all in line with the Viva Laredo Comprehensive Plan

STRATEGIES FOR IMPLEMENTATION OF THE COA'S RECOMMENDATIONS

After finalizing the service, capital and financial plans, we will develop a detailed prioritization and implementation plan that will identify the actions, agreements, infrastructure, coordination, and materials required to realize the recommended transit network, complementary paratransit service, and any additional short-range recommendations.

The implementation plan will include a range of immediate actions, near-term mobility enhancements, and longer-term expansion scenarios. The implementation plan will also be developed in a graphic format that is easy for the general public to comprehend.

Further, the implementation plan will also include a service design guidebook and performance evaluation methodology to review ridership and operating performance on an ongoing basis. The performance standards are intended to ensure that future service changes improve system efficiency and effectiveness.

SURVEY METHODOLOGY

We can offer a bilingual on-board survey effort as part of this project to ensure that passenger feedback and preferences is strongly considered as part of the planning process and help understand more about riders. The on-board survey will take place in conjunction with the ridecheck and will include the following categories:

- **Origin-Destination Information:** Respondents will be asked to identify the precise origin and destination of their current trip.
- **Fare Payment Type:** This would help provide more detailed information about how passengers pay to ride transit and under which fare category.
- **Trip Purpose:** This information will help to identify existing markets and help understand fluctuations in ridership.
- **Frequency of Use:** Respondents will be asked when and how often they ride the service and how long they have been using transit in general.
- **Transit Dependency:** This information will assess

transit dependency by asking if passengers could have made a trip if transit were not available. Responses in this category often correlate with income but can also indicate high concentrations of students.

- **Passenger Satisfaction:** It is useful to have an accurate assessment of passenger satisfaction of the existing service. Passengers also will have an opportunity to provide open-ended comments or suggestions about routes, hours and frequency of service.
- **Demographic Profile:** The questionnaire can also solicit detailed demographic information including income, age, gender, race, primary language, and any other demographics deemed important to the study.

Our team will work collaboratively with staff to design the on-board survey instrument. Upon collection of all completed surveys, all data collected from the survey will be entered and analyzed. A similar online survey will also be developed for distribution through El Metro's social media pages and website.

PUBLIC INVOLVEMENT

Public outreach is a cornerstone of most of our projects. We are proficient at facilitating meetings, presenting complex materials in a user-friendly way, and putting together easy-to-follow meeting materials. Through our combination of public facilitation, expertise in substantive issues and design, we have the tools and personnel to build a successful dialogue between the community and stakeholders.

Through the entire process, our team works with city staff, key community leaders, mobility, housing, and

economic development advocates, developers, and local businesses to ensure productive feedback loops.

Ultimately the community engagement process goal is to guide the vision developed for the MPO Comprehensive Operational Analysis and to connect plan outcomes and recommendations directly to user needs and values. To that end, the following general arc will be followed:

We will collaborate with the City of Laredo in identifying the stakeholders group that will participate in detailed discussions throughout the project. The group should include a variety of perspectives such as city departments, MPO, economic development and sectors of the community.

We recommend a minimum of three rounds of stakeholder interviews at key stages of the planning process.

The first round, for example, will involve discussion on overall vision, desired outcomes, synergies of benefits across all sectors, and a preliminary discussion on how the program and design should respond to those opportunities identified.

The next rounds of discussions would build upon the team's and staff's design responses. Ultimately, the discussions and the collaboration with city staff at routine intervals, ensures the entire team understands what the project can do for their sector and what their sector can do for this project.

All discussions will be moderated by staff and our project director and will be accompanied by meeting notes and our subsequent recommendations to City

staff for their consideration.

Survey: We will prepare a bilingual community survey to gather input and commentary regarding the desired outcomes. We will design the survey based on best practices found in the Handbook of Survey Research, Second Edition by Peter V. Marsden. The results will be summarized and integrated into reports and discussions with stakeholders and staff to inform them of goals and values from the broader community.

To ensure maximum reach and engagement and we will provide prizes and incentives for filling out survey.

INCORPORATION OF GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Our team will create route scorecards that utilize ridership by stop and trip to organize the data into a useful tool for evaluating individual route performance.

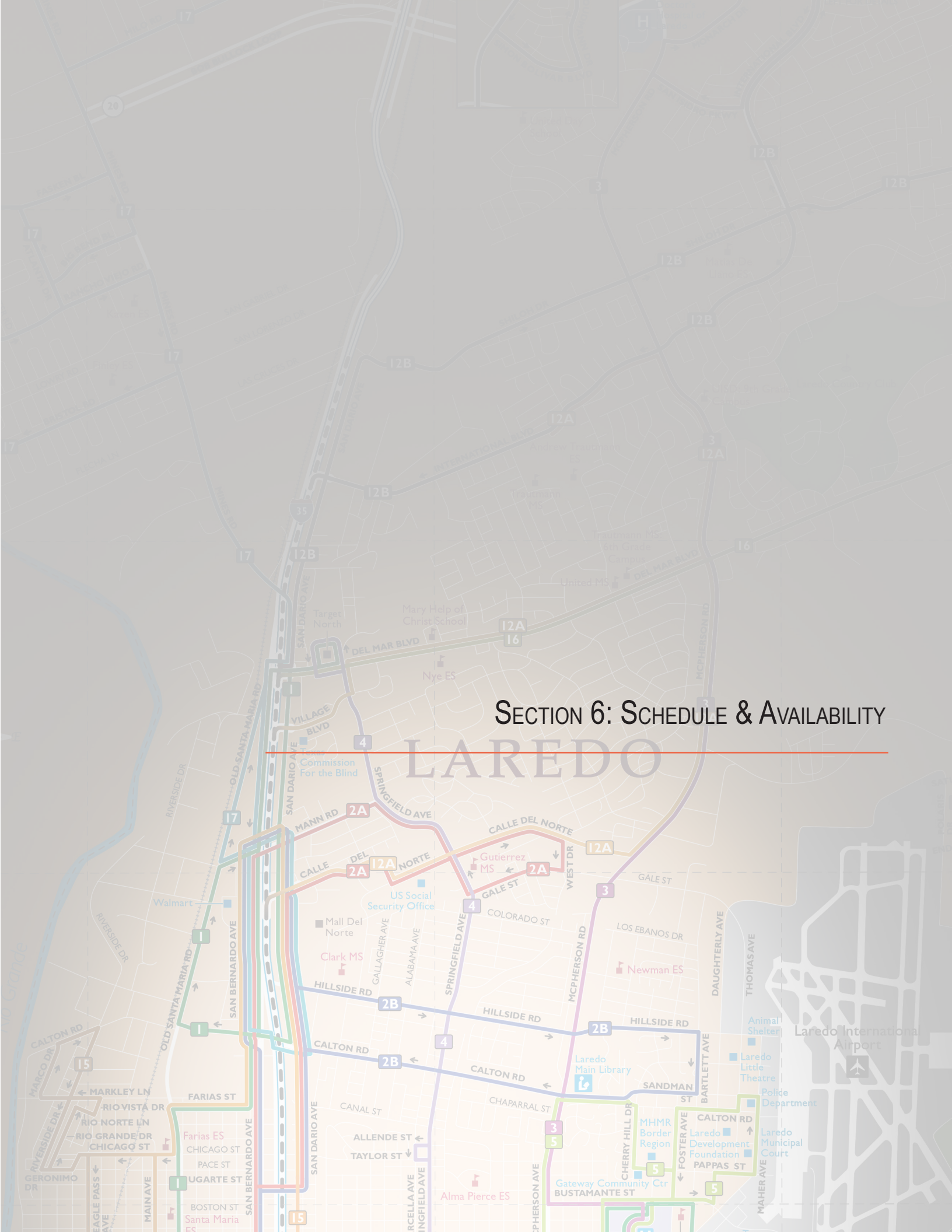
The route scorecard tool produces the following reports:

- Ridership Reports that present total and average ridership by route, day, time period, and direction.
- Load Profile Reports that show boardings, alightings, and loads by stop, by time period, by segment, and by direction.
- Trip Summary Reports that present ridership and on-time performance by trip, average ridership, maximum loads, load factors, and on-time performance by time period, including a breakdown of both weekday and weekend service.
- Running Time Reports that present average running times by route segment and time of day, as well as the standard deviation of the running time.

