

# Capital Metro Internal Audit

UT Internal Audit Projects – Spring 2021

# CAP METRO – UT Audit Intern Program

- CapMetro joined UT Audit Intern Program in the 2018 Fall semester.
- UT's #1 ranked Masters of Professional Accounting Audit class requires an audit internship.
- Course Syllabus Objective: “introduce students to the current scope of internal auditing that extends far beyond the traditional external audit attestation of financial statements.”
- Teams of three students are assigned to each project.
- The audit project objectives and deliverables are identified and set at the beginning of the project in the planning stage.
- The projects require a combination of auditing skills together with business consulting and advisory skills.
- UT Audit Interns work under the guidance of the VP of Audit and staff.

# UT Audit Projects Offered – Spring 2021

## Nine Projects to choose from as follows:

1. **Facilities Maintenance (Contract Monitoring & Compliance)** – process review and flowcharting
2. **Discounted Pass Program** – flowchart controls and benchmark against Texas transit agencies
3. **Paratransit Operations** – assess MTM Transit contract and monthly billing process
4. **Security Incidents – Process Flowcharting & Analysis** – process review and flowcharting
5. **Security Incidents – Data Analytics** – analyze data from key systems (e.g. OrbCAD)
6. **Business Continuity (COOP Plan)** – develop process mapping and flowcharting of COOP
7. **Electric Bus Fleet – In Processing Procedures** – CapMetro recently placed in service 12 electric buses
8. **Vehicle Toll Charges – Develop Automated Controls** – evaluate and controls over toll charges
9. **Marketing/Communication Dept** – evaluate budget & forecasting process

# UT Audit Projects Chosen – Spring 2021

## Six Projects Chosen:

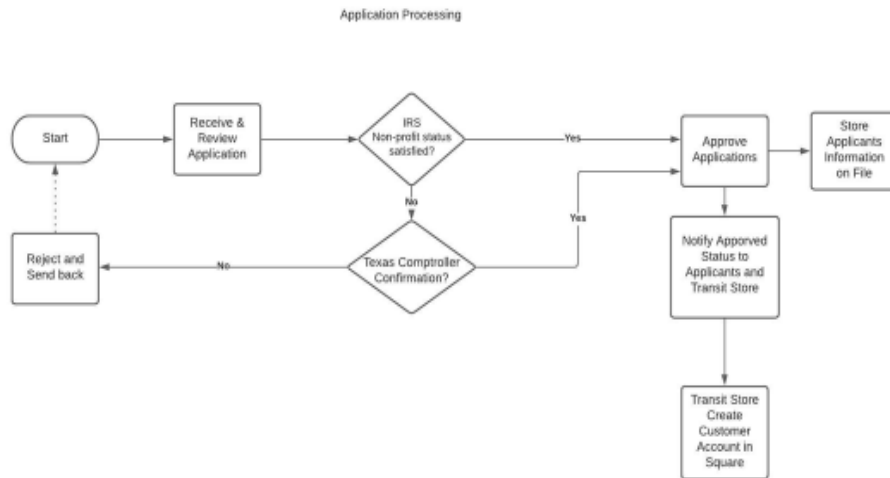
1. Discounted Pass Program – flowchart controls and benchmark against Texas transit agencies
2. Paratransit Operations – assess MTM Transit contract and monthly billing process
3. Security Incidents – Process Flowcharting & Analysis – process review and flowcharting
4. Security Incidents – Data Analytics – Analyze data from key systems (e.g. OrbCAD)
5. Electric Bus Fleet – In Processing Procedures – CapMetro recently placed in service 12 electric buses
6. Marketing/Communication Dept – evaluate budget & forecasting process

