



# Business Rules

VERSION DRAFT 03

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## REVISION HISTORY

Date	Version	Author	Description of Modifications
August xx, 2019	Draft .01	Fagan Consulting	Created
November 5, 2018	Draft .02	Fagan Consulting	Modified
December 3, 2019	Draft .03	Fagan Consulting	Modified – removed many Business Rules for Account Processing, Posting, Image Review.

## DOCUMENT REFERENCES

Title and Description	Version

## 1 INTRODUCTION

This document contains the Roadside Business Rules to which the Northeast Texas Regional Mobility Authority (NET RMA) operates. This document is maintained by the Operations Division.

### 1.1 PURPOSE

This document tracks and maintains the NET RMA Business Rules. This document functions as a living document. When a Business Rule changes, the “Last Update” column in Section 2.1 will reflect the date of the modification. **Values stated in the “Value” column of the rules represent user configurable values and not system related changes.** Additional notes may appear in Revision History.

### 1.2 DEFINITIONS, ACRONYMS, ABBREVIATIONS

Term	Definition
<b>AVC</b>	Automatic Vehicle Classification is the toll lane system that detects and classifies vehicles based on the number of axles.
<b>AVI</b>	Automatic Vehicle Identification is the radio frequency system that identifies vehicles using transponders as they pass fixed antennas or readers to automatically charge the toll to the Customer.
<b>Away Agency (a.k.a. Visited Authority)</b>	An Interoperable Agency that is not the Customer’s Home Agency.
<b>BOS</b>	Back Office System is the toll processing system that contains the Host, Image Review, Customer Service and Violations Processing subsystems.
<b>DMV</b>	Department of Motor Vehicles is the Texas state agency that provides vehicle registration information to the Mobility Authority.
<b>Exempt Vehicle</b>	A vehicle that qualifies for non-revenue travel on the toll road
<b>FIFO</b>	First in, First Out describes the order in which payments are applied to outstanding transactions.
<b>Home Agency</b>	An Interoperable Agency which owns and maintains the customer account of vehicle(s) and transponder(s) to which interoperable toll transactions are posted.
<b>ICD</b>	Interface Control Document describes the technology, format, frequency, and processing requirements for data exchanged between systems.
<b>I-Toll</b>	A Video Transaction that is sent for posting or is posted to a Customer Account.
<b>LVL</b>	License Plate Validation List is a comprehensive list of registered license plate accounts in use by a toll authority together with the current status (e.g., active, invalid) of the underlying customer account.
<b>NCOA</b>	National Change of Address is a database that contains the names and addresses of people and businesses who have filed a change-of-address with the United States Postal Service.

Term	Definition
<b>OCR</b>	Optical Character Recognition is software that extracts the number and jurisdiction from an image of a vehicle's front or rear license plate.
<b>OOS</b>	Out of State
<b>PAN</b>	Primary Account Number found on a credit/debit card.
<b>PBM</b>	Pay By Mail is an Account option for Customers that post-pay for their toll road usage based solely on their license plate(s).
<b>PCI-DSS</b>	Payment Card Industry Data Security Standard
<b>Problem Plate</b>	A license plate that is associated with a customer escalation in the system.
<b>Processing Hub</b>	Hub where AVI transactions and video-based transactions are processed when a match is found on the TVL or LVL for the vehicle.
<b>Tokenization</b>	The issuance of a unique code/token for identification of a specific credit card. Tokenization is used by the system to reduce security risks inherent in the collection of account payments.
<b>Transaction</b>	An event that occurs when a vehicle travels through a tolling location where the event may or may not be associated with a transponder read. Refers to both a transponder and Video transaction.
<b>Transaction Valid Posting Age</b>	Term used to define the transaction age for posting to an account.
<b>Transponder</b>	A device placed on or within a motor vehicle that can transmit or receiving information used to assess or collect tolls that results in recognizable vehicle identification for tolling purposes.
<b>Transponder Transaction</b>	Each electronic record of a toll that constitutes one toll payable from a customer, respecting a vehicle that (a) passes through a toll lane, (b) is equipped with a transponder issued by a Transponder Issuer, and (c) has a sufficient account balance at the time of posting or re-posting to pay in full the applicable toll rate.
<b>TVL</b>	Transponder Validation List is a comprehensive list of registered transponder accounts in use by a toll authority together with the current status (e.g., active, invalid) of the underlying customer account.
<b>VPC</b>	Video Processing Center is where video transactions are processed and posted to Pay By Mail accounts.
<b>Video Transaction</b>	Each electronic record of a toll and video image(s) of license plates and other video data with respect to a vehicle without a valid Transponder read and processed through Pay By Mail.
<b>Violation</b>	A video transaction that is not matched to a Transponder account and remains unpaid after initial invoicing.