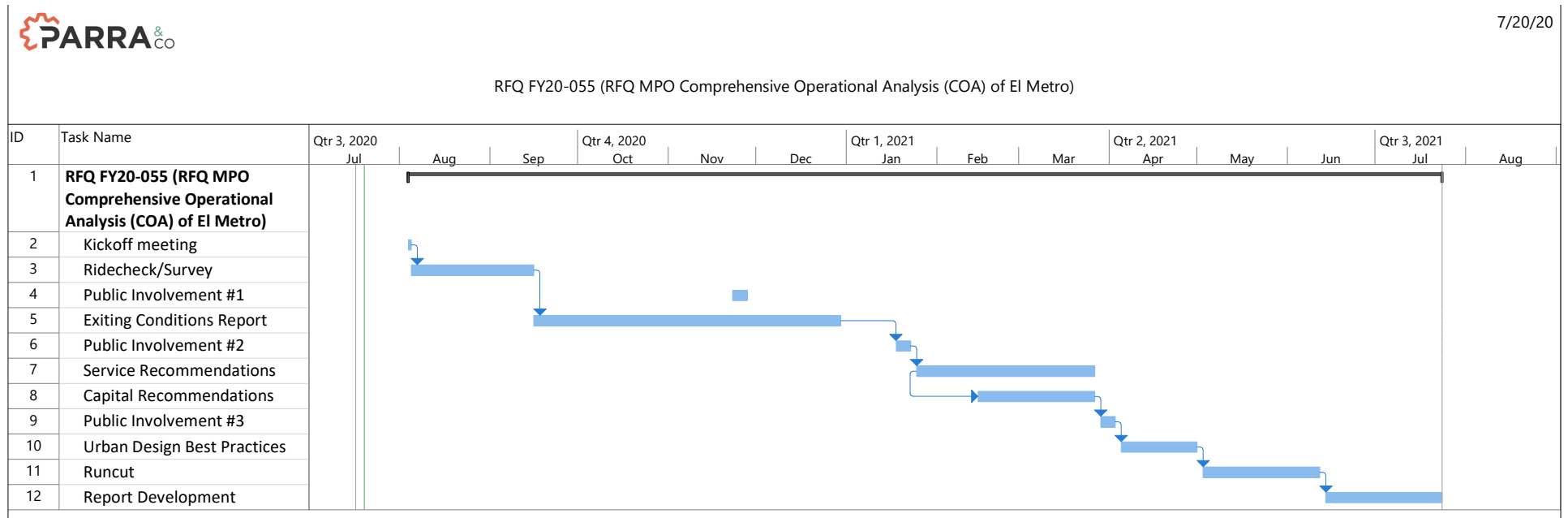
Graphical Representations of the above information will include charts, graphs, and GIS maps.

SECTION 6: SCHEDULE & AVAILABILITY

LAREDO



SCHEDULE



AVAILABILITY

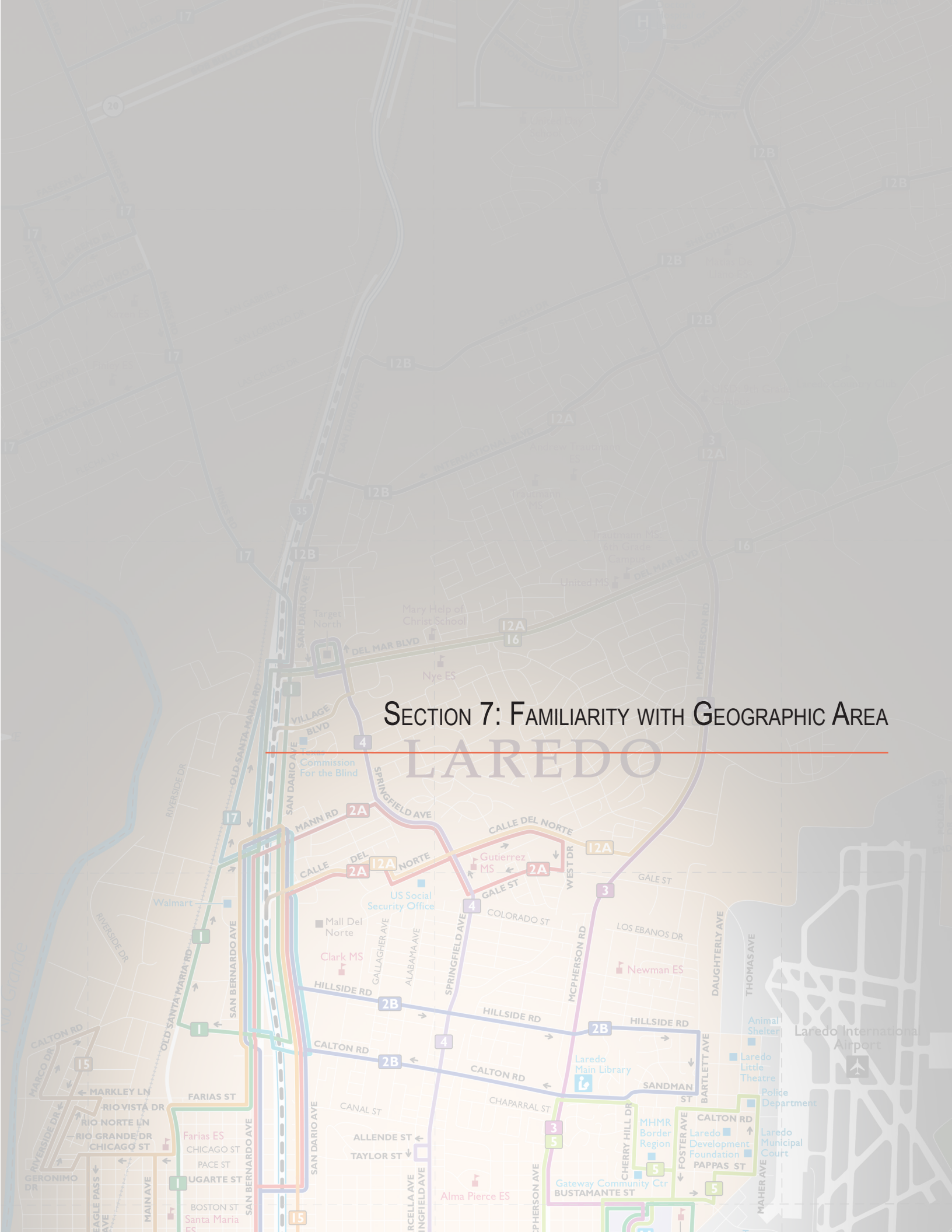
Parra & Co maintains a current and projected workflow “master control panel” using the software BQE Core® as forecasting tools to ensure that adequate staff are available to commit to existing and future projects. The Parra & Co team’s current and committed workload was taken into consideration in the development of this proposal. All key personnel will be available to initiate work assignments immediately upon authorization by the City and will complete their assigned duties consistent with the overall project schedule.