# UT Audit Intern Projects – Deliverables

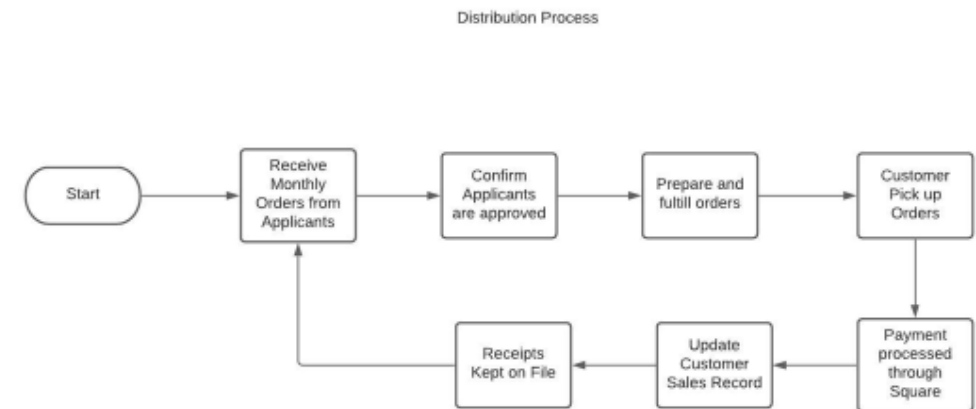
	Process Review	Flowcharting	Contract Review	Benchmarking	Data Analytics	Powerpoint Presentation with Recommendations
<b>Discounted Pass Program</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>
<b>Paratransit Operations</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>
<b>Security Incidents - Process Flowcharting</b>	<b>XX</b>	<b>XX</b>				<b>XX</b>
<b>Security Incidents - Data Analytics</b>	<b>XX</b>				<b>XX</b>	<b>XX</b>
<b>Electric Bus Fleet - In Processing Procedures</b>	<b>XX</b>		<b>XX</b>	<b>XX</b>		<b>XX</b>
<b>Marketing/Communication - Forecasting Expenses</b>	<b>XX</b>	<b>XX</b>			<b>XX</b>	<b>XX</b>

# Discounted Pass Program – sample of deliverables

## Application Process Flowchart



## Ticket Sales Process Flowchart



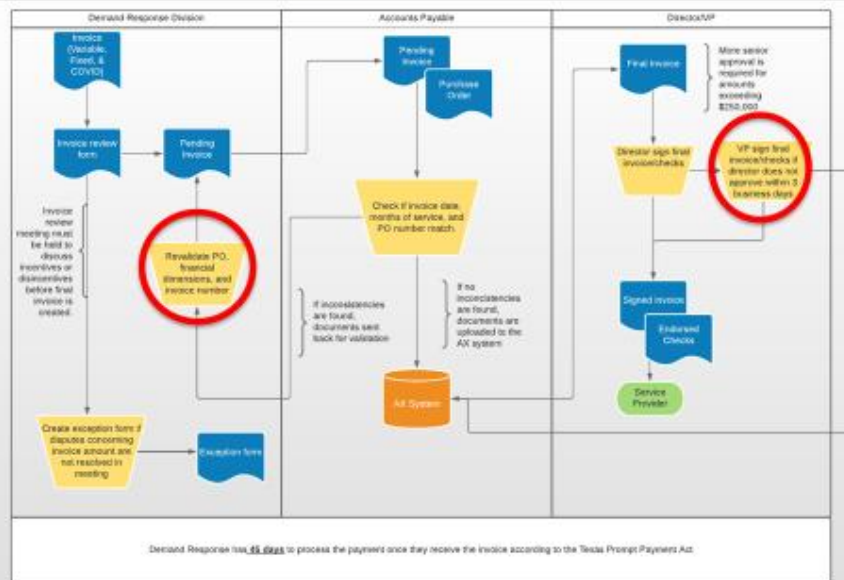
# Discounted Pass Program – sample of deliverables