## 2 BUSINESS RULES

### 2.1 GENERAL BUSINESS RULES

Rule	Value	Condition/Rule Description	Last Update
BR-1	Axle-based	Vehicle classification methodology used at NET RMA.	
BR-2	2 through 6	Allowable vehicle classifications.	
BR-3	<= 2 axles	Number of axles on a class 2 vehicle.	
BR-4	3 axles	Number of axles on a class 3 vehicle.	
BR-5	4 axles	Number of axles on a class 4 vehicle.	
BR-6	5 axles	Number of axles on a class 5 vehicle.	
BR-7	6+ axles	Number of axles on a class 6 vehicle.	
BR-8	AVI Toll Rate	Toll rate used for transponder transactions and video transaction license plates that are on the TVL and pursued through the processing hub.	
BR-9	Register by AVI Rate	Toll rate used for video transaction license plates on the LVL and pursued through the processing hub.	
BR-10	Pay By Mail Toll Rate	Toll rate used for video transactions pursued through the toll bill process in the back-office system (BOS).	

### 2.2 ROADSIDE BUSINESS RULES

Rule	Value	Condition/Rule Description	Last Update
BR-11	Vehicle presence	Saving an image of every vehicle in the lane.	
BR-12	Front and Rear	Image types saved for each vehicle in the lane.	
BR-13	One (1) image	Number of images saved of the front of the vehicle.	
BR-14	One (1) image	Number of images saved of the rear of the vehicle.	
BR-15	AVC	Default vehicle classification (unless degraded mode).	
BR-16	Transponder class (if present)	Default vehicle classification if the AVC operated in degraded mode.	
BR-17		If the lane reads multiple transponders for one (1) vehicle, the lane uses the first valid transponder read as the transponder to charge. The lane records all other transponder reads but does not process the reads as a transaction.	
BR-18	\$0.00	Toll Rate indicated for a closed lane.	
BR-19		Transponder reads not associated with a vehicle on the TVL get recorded as a spurious transponder read but is not processed as a transaction.	

## 2.3 HOST TRANSACTION PROCESSING BUSINESS RULES

Rule	Value	Condition/Rule Description	Last Update
BR-20	Compare transponders against TVL	First step in the transponder transaction process.	
BR-21	All, irrespective of status	Transponder transactions sent to processing hub to determine if they will post against home agency customer accounts.	
BR-22		Transactions with a disposition of "Posted" from the Processing Hub will not be processed further.	
BR-23	999	Number of times a transaction can be re-submitted to the Processing Hub. It is expected that the time will expire before the number of retries.	
BR-24	60 days from the transaction date	Amount of time the host must submit or re-submit a transaction to the processing hub for processing.	
BR-25		Transponder Transactions must have a rejected Processing Hub disposition before being sent to image review.	
BR-26	96 hours	Amount of time the Host should wait for a disposition from the processing hub before alerting the Mobility Authority of a potential problem.	
BR-27	15 days	Maximum amount of time the Host should wait for a disposition from Image Review before alerting the Mobility Authority of a potential problem.	
BR-28	6 months	Maximum amount of time images will be stored for paid AVI / I-TOLL transactions.	
BR-29	2.5 years from transaction date	Maximum amount of time images will be stored for all other transactions.	
BR-30			
BR-31		After Image Review, rejected images (a.k.a. "code offs") will not be pursued further.	
BR-32		After Image Review, if the transaction has not already been sent to the Processing Hub, it will be validated against the TVL and sent to the Processing Hub for processing.	
BR-33		After Image Review, if the transaction has not already been sent to the Processing Hub, it will be validated against the LVL (after the TVL) and sent to the Processing Hub for processing.	

Rule	Value	Condition/Rule Description	Last Update
BR-34		An Exempt Vehicle List (containing license plates and tags) is maintained so that vehicles, in accordance with the Mobility Authority's non-revenue policy, are allowed non-revenue access. For example, First Responders are maintained on this list.	
BR-35		Exempt Vehicle List may be used for quarantining transactions from license plates that have special billing arrangements with the Mobility Authority.	
BR-36		Transactions rejected by the Processing Hub that have already been through Image Review will be compared against the Non-Revenue list before being sent for Toll Bill processing.	
BR-37		Transactions on the Non-Revenue list will not be processed further.	
BR-38	5 days from the transaction date	Transactions must be sent to the Video Processing Center (VPC) for processing within this amount of time.	