The Parra & Co Team has experienced professionals to complete this project. In addition, Parra & Co has team up with succesfull consultants with extensive knowledge of Laredo and a keen interest in the development and enrichment of the area. Parra & Co, together with Able City, Nelson Nygaard, LAN and Liquid Studio put at your disposition a deep bench of resources to draw upon as needed to accelerate the project schedule, provide additional resources for specific tasks as required, and provide a fast response.

Our team is committed to providing exceptional resources from the start of this project through successful completion.

SECTION 7: FAMILIARITY WITH GEOGRAPHIC AREA

LAREDO



FAMILIARITY WITH THE GEOGRAPHICAL AREA OF THE PROJECT

Viva Laredo Comprehensive Plan

Not only is our team familiar with the city and the site, but by having the authors of Plan Viva Laredo, Able City, we are uniquely familiar with the guiding document that will guide the overall vision of this project. The work and vision of the entire community is embedded in Plan Viva Laredo and it will provide key insight for the team and stakeholders as to the alignment with City's goals for its future, the desired connection to immediate neighborhood context, mobility, and the shared value of the economic gains of a successful of a transit system.



Bike Laredo

After staggering studies revealed Laredo's poverty rate and income level were indirectly taxing Laredo's most impoverished through a lack of transportation options, a group of advocates came together to address the dire need for a transportation system that catered to every type of commuter. With the help of the Laredo Active Living — Mayor's Wellness Council, a citizen-group advocating for physical activity in the community as part of its mission, BIKELaredo was formed.

BIKE Laredo promotes diverse methods of transportation, as well as advocate for an improved and complete transportation system that guarantees safety for all types of commuters, particularly cyclists. Tied with Laredo Active Living's mission of promoting an active lifestyle, BIKELaredo encourages a lifestyle least dependent on car transportation and more reliable on environmentally and health-friendly transit methods, as well as provide new recreational options for Laredoans.

BIKELaredo goal is to educate, advocate and organize. It unites the efforts of many cycling advocates, City of Laredo staff, and the Texas Department of Transportation to create a healthier, more equitable city that works for everyone.

Bike Advocacy Citizen Committee

Bike Safety and Education: Working with the City of Laredo Police Department, BIKELaredo focus on public safety issues regarding cyclists and motorists, as well as work on the development of the Share the Road Campaign and enforce the Joey Muñoz Ordinance, otherwise known as the 3 ft. Rule of Separation between motorists and cyclists.

Bikeway System: Working with the City Of Laredo Traffic Department, El Metro, Planning, Police Department, and Text Dot, BIKELaredo works towards implementing Laredo’s first citywide bikeway plan, connecting safe routes for cyclists with effective public transport at strategic points in the city that promote and encourage bike use. This is part of the City of Laredo’s mission to Complete the Streets.

BIKE to School Program: BIKELaredo together with the City of Laredo and Laredo Independent School District focuses on instituting a Bike to School program starting with a pilot project that can eventually expand district-wide. The goal is to evaluate the routes with high priority and align them with adequate cycling safety infrastructure for students to use.



Land Use and Land Development Code (ReCode Laredo)

The work of Able City (one of the team members) on Viva Laredo and ReCode Laredo has given us a uniquely comprehensive perspective on the land use and development conditions that are tied to transit use and efficiency. As we recognize the codependency of transit and land

use, we must align planning efforts to reinforce the desired goals as they are one and the same.

We not only are familiar with the current and planned land development code from our first hand experience working on improving them, our stakeholder efforts on that project have given us key insights to barriers and opportunities that are pertinent to transit that must be brought to bear when planning for transit.

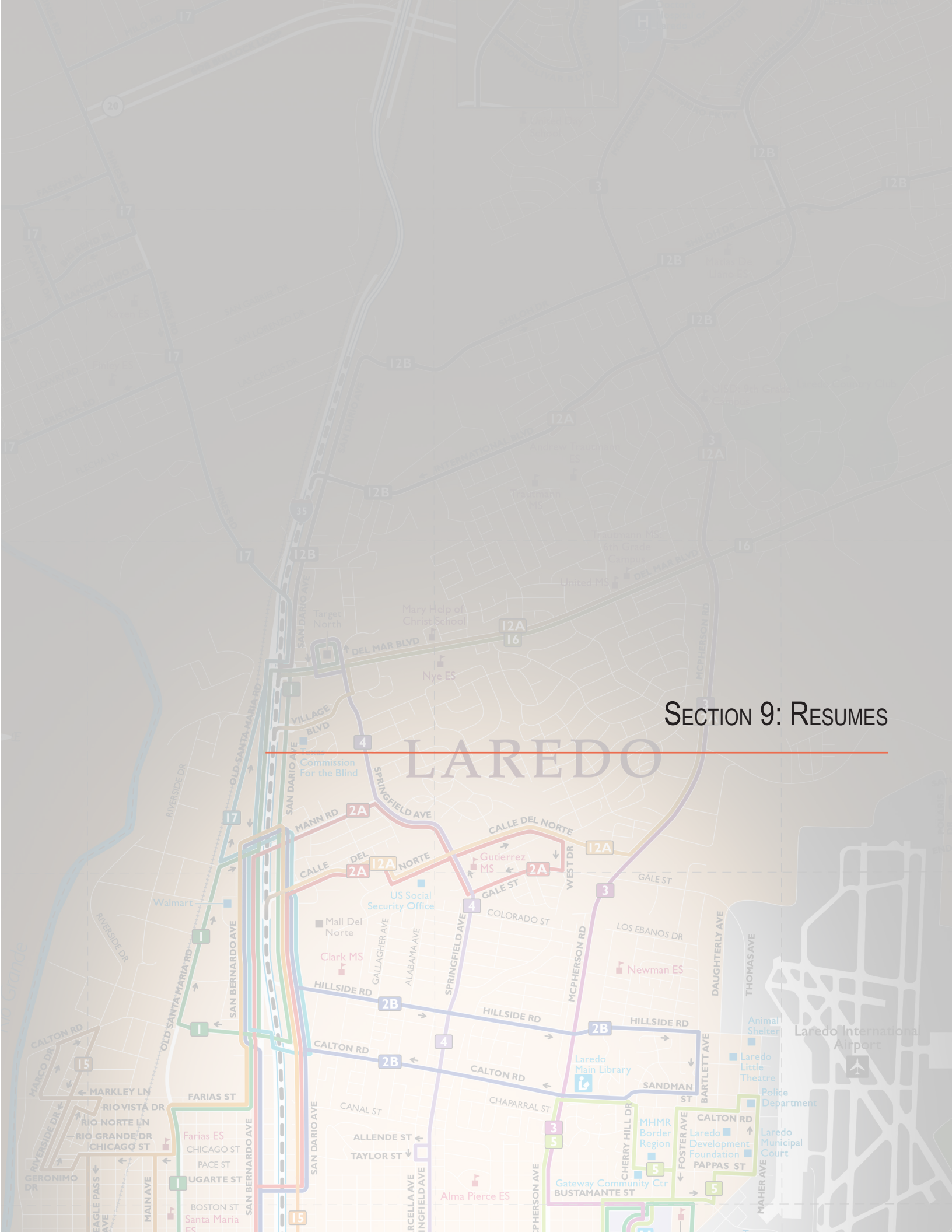
We will prepare land use plan concepts and ensure that the corridor may experience the desired development found in the vision and strategy. Special attention will be placed on the undesired or incompatible land uses and zoning resulting from streetscape design and make it consistent with the community and stakeholder vision.