## Benchmarking Results

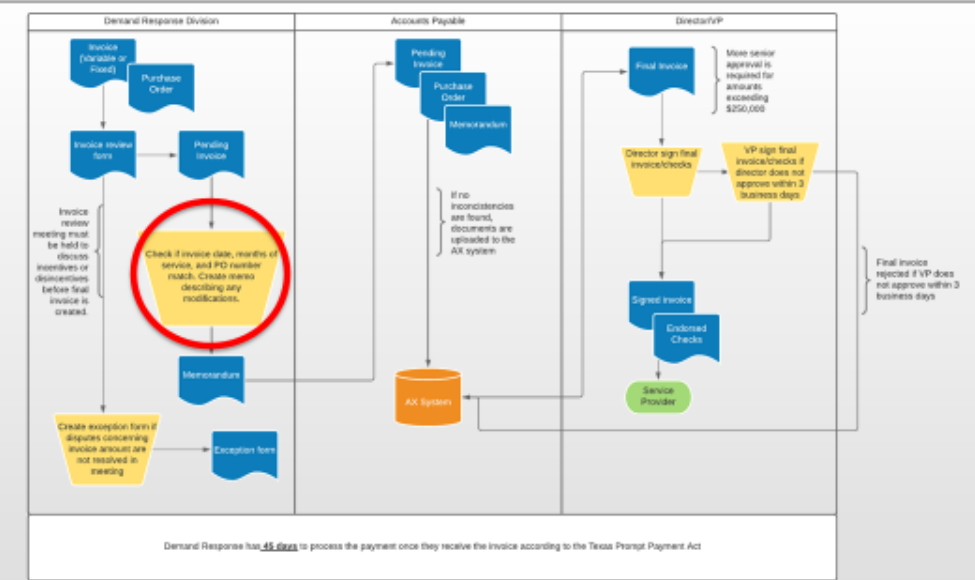
	Questions Required on Application	CapMetro	VIA	DART	METRO
1	Form requires name, address and phone #	Yes	Yes	Yes	N/A
2	Organization Status (i.e. Non-Profit; Not For Profit; Government	Yes	Yes	No	N/A
3	Federal Tax ID/IRS confirmation	Yes	Yes	Yes	
4	Describe purpose of organization	Yes	Yes	No	
5	verify for past services/transactions with transit agency	Yes	No	No	N/A
6	Ask if client or agency covers the cost	Yes	No	No	N/A
7	Requires agencies to describe how client eligibility is verified	Yes	Yes	No	N/A
8	Describe process of passes distribution	Yes	No	No	N/A
9	Describe recordkeeping process for pass distributed	Yes	Yes	No	N/A
10	Acknowledgement that organization can't charge more than what it paid transit agency	Yes	No	No	N/A
11	Acknowledgement that organization can be removed from program anytime if found they don't meet criteria	Yes	No	No	N/A
12	Include a copy of your Organization's Bylaws, Charter or Annual Report.	No	Yes	No	N/A
13	Describe specific services offered to clients	No	Yes	No	N/A
14	total number of clients served by organization and percentatge served by transit program	No	Yes	No	N/A
15	How transit program assists organization's mission	No	Yes	No	N/A
16	Transit agency provides a document to participating organizations to record clients receiving passes and type of passes received.	No	Yes	No	N/A