Land Development Codes produces effective, user-friendly regulations. Their approach is based upon the following key principles:

Community Values: Land Development Codes should reflect the values of the community as expressed during an extensive public participation process. Our process involves input and feedback from the community before key regulations are drafted. **Appropriateness:** The Land Development Codes will be tailored to the unique needs of the community’s demographics, environmental resources, and development potential. **Consistency:** Land Development Codes should be consistent with and implement the comprehensive plan. **Flexibility:** The Land Development Codes will accommodate different types of development concepts and standards while maintaining flexibility in administration.

SECTION 9: RESUMES

LAREDO





Eduardo J. Parra, P.E., LEED BD+C
Texas Registered Professional Engineer No. 101217



Mr. Parra is a civil engineer with over 20 years of experience managing and designing projects for municipal governments and private clients, both in the US and abroad. Throughout his career, he has served as engineer-of-record and engineer-in-responsible charge for the design and construction of multiple transit and roadway projects, utility projects, disaster recovery and preparedness efforts, stormwater / drainage, civil and coastal engineering, as well as energy efficiency & sustainability projects. Mr. Parra has been actively involved with regional and national professional societies and associations including serving on the board of Trustees of the San Antonio Water System, and formerly in the U.S. Green Building Council in Central Texas. Mr. Parra holds a B.S. in Civil Engineering from Universidad Rafael Urdaneta in 1997 (Venezuela) and a M.S. in Civil Engineering from Penn State University in 2001.

Project Manager – Multimodal Transit System Master planning for Rural Economic Assistance League (R.E.A.L) – Alice, TX: Mr. Parra provided programmatic management for the concept and federal grant funding application of this multimodal facility. R.E.A.L provides bus service in an area covering the counties of Aransas, Jim Wells, Brooks, Live Oak, Duval, Refugio, San Patricio, and Bee in South Texas. REAL has a ridership of over 200,000 passengers a year with a fleet of 66 vehicles. Their current facilities are dated and out of capacity to serve the current growth. REAL received a grant from TxDOT for a feasibility phase on a new Multimodal Facility in Alice, TX. Currently, his team is doing all the Civil Engineering work for the new facility.

Project Manager - El Metro Transit Grant Assistance, Laredo, TX: Mr. Parra assisted the City with the preparation of a TIGER grant and 5309 grant request and application for the new Operations & Maintenance Facility of El Metro Transit. Subsequent adaptation and submittal of the 5309-grant application that awarded close to \$10 million for the facility.

Project Manager - El Metro Transit Grant Intergovernmental Coordination Assistance, Laredo, TX: Mr. Parra served as the liaison between the City, El Metro Transit, FTA National, and FTA Region VI towards approval of funds, protection of local investment, and maximization of federal funding available for the development of the New Operations and Maintenance facility for El Metro Transit.

Principal in Charge - Laredo MPO Urban Transportation Study 2040 MTP Update, Laredo, TX (2013 - 2015)*: Mr. Parra coordinated a team in charge of updating the 2040 metropolitan transportation plan for the Laredo Urban Transportation Study (LUTS). The MTP provides a vision for meeting the existing and anticipated travel demands on the multimodal transportation system serving the Laredo area through the year 2040. The 2040 MTP is being developed with compliance to MAP-21 requirements and to support a balanced, multimodal, and sustainable transportation system that improves the multimodal system and enhances livability in this rapidly growing area.

Principal in Charge - Laredo MPO Travel Demand Model Update, Laredo, TX (2013-2014)*: Mr. Parra coordinated a team in charge of updating the network and demographic data for the new base year (2008) and future year 2040 for submittal to the Texas Department of Transportation (TxDOT). Responsibilities included refining network; data collection to determine network attributes; developing demographic data for all years, and preparing geographic files and reports required to make the submittal to TxDOT.

Project Director – El Metro New Operation & Maintenance Facility. Laredo, Texas* – Mr. Parra served as the Project Director for the design of the new facility for El Metro to be located near the airport. This project encompassed the programming, planning and design of a new \$35 million Bus Transit, Administration, Operations and Maintenance Facilities, on a 25-acre site. The new site and facilities were designed to support and house 150 buses, fueled with Compressed Natural Gas (CNG). The site is located on previously disturbed, yet undeveloped land. The Programming effort defined required space, critical adjacencies, flows and equipment.

Project Manager, Main / Navarro / San Pedro Roundabout Design, City of San Antonio, Texas*. Mr. Parra served as Project Manager and Project Director during the schematic design phase of this 2012 Bond Project. A tremendous coordination effort was necessary since multiple adjacent roads were being redesign parallel to the roundabout and had earlier start dates. Mr. Parra coordinated a virtual and local design team and a successful PM transition.

*Projects perform under a previous firm.

Thomas Wittmann

Principal



Thomas Wittmann has more than 22 years of experience in transportation planning, specializing in transit operations and capital planning. He has worked with large urban systems throughout the country. His transit operations experience includes high-capacity transit feasibility studies, comprehensive operational analyses, transit master plans, transportation development plans, optimization studies, and management performance reviews. Thomas's transit capital facilities experience includes park-and-ride feasibility studies, park-and-ride operations plans, transit center planning, and ridership forecasts.



EDUCATION

MS, Civil Engineering, Transportation, North Carolina State University, 1994
BA, Physics, University of Chicago, 1991

EXPERIENCE

Nelson\Nygaard Consulting Associates, Inc.
Principal, 2011–Present

- **Long Beach Transit Comprehensive Operational Analysis, Long Beach Transit (Long Beach, CA) 2016–2018.** Thomas served as project manager for a line-by-line analysis designed to shape the future of LBT's services. This study evaluated and optimized the network to better meet the needs of Long Beach and its surrounding communities today. Branded as the Systemwide Transit Analysis and Reassessment (STAR) Initiative, this process culminated in a roadmap for improvements to transit service over the next ten years. In addition, supporting elements to the service plan were developed in the form of a series of white papers on topics such as fare policy, speed and reliability improvements, public information practices, and emerging mobility services.
- **Pierce Transit Network Plan, (Tacoma, WA) 2015–2016.** Thomas assisted Pierce Transit reinvesting service hours that had been restored since the great recession. He offered two different service scenarios – one that simply added back service to the route network – and a transformative restructure that allowed more community goals of frequency and later evening service to be met. The public and agency supported the transformative restructure. Changes have been implemented in 2017 and ridership declines have been reversed.
- **Comprehensive Operational Analysis, Livermore Amador Valley Transit Authority (Livermore, CA) 2015–2017.** Thomas led a complete overhaul of a very suburban system that was suffering from low ridership and financial penalties due to a BRT alignment not meeting ridership targets. The BRT alignment was altered to better serve community needs and an emerging mobility partnership with Uber/Lyft/Taxi's was developed to better connect low-density suburban areas with BART and other destinations. Since implementation in 2016, ridership has increased with no net increase in service hours.
- **Network Planning Project, Utah Transit Authority (Salt Lake City, UT) 2011–2014.** Thomas led the bus service planning component of the planning effort to identify the next high-capacity transit corridors in the Salt Lake City urbanized area. Ten new "Bus Plus" corridors were identified. As part of this contract, Thomas has also helped UTA identify their core service network, and assist in service reduction strategies.
- **Big Blue Bus Expo Line Integration Plan, Big Blue Bus (Santa Monica, CA) 2013–2014.** Thomas led the effort to realign Big Blue Bus service to feed into and complement the new Expo Line that is being extended from Culver City to downtown Santa Monica. The plan included market research, public outreach, and multiple iterations of changes to respond to public comment. The resultant plan improves frequency on the highest ridership routes and creates a grid of north/south service to feed the Expo Line.



Thomas Wittmann
Principal

- **Five-Year Service Plan, Utah Transit Authority (Salt Lake City, UT) 2013.** Thomas helped Utah Transit Authority develop its first multi-modal five year plan that integrated bus planning with the expanded rail network. Additional frequent service corridors, revised commuter service, and simplified route networks were recommended, as well as expansion priorities such as more frequency and added span of service.
- **Transit Development Plan, StarTran (Lincoln, NE) 2015–2016.** Thomas led this TDP, which providing a short- and long-term roadmap for service in Lincoln. Cost-constrained recommendations include simplifying routes, adding frequency, and extending span of service. Ridership has increased in the first 8 months since recommendations were implemented
- **Metro Transit Service Analysis, Central Oklahoma Transportation & Parking Authority (Oklahoma City, OK) 2013–2014.** Thomas was the project manager of this analysis, which was designed to modernize OKC's service network. The study results were implemented in 2014 and included simplified routes, new crosstown service, non-downtown focal points of service, and frequent service corridors. Ridership increased by 8 percent in the first 6 months after implementation.
- **Comprehensive Operational Analysis, New Orleans Regional Planning Commission (New Orleans, LA) 2011–2013.** Thomas was the project manager for this study. Some goals of the study were to address chronic capacity issues on RTA routes as well as integrate the new Loyola streetcar into the overall network. The study resulted in multiple regional recommendations outlining opportunities for RTA and JeT to better coordinate their services. Routes in New Orleans East were restructured to better serve redeveloped commercial areas.
- **Cache Valley Short-Range Transit Plan, Cache Valley Transit District (Logan, UT) 2011–2012.** Thomas led an effort to conduct a transit plan of CVTD. Better integrating Utah State University to the regional transit network was one of the primary goals of the study.
- **Transit System Plan, SunTran (St. George, UT) 2015–2016.** Thomas was the project manager for the effort to improve existing operations and help SunTran plan for future expansion. Reducing transfers, improving directness of service, and identifying unserved markets were all part of the resultant service plan.
- **Comprehensive Operating Analysis, City of Huntsville (AL) 2011–2012.** Thomas led an effort to improve the efficiency and effectiveness of Shuttle service in Huntsville. Addressing chronic on-time performance is a key element of the project. Ridership was up by more than 15%.
- **Salinas Area Service Analysis, Monterey-Salinas Transit (Salinas, CA) 2012.** Thomas was the project manager for the effort to improve MST's service in Salinas. Specific recommendations included improvements to reliability, efficiency, and less duplication of service. Recommendations were implemented in 2012.
- **Efficiency Analysis, Monterey-Salinas Transit (Monterey, CA) 2013.** In response to California's pension reform, MST's operator union has delayed the receipt of federal operating dollars. In response, Thomas helped MST develop a limited service plan that would allow MST to operate without federal subsidies. This project was completed in less than two months.
- **Short-Range Transit Plan, Santa Cruz Metro (Santa Cruz, CA) 2014.** Thomas was the project manager for the SRTP. He led service planning efforts to improve connections along Santa Cruz METRO's major transit corridor. After performing ridechecks on key routes and conducting stakeholder and public meetings, Thomas and his team gave recommendations to improve efficiency and on-time performance throughout the system.

James Gamez

Principal



James is a project manager with 15 years of transit experience as a consultant and agency transit planner. James specializes in service evaluation, market analysis, network design/redesign, and community engagement. Since joining Nelson\Nygaard in 2013, James has led transit projects for agencies, cities, and major employers across the United States. James' list of completed projects include comprehensive system analyses, feasibility studies, corridor plans, and capital improvement programs. James takes pride in developing plans that improve mobility and increase access to opportunity. Prior to joining Nelson\Nygaard, James was the principal planner at Capital Metro in Austin, TX.



EDUCATION

B.A., Geography, University of Texas, 2003

EXPERIENCE

Nelson\Nygaard Consulting Associates, Inc.

Principal, 2018–Present; Senior Associate, 2013–2018

- **San Marcos Transit Plan, City of San Marcos (San Marcos, TX) 2019–Ongoing.** Project Manager for the five-year plan to coordinate San Marcos Transit and Texas State University's Bobcat Shuttle. The plan combed detailed transit service analysis to identify efficiencies with a strategic fleet plan, fare policy, and paratransit policy, as well as a vision for a Downtown Transit Plaza that includes connections to all modes.
- **CityLink Comprehensive Operational Analysis, Greater Peoria Mass Transit District (Peoria, IL) 2019–Ongoing.** Project manager for a comprehensive assessment of transit service in the greater Peoria region. Currently assisting the agency prepare for implementation of service recommendations.
- **Kalamazoo Area Bus Stop Study, Central County Transportation Authority (Kalamazoo, MI) 2018–2019.** James led a study to develop a new bus stop policy for the Kalamazoo area to improve rider experience, ADA compliance, operational safety, and on-time performance. The project included analysis of bus stop usage, spacing, placement, amenities, and pedestrian access. The study assessed the existing conditions of the Metro system including how well transit demand was being met, stop-level ridership, stop spacing, bus stop amenities, and sidewalk connectivity.
- **Cedar Park Transit Feasibility Study, City of Cedar Park (Cedar Park, TX) 2018–2019.** Project manager for a study to assist the Cedar Park community assess the feasibility of implementing new transit service in Cedar Park. Developed a multi-phased service plan and cost estimates for new service.
- **Torrance Transit Comprehensive Operational Analysis, City of Torrance (Torrance, CA) 2018–2019.** Project manager for a comprehensive assessment of transit service that included an analysis of existing and future conditions, a robust community engagement plan, development of service improvements, and a capital improvement plan. The final report included a 10-year plan to update, optimize, and expand Torrance's Transit service. Initial service changes coincide with the opening of the Torrance Transit Park-and-Ride Regional Terminal.
- **Huntsville Transit Study, City of Huntsville (Huntsville, AL) 2018.** James served as project manager for this study to advance Huntsville's transit system over the next five years. Project goals included identifying opportunities for route and schedule optimization. The study also explored opportunities to reduce cost of paratransit and update fare pricing and media.
- **Wichita Transit Feasibility Study, Wichita Area Metropolitan Planning Organization (Wichita, KS) 2018.** James served as project manager for a feasibility study to determine demand for fixed-route and demand-response service to the cities of Derby, Andover, Haysville, and Maize.
- **Pueblo Transit Study, Pueblo Transit (Pueblo, CO) 2016–2017.** Project manager for Pueblo's first comprehensive transit study. Analyzed service design, ridership, market conditions, and fare policy. Facilitated community outreach to identify transit needs. Provided service, capital, marketing, and fare recommendations.