# On Demand (Paratransit) – sample deliverables

## Flowchart Before



## Flowchart After





# On Demand (Paratransit) – sample deliverables

## Appendix – Rail CDRL

**FPR**  
CAPITAL METROPOLITAN TRANSITATION AUTHORITY

**EXHIBIT (Revision 2)**  
**CONTRACT DATA REQUIREMENTS LIST**

Section	Contract Data Requirements List	Days from RTP
4.3	PPE List	60 NTP
4.10	Internal Control Plan for Accident and Incident Reports	120 NTP
4.14	Safety Committee Policy and Procedures Manual	120 NTP
4.16	Contractor Safety Compliance Plan	90 NTP
4.16.1.1	68 CFR 217 PLAN (Railroad Operating Rules)	90 NTP
4.16.1.2	49 CFR 219 PLAN (Control of Alcohol and Drug Use)	90 NTP
4.16.1.3	49 CFR 225 PLAN (Railroad Accident Reporting)	90 NTP
4.16.1.4	49 CFR 238 PLAN (Emergency Preparedness)	90 NTP
4.16.1.5	49 CFR 240 Plan (Qualification/Certification)	90 NTP
4.16.1.6	Close Call Reporting Evaluation Procedure	90 NTP
4.16.1.7	Environmental Incident Procedures/Policy	90 NTP
4.16.1.8	Roadway Worker Safety Program	90 NTP
4.16.1.9	System Safety Program Plan	90 NTP
4.16.1.10	Impact Risk Reduction Plan	90 NTP
4.16.1.11	Public Safety Plan	90 NTP
4.16.1.12	Emergency Response Plan	90 NTP
5.6.1	Contractor System Security Compliance Plan	90 NTP
5.9.3	Security Issue and Incident Report	120 NTP
6.3.16	List of Designers	30 NTP
6.4.1	Organization Chart (functional)	60 NTP
6.10.4	Staffing Plan	60 NTP
6.10.1	Recommended List of Positions	30 NTP
6.10.2	Hiring Process	30 NTP

RFP 13468 Page 1 of 1 Exhibit (Revision 2)

## Recommendations for Best Practices

- Increase CDRL requirements, benchmark with Rail

Contract Data Requirements List	Report Type	Frequency	Category
PPE List		60	(Recommendation)
Internal Audit Plan	Once	With proposal	(Recommendation)
GM Vacancy Plan	Once	With proposal	(Recommendation)
Internal Control Plan for Accident and Incident Reporting		120	(Recommendation)
Audited Financial Statements	Annually	With proposal	(Recommendation)
Trash Removal Plan		90	(Recommendation)
Other Equipment Maintenance Plan		60	(Recommendation)
Workmanship Standards	Annually	120	(Recommendation)
Hiring Process		30	

- More detailed contract information
  - Frequency of reports
  - Who, specifically, to report to

# Electric Bus: In-Processing Procedures

## Proterra and New Flyer Contracts (Exhibits E/F)

Review of contracts identified the following:

- The Proterra Contract did not specify the delivery of procedures manuals. However, manuals were delivered.
- The employee training, in general, was not mentioned in either contract.
- The Pre-Delivery Inspection is not mentioned in either contract.

Item	Description	Location	Not Present
Training			X
Procedure Manuals	Authority has proprietary rights to the technical data including the procedure manuals once the buses are delivered as well as patented materials, equipment, devices or processes	Pg. 11; Item 25	
Bus Delivery	Made to 2910 E 5th Street Austin, TX 78702	Pg. 3; Item 7	
	Delivery type: F.O.B. Destination	Pg. 3; Item 7	
	Buses must be in compliance with the provided specifications upon delivery	Pg. 3; Item 7	
Liquidating Damages/Disincentives	Place of delivery is subject to change at the discretion of the Authority	Pg. 6; Item 13	
	If the unit price is an estimate and the actual price of the unit varies by more than 20% above or below the estimated quantity, an equitable adjustment shall be made to the contract by either party.	Pg. 7; Item 15	



## METRO OPERATIONS

### Procedure and Responsibilities for In-Processing Buses

SCOPE: This document is intended to guide CMTA and Service Providers Vehicle Maintenance through the in-processing of the new vehicles.

Step / Task	Responsibility	Status
1 Notify [Equipment Engineer] that new vehicles are arriving and send copies of all maintenance manuals requesting a PMI and PMR cycle be created and activated in Spear	MS&P, PM	
2 Collect the fleet information from the Vendor, fill in the "Vehicle Load Sheet", and send to the MP	MS&P, PM	
3 Load static data into Spear; notify IT/Trapeze about the new series (Service Now ticket), create vehicle series, create assets (vehicles and components), load vehicle static data, enter the initial mileage.	MP	
4 Notify EADS (IT Dept) via Service Now ticket about the new series are arriving and they need to be added to the OrbCAD catalog (unit number, destination sign type, wheelchair active high/low).	Coordinator of Mobile Technology	
5 Configure and load the fuel information	MP	
7 Arrange for delivery of vehicle(s)	MS&P, PM	
8 Escort delivery of vehicle into the yard	Service Provider	
9 Verify the VIN matches the Vehicle ID number	Service Provider	
10 Inspect the vehicle, look for handling and delivery damage, such as: Body scratches Window cracks Antennas Tire damage Clean interior and exterior	Service Provider	
11 Check for removable items, such as: Handheld Fire Extinguisher (tag and break away tie) Fire Suppression System Pin (and break away tie) Hazard Triangles Box (and break away tie) Blue Loop Straps (for W/C securement)	Service Provider	
12 Check that Fuel Level is over ¾ full	Service Provider	
13 NOTE: Make a note of any missing items, low fuel or damage ON THE DELIVERY RECEIPT before signing	Service Provider	
14 Sign and photocopy Original Delivery Documents and then return original to delivery driver	Service Provider	
15 Escort delivery driver off the yard.	Service Provider	
16 Collect Keys: DVR key Radio Box Key	Service Provider	
17 Perform Acceptance Inspection and take requisite photos.	Service Provider	
18 Scan copy of all documents to SP Extranet (SharePoint) in the format designated by MS&P PM	Service Provider	