James Gamez
Principal

- **Transit Master Plan, City of Round Rock, (Round Rock, TX) 2015.** Project Manager for transit development plan. Evaluated existing market conditions and travel patterns. Facilitated stakeholder discussions and public workshops to assess transit demand and increase community awareness. Developed 10-year service implementation plan.
- **Short Range Transit Plan, City of Turlock (Turlock, CA) 2015–2016.** Project manager for comprehensive service evaluation. Developed recommendations for local service improvements, university student pass program, and regional commuter bus service. Assisted staff with service change implementation, rebranding, and marketing.
- **Comprehensive Operational Analysis, Corpus Christi Regional Transportation Authority (Corpus Christi, TX) 2015–2016.** Deputy project manager for evaluation of entire transit system. Facilitate outreach with riders and local stakeholders. Recommend short-range route and schedule improvements, as well as mid-range service expansion priorities. Develop a detailed implementation plan.
- **Transit Development Plan, StarTran (Lincoln, NE) 2015–2016.** Deputy project manager for comprehensive system evaluation. Facilitate extensive community outreach. Develop recommendations for service improvements, bus stop guidelines, service standards, and future downtown transit center.
- **Short-Range Transit Plan, RoadRUNNER Transit (Las Cruces, NM) 2014.** Project manager for comprehensive evaluation of ridership, transfer patterns, and operational issues. Developed a cost-neutral plan to improve route connectivity and access to major destinations, while expanding service coverage. Recommended future transit investments and create performance metrics.
- **Comprehensive Operational Analysis and Ten-Year Plan, Antelope Valley Transit Authority, (Lancaster, CA) 2014.** Project manager for multifaceted planning effort. Evaluated existing service performance. Engaged riders and stakeholders. Developed a 10-year service expansion plan, capital improvement recommendations, and performance standards.
- **San Marcos Five-Year Transit Plan, Capital Area Rural Transportation System (San Marcos, TX) 2014.** Project manager for comprehensive short-range planning effort. Evaluated the effectiveness of the existing transit system and developed a five-year plan to optimize and expand services. Facilitated community and stakeholder outreach. Developed operating, capital, and financial plans.
- **Five-Year Plan, Utah Transit Authority (Salt Lake City, UT) 2013.** Deputy project manager for a five-year service plan to increase ridership and improve system integration. Analyzed ridership performance, system design, and staff feedback to identify deficiencies, and opportunities. Recommended route and schedule adjustments to improve mobility and productivity.
- **Short-Range Transit Plan, Ventura County (Ventura, CA) 2014.** Project manager for development of a countywide planning effort. Developed countywide performance metrics and service guidelines to improve the coordination, consistency, and connectivity of transit services amongst nine providers. Developed a five-year service plan for intercity bus service.
- **Calexico Transit Study, Southern California Association of Governments (Calexico, CA) 2015.** Project manager for a multimodal transit study examining public and private bus and taxi services operating within the City the Calexico. Reviewed current operating characteristics, customer amenities, and city regulations.

PREVIOUS EXPERIENCE

Capital Metropolitan Transportation Authority, Austin, TX

- Principal Planner, 2011–2013; Senior Planner, 2009–2010; Transportation Planner, 2005–2008

City of Marble Falls, Marble Falls, TX

- GIS Analyst/Planner, 2004–2005

Corpus Christi Metropolitan Planning Organization, Corpus Christi, TX

- Transportation Planner, 2003

MARIO A. PENA, AIA, AICP, CNU-A
ABLE CITY PARTNER/PRINCIPAL



EDUCATION

University of Colorado at Boulder

Bachelor of Environmental Design in Architecture

Harvard University

Early College Credits

Instituto Tecnológico de Estudios Superiores, Mty MX

Architecture Study Abroad

LICENSES & CERTIFICATIONS

Registered Architect with the State of Texas

License No. 20580

Registered Architect with the State of Florida

License No. AR98707

Numbers of years licensed +9yrs

AICP American Institute of Certified Planners

The Congress of New Urbanism

CNU: Accredited Member

International Council of Shopping Centers, Certified Construction, Design, & Development Professional

PROFESSIONAL EXPERIENCE

Able City

Principal/Owner 2017- present

Hickey Peña Architects

Principal/Owner 2008- 2017

Turner, Hickey & Associates

Associate Partner 2001-2008

BIOGRAPHY

Mario A. Peña is a certified planner AICP and registered Architect in the state of Texas and Florida with over 16 years of experience, 8 of which have been as principal of a design firm. Mario has focused on creating and leading teams of professionals with a passion for design, sensibility for creative problem solving, and unwavering customer service. He has continued to enhance his professional skills broadening his expertise in the areas of retail development and urban planning. With a keen interest in urbanism and smart-growth, Mario understands the need to create urbanism that has an appropriate density that is connected and that contributes to the quality of our places. He is particularly passionate about place-making, and promoting codes and policies that enable places designed for people to thrive and that will stand the test of time.

Mario has been a contributor to the Laredo Morning Times and Laredos News commenting on urban planning and walkability. You can also find him on the Rivard Report as it covered Mario's presentation on SA Tomorrow's impact on neighborhood master plans and equity planning. Texas Architect Magazine (Nov/Dec 2018) featured Mario's work on community outreach as the basis of visioning transformative comprehensive plans.

SELECTED PROJECTS

- El Metro Palomino Hub
- El Metro Transit Center Redesign LEED Silver
- R.E.AL. Transit Multi-modal Facility Public Safety
- VIA UDC Assessment and Review
- Headquarters With Fuel Station
- Laredo Transit Operating Facility
- San Antonio UDC Assessment and Review
- Laredo Building and Land Development Code
- Viva Laredo Comprehensive Plan
- UISD Transportation Facility
- Airport Federal Inspection Station
- Former Airport Terminal Remodel at the Laredo International Airport
- Texas A&M International University Master Plan
- Encinal North Development Master Plan
- Paseo Casa Blanca Master Plan
- District III and IV Neighborhood Action Plan
- District VII Priority Funds Charrette

Resume



31 Years of
Experience

Suki Hay, PE

Traffic Engineer

Experience

Traffic Signal Synchronization Project – Laredo, TX:

Traffic Project Manager. Suki conducted the synchronization of seven key corridors consisting of 80 traffic signals city-wide to improve travel efficiency along key corridors in Laredo. Suki led the effort to prepare AM, PM, mid-day and weekend time-of-day (TOD) plans to reduce congestion, beginning with Mines Road (FM 1472), the City's most congested transportation trade corridor. Laredo operates 254 signals with the eventual phase out to all TS2 type controllers. The latest industry tools were used on this project:

- The latest Trafficware ATMS platform which was used to deploy the new signal timing.
- Synchro 10 software was used to optimized cycle lengths and maximize green band for the coordinated phases while minimizing side street delay.
- Vehicular and pedestrian clearances were updated to current NCHRP recommendations and TMUTCD guidelines.
- Flashing yellow left turns were implemented to provide lead/lag operations to fully maximized the corridor green band.
- Suki utilized the new TranSync-M tool which runs virtual signal controllers on mobile devices during implementation of new timing plans.

SH 71 Managed Lanes – TxDOT, Austin, TX

Traffic QA/QC Lead for the lead engineering services on the SH 71 Managed Lanes D-B Project for TxDOT from Presidential Blvd. to just east of SH 130. This work included the construction of managed lanes, general purpose lanes, at-grade ramps, grade-separated crossing at FM 973 and SH 130, new signal installations, and intersection improvements. The project also included the realignment of FM 973 from south of the Colorado River to south of the current SH 71 and FM 973 intersection. Due to the size and complexity of the project, many phases of TCPs were necessary to meet the Contractor's construction schedule demands. This required LAN to continually re-evaluate trip routing choices, redistribute vehicle volumes, and address pedestrian accessibility issues as a result of the shifting work zone.