## Key Differences between Electric and Diesel Bus

- Maintenance
  - Maintenance staff must understand how to work on all-electric propulsion systems and high voltage.
- Training
  - Maintenance staff (servicing high-voltage systems)
  - Office Staff (tracking and monitoring bus routes)
  - Bus Operators (learning how to drive fully-electric bus)
- Operations
  - Charging process
    - Depot charging (4-6 hours for full charge)
  - Overhead Charging – quick charge
- Bus Performance Implications
  - Weather conditions
  - Operator driving habits



# Electric Bus- In Processing Procedures

## Interviews Conducted

- 4 Transportation Agencies
  - Embark (Oklahoma City, OK)
    - Dennis Fry, Facility & Fleet Manager
  - VIA (San Antonio, TX) / Checklist Obtained
    - Ed Bennett, Director of Fleet Maintenance
  - Trinity Metro (Fort Worth, TX) / Checklist Obtained
    - Bill Lambert, Director of Maintenance
  - Port Arthur Transit (Port Arthur, TX)
    - Ivan Mitchell, Transit Manager
- MV Transportation Staff
  - Joel Odem, Quality Assurance/Training Manager
  - Phillip O'Neal, MV Electronics Manager



### VIA Battery Electric Bus Commissioning

Bus Number :  
 Manufacture:  
 VIN Number:  
 In Service Mileage:

Commissioning Start Date:  
 Commissioning Completion:  
 License Plate Number:  
 RO Number

#### High Voltage Charging Validation:

Perform 10 fast charging cycles at Sunset Transit Center  
 Perform 3 depot charging sessions from each charging port  
 Manuf. Validation Complete  
 Perform BEB "B" Inspection

#### Electrification Sign Off:

##### Interior:

Inspect door operation  
 Probe farebox and program correct vehicle number  
 Install interior decals  
 Program Sign with current program  
 Install "Pucks"  
 Place copy of registration in operators compartment  
 Install Transfer Cutter

##### Exterior:

Wrap Installation  
 Install License Plates  
 Record Low Voltage battery serial numbers:  
     #1                      #2  
 Body Shop to install Exterior graphics

##### Tire shop:

Record Tire Serial numbers:  
 LF:                      RF:  
 LRO:                      RRO:  
 LRI:                      RRI:  
 Ensure proper tire inflation

##### Radio:

Ensure CCTV commissioning  
 Complete INIT system Commissioning Sheet

##### Road Test Validation:

Perform 15 Service stops  
 \*\*Cycle Ramp and doors at service stop  
 Perform Brake Deceleration Test

Sign Off      Date







## Recommendations for CapMetro

- Create the In-processing Checklist for electric bus (leverage VIA's Electric Bus Checklist)
- Ensure training is defined in the contract for appropriate staff, including operators, mechanics, and technicians.
- Obtain the Pre-Delivery Inspection (PDI) from the vendor.
- Ensure a diagnostic check is performed to ensure issues are identified including performing a battery test.
- Complete road test of the bus.

Questions?







**METRO**

**THANK YOU!**