UPRR Safety Zone – UPRR, Ennis, TX

Traffic Project Manager for the Conceptual Traffic Assessment developed for the Union Pacific Safety Zone Project. Traffic data was collected for analysis of the crossings, and determine the impacts of the improvements to the flow of traffic through the Downtown area—potential closures of at-grade railroad (RR) crossings at the intersections of Tyler, Brown, and Milam Streets, improvements to existing grade-separated intersections at Belknap and Baylor Streets, lowering of Ennis Avenue to create a new grade-separated crossing, and determining the typical cross section for Ennis Avenue in general accordance to the Downtown Master Plan.

Goforth Road Extension – Kyle, TX

Construction Support/Traffic Lead. Addressed construction related modifications to signal and illumination plans and resolved City's Request for Information (RFIs)

Education

Bachelor of Science | Civil Engineering |
University of Rhode Island | 1987

Registrations/Certifications

Professional Engineer: Texas, No. 98748
TxDOT ESN #15044
TxDOT Precertifications: 7.1.1, 7.3.1,
7.4.1, 8.1.1, 8.2.1, 8.3.1

Background

Ms. Hay has more than 31 years of experience specializing in traffic engineering including transportation planning, traffic modeling and signal designs from working for state highway departments, and municipalities. Her experience includes design and analysis, preparation of construction plans, specifications, and cost estimates for a variety of signal projects including diamond interchanges and continuous flow intersections. Suki's experience includes preparing studies and reports for private and municipal clients; transportation plans, interchange justifications, railroad separation, traffic impact analyses, intersection improvements, corridor optimization, and signal warrants.



Suki Hay, PE

Traffic Engineer

Experience (Continued)

paperwork. Provided field signal timing for the new signal turn-on at Goforth Road and Kyle Parkway intersection. Revised roadway illumination plans to tap alternate signal power source at the Goforth Road and Kyle Parkway intersection.

Beamer Road/FM 2351 – Harris County, TX

Traffic Project Manager for performing traffic and transportation engineering services for the Harris County Roadway Improvement Project. Engineering role was to study, analyze, and provide lane configuration recommendations for the Beamer Rd./FM 2351 intersection. Intersection improvements included adding turn lanes, new ADA ramps, permanent signal with accessible pedestrian signals (APS), and fiber optic interconnect. A temporary signal was designed to accommodate the staging of the TCP lane switching.

TxDOT IH 20 Frontage Roads – Dallas, TX

Traffic Project Manager for the new and modified signal designs at the Main Street and Camp Wisdom Road Frontage Road intersections at IH 20 to TxDOT standards. Intersection improvements included adding turn lanes, new ADA ramps, signal upgrades to utilize radar detection, flashing yellow left turns, and accessible pedestrian signals (APS). LAN recommendations were made to facilitate driveway(s) reviews between TxDOT and the City to close/move driveways to avoid potential adverse traffic operations at the new signal at Camp Wisdom Road.

Carroll Avenue and Federal Way, Signal and Right Turn Lane Improvements – City of Southlake, TX

PM/Traffic Lead. Project included the installation of a new signal and right turn lane at the intersection of Carroll Avenue and Federal Way at the entrance to Southlake Town Square. The intersection improvements included ornamental signal poles and illumination, accessible pedestrian signals, ADA compliant ramp and sidewalk upgrades, field signal timing for the new signal turn-on, and connectivity to the Southlake Pathways Master Plan to Southlake Town Square.

M 156 between SH 114 and 12th Street – Denton County, TX

Traffic Engineer for traffic signal design with accessible pedestrian signals (APS) for four intersections, and signage and pavement marking along FM 156 between SH 114 and 12th Street. Project is to widen a 2-lane rural to a 4-lane divided urban cross section with a wide center median. Traffic signal design for three intersections included railroad pre-emption and Exhibit A plans for TxDOT and BNSF submission. Project challenges included temporary signals and detouring of FM 156 and FM 407 vehicular and railroad truck traffic to the minimize the construction time and facilitate the improvements at the railroad crossings. Successfully completed the project and met TxDOT requirements for a \$32.5M scheduled construction project.

IH 30 at Chapel Creek Boulevard, Bridge Replacement Study – Fort Worth, TX

Traffic Engineer responsible for conducting a traffic engineering study and operations analysis for the proposed widening of the Chapel Creek Boulevard overpass at IH 30. The project involved traffic projections, SYNCHRO, SimTraffic, and PASSER to perform the signalized and unsignalized intersections LOS analysis comparisons of the various alternatives for the existing and proposed conditions. A comprehensive operations report with recommended improvements was submitted and approved by TxDOT. Work

Suki Hay, PE

Traffic Engineer

Experience (Continued)

also included design of a new signalized intersection at the IH 30 at Chapel Creek Boulevard interchange. This project required coordination efforts between TxDOT and the City of Fort Worth Traffic Groups to provide an interim alternative to optimize the interchange operation until future traffic warrants the full use of the proposed \$10M roadway and bridge improvements.

US 67/US 277 Corridor Study – TxDOT, Tom Green County, TX

Traffic Project Manager for the LOS analysis and report preparation for the corridor report submitted for the US 67/US 277 schematic. Three alternatives were evaluated for additional freeway lanes, ramps, continuation of frontage roads, and intersection improvements. Due to the complexity of the proposed improvements, analysis was performed using VISSIM for all the basic freeway, merge/diverge, and weave segments. 3D VISSIM animations were rendered for the preferred alternative for public viewing at the TxDOT Open House.

SH 26 from Hall-Johnson Road to Brown Trail – Tarrant County, TX

Traffic Engineer responsible for re-evaluation of the SH 26 traffic corridor re-timing study for the final determination of the need and extent of left turn lanes to serve the ultimate reconstruction of a 4-lane undivided to a 6-lane divided urban cross section. The project involved traffic projections, SYNCHRO, and SimTraffic to perform the signalized intersections LOS analysis and 95th percentile queue comparisons of the existing and proposed conditions. Work also included temporary signal designs, QC of the new signal designs (including an emergency signal), and new roadway/pedestrian illumination along the SH 26 corridor. This project required TCPs and temporary signal design/phasing be developed that allowed for full access to driveways and side streets during the various construction phasing/sequencing for the \$25.5M TxDOT scheduled construction project.

Downtown Square, Curb Extensions/Signals/ADA upgrades/APS – City of Denton, TX

PM/Traffic Lead. Project included new signal designs at the four intersections in the historic Denton Downtown Square as part of the \$3M citywide Traffic Signal Improvements in the 2014 Bond Program. The intersection improvements included ornamental signal poles and illumination, accessible pedestrian signals, ADA compliant ramp and sidewalk upgrades, and connectivity to the Downtown core as envisioned in the Downtown Master Plan.

W. Sandy Lake Road, Freeport Parkway & Denton Tap Road, New Turn Lanes/Signal/Signal Mods/APS/Illumination – City of Coppell, TX

PM/Traffic Lead. Project included new signal designs and modifications to signals along W. Sandy Lake Road, Freeport Parkway, and Denton Tap Road. The city-wide improvements included ornamental illumination poles, flashing yellow left turn implementation, accessible pedestrian signals, ADA compliant ramp and sidewalk upgrades, and upgrading the City signal fiber optic interconnect system.

Gene Belmares

Partner - Business Development
Officer gene@liquidsg.com



Partner - Business Development Officer at Liquid Studio Group

January 2015 - Present

In January 2015, Belmares Management officially merged with Liquid Web Studios to form LWS Media LLC dba Liquid Studio Group. The merger brings together the principals of two cutting edge firms with over 70 combined years of marketing, sales, entrepreneurial, and digital communications experience. As a Partner in a hybrid creative, full-service marketing and advertising agency, I am responsible for business development. Additionally, our content and copy writing team develops content for inbound marketing, social media strategies, public relations, communications strategies and websites.

Public Involvement Experience

City of Laredo Utilities – Integrated Water Master Plan

Subconsultant to Lockwood, Andrews, and Newnam

May 2020 – Present

Liquid Studio is currently involved in Community Input and Community Outreach for the City of Laredo's Utilities Department Integrated Water Master Plan. We are actively involved in developing surveys, building a website for dissemination of information, managing social media platforms for same. Future tasks involve acquiring meeting space or conducting virtual Town Halls, contacting elected officials, stakeholders, community organizations, and the general public in conjunction with the COL Integrated Water Master Plan. The deliverables will include, survey results, educational pieces, and dissemination of final Water Master Plan.

Webb County – City of Laredo Regional Mobility Authority

Consultant to RMA

October 2020 – Present

We are actively involved in the creation and management of the RMA's website for dissemination of information, developing and managing their social media platforms for same as well as assisting in Public Relations tasks such as crafting press releases, communications pieces, and general broadcasting of news and information.

Webb County – City of Laredo Regional Mobility Authority

Subconsultant to HNTB

November 2016 - Present

Liquid Studio and I are currently involved in Stakeholder Meetings and Community Outreach for the Webb-COL RMA. We are actively involved in acquiring meeting space, contacting elected officials, stakeholders, community organizations, and the general public in conjunction with the RMA's North Laredo Transportation Study. Future tasks will include collecting data, comments, demographics, and compiling said data for our client, the RMA/HNTB. This work authorization will continue for 6 months as we will continue to take input for Northwest Laredo's transportation infrastructure project planning.

City of Laredo Flores Street SUE Project

Subconsultant to LAN

December 2016 - Present

As a subconsultant to LAN, Liquid and I are responsible for assisting project engineers in securing utilities coordination with stakeholders, meetings with client (City of Laredo) and elected officials. Additionally, we have assisted in securing meeting space, providing general assistance in facilitating meetings with parties involved. When this project proceeds to construction, our roll will shift to public advisories, affected party notifications, and public relations.

Previous Experience

City Council Member - City of Laredo

May 2002 - December 2010

- In my capacity as a city council member, I have held hundreds of public hearings, town hall meetings, stakeholder meetings. As a member of the water Issues committee, I was instrumental in researching and assessing information and input gathered in our search for a secondary water source.
- Led the City of Laredo's search for a secondary water source as member and chair of the Water issues committee.
- Eliminated wastewater plant impact by building new state of the art wastewater treatment plant and decommissioning the old plant. Coordinated and participated Public Hearings for Permit Acquisition.
- Eliminated all water pressure issues in North Laredo through water line enhancement and the building of Laredo's first two-million-gallon elevated water storage tank.
- Elected Official with duties including Budget, Policy Creation, Project Management, Finance, Creation of Municipal Law, Tourism Marketing, and Land Development, Utilities and Transportation Infrastructure Planning.
- Other Major accomplishments include; Creation of North Central Park Creation of Shiloh Hike and Bike Trails
- Acquisition of all land for both projects listed above totaling 200 plus acres
- Developed Andrews Circle Park in 48 hours including concrete walk path, trees, sod, irrigation system, and lighting
- Designed, developed, and led the face lift of Andrew Trautmann Park including planting 30 plus trees, cinder walking path, new BBQ area and landscapes
- Landscaped both chicanes at the entrances to Las Brisas neighborhood. Involved over 3,500 volunteers in the development of the above park and beautification projects
- Championed the Indoor Clean Air Act banning smoking indoors in all public areas. Our ordinance has now served as a model for other Texas cities
- Co-authored and passed the Green Space ordinance that now protects our creeks, tributaries, and the Rio Grande
- Lobbied successfully and created ordinances to allow Laredo to manage the 911 system and the PSAP for the South Texas Council of Government
- Brought to council and passed the implementation of Laredo's Reverse 911 system Passed the No Liability Insurance tow away ordinance
- Eliminated flooding in North Laredo neighborhoods through storm water and flood plain management ordinances
- Created, through the legislative affairs committee and council, Laredo's legislative trip to Austin to mirror our legislative efforts in Washington which have yielded hundreds of millions of dollars to date for Laredo.

City Council Committees

Water Issues Committee 2002-2006
 Sports Venue Chair 2002-2006
 Legislative Affairs Chair 2002 -2006
 Operations Committee 2006 -2010

Laredo Webb County MPO 2004 - 2010
 Veteran's Affairs Committee 2002 – 2004
 Liaison Commission for Women 2004
 Finance Committee 2006 - 2010



Laredo • San Antonio • Houston



ARCHITECTURE. URBANISM. CITY MAKING



**Lockwood, Andrews
& Newnam, Inc.**
A LEO A DALY COMPANY



STUDIO GROUP



**Comprehensive Operational Analysis (COA) for El Metro
Evaluation Ranking Sheet**

COMMITTEE	FIRMS	
	Stantec Consulting Services, Inc.	Parra & Co.
Evaluator 1	90	65
Evaluator 2	80	91
Evaluator 3	95	96
Evaluator 4	95	90
Evaluator 5	85	96
Evaluator 6	92	84
Total Points	537	522
Overall rank	1st	2nd

Discussion with possible action on Hachar-Reuthinger

Welcome to new member Humberto “Tito” Gonzalez, Jr., filling the “PRIVATE SECTOR Member at large” position on the Policy Committee.

Angelica Quijano

From: Antonio Rodriguez <anrodriguez@HNTB.com>
Sent: Wednesday, September 16, 2020 9:21 AM
To: Vanessa Guerra; Kirby Snideman; Angelica Quijano
Cc: Jed Brown; Melisa Montemayor; Doug Howland
Subject: WCCL RMA Report for MPO Meeting (September 21, 2020)

ATTENTION: This email originated from outside your organization. Caution when clicking links or opening attachments.

Team, please see the update below. If possible, please include in the Policy Committee packet.

1. Killam Industrial Blvd. Turn Lanes – 100% Design completed and submitted to TxDOT on 5/14/20. TxDOT Design and Construction Division have provided comments and comments are addressed. Utilities are on track for clearance by end of September. ROW is acquired. The project letting is tied with the TxDOT FM 1472/ IH 69 W Project and is planned for November 2020.
2. Los Presidentes (Cuatro Vientos to Concord Hills) – HNTB is reviewing the Acceleration/ Deceleration Lanes for Cuatro Vientos 60% Design. We are submitting 60% plan set to TxDOT for their review on the week of the 21st. Los Presidentes anticipated letting of the project is scheduled for Fall 2020.
3. Vallecillo Road –Traffic study commenced in August. WCCL RMA has been in coordination with the City of Laredo Traffic for their comments on the traffic study process and methods. ILA between the City of Laredo and WCCL RMA has been executed.
4. Anticipate WCCL RMA Board meeting on the last week of September.

If you have any other questions, please let us know. I hope you have a great day.

Thanks.

Antonio Rodriguez, PE

WCCL RMA GEC Deputy Program Manager
Cell (512) 800-0382

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.

This e-mail and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. If you are NOT the intended recipient and receive this communication, please delete this message and any attachments. Thank you.