

# **THEA\_CA Interface Control Document ICD**

**Tampa Hillsborough Expressway Authority**

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**Version 1.9**

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# 1 THEA CCSS Collection File Exchange

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## 1.1 Purpose

Purpose of this document is to outline the strategy and technical requirements for the new collections interface to transfer data from the Florida's CCSS to THEA and subsequently to THEA's collection agency (the "CA").

### 1.1.1 Overview Daily Transaction File

Each day, CCSS will send newly RTOA Amendment type transactions to THEA. THEA will initiate a Get\_Demographics web service call for the RTOA transactions account information.

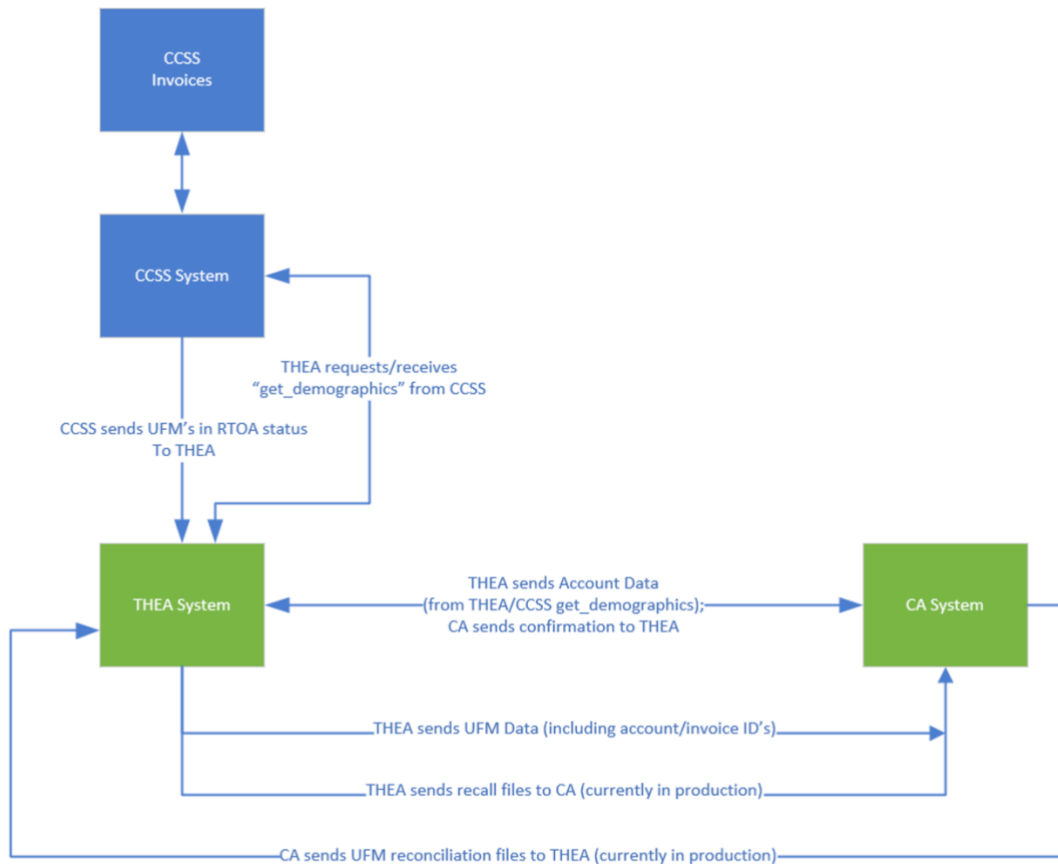
The Get\_Demographics results are pushed to a CA hosted Web Server for account creation. The CA will create new accounts into the CA's Back Office System (BOS). The CA will use pre-established and already in-production account creation rules and logic to determine if a new account is created or if the account already exists in the BOS. After the Get\_Demographics file is successfully processed, a response is sent by the CA to THEA indicated whether the data was processed successfully.

After THEA receives confirmation the Get\_Demographics was processed, THEA will push all new RTOA, UFM transactions associated with the Get\_Demographics file to the CA's Web Server. The CA will match the Account number listed in each UFM sting to the correct Account within the BOS (Note: The CA creates a unique Collections account in the BOS but retains the original account number for reporting and mapping purposes).

The CA will call at least one image for all accounts (this is required for BOS invoicing rules) and store the image on the CA's servers.

Important note: The web service exchange will have a daily black out period from 11:30 pm – 1:30 am EST. During this time, will run the nightly invoice processes.

### 1.1.2 File Exchange High Level Design



### 1.1.3 File Exchange Requirements

- A. THEA will provide the CA with the following:
  1. Pushed Get\_demographics Results
  2. Pushed Associated\_UFM\_data files
  3. Access to Get\_image Interface for image web-service calls
- B. The new get\_demographics interface shall be based on web-service technology.
- C. The new get\_demographics interface shall replace the existing get\_evidence interface that is in production to transfer data from FTE and TransCore.
- D. The data retrieved by THEA from CCSS using the get\_demographics interface shall be stored in THEA's database for long-term record keeping purposes.
- E. The new get\_demographics interface shall follow existing business rules used in production by the get\_evidence interface to transfer data from THEA to TransCore. i.e. The get\_demographics interface shall be triggered after receiving from CCSS the UFM amendment type RETURNED\_TO\_ORIGINATED\_AGENCY (RTOA) for unpaid tolls that were invoiced a minimum of 2 times by the CCSS.

- F. The new collections interface shall use the existing Associated UFM data file layout in production with the CA with the exception of an added field for Account Number data. UFM data is pushed from THEA to the CA, including URL information for the CA to retrieve vehicle images from THEA/TransCore for the CA’s billing and website operation purposes.
- G. The steps to transfer data from THEA to the CA shall be executed as follows:
  1. The Get\_Demographics data needs to be transferred from THEA to the CA and confirmed by the CA.
  2. After the toll account data is confirmed by the CA, the associated UFM data needs to be pushed from THEA to the CA. The Account Number will be used to correlate the UFM with the account.

## 1.2 Transaction Processing File Inventory and Specification

### 1.2.1 Demographics

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	“acct_info”
acct_id	Integer	Y	Customer account number
firstname	String(40)		First name of the primary account holder
middlename	String(40)		Middle name of the primary account holder
lastname	String(60)	(Y)	Last name of the primary account number Only one of “lastname” or “company” is required.
address1	String(35)	Y	Address Line1
address2	String(35)		Address Line 2
city	String(30)	Y	City
state	String(2)	Y	State (2 character code)
country	String(3)		Country (3 character code)
zip	String(6)	Y	ZIP Code (6 character – support USA and Canada)
zipplus	String(4)		ZIP Plus code (4 character)
lpn	String(10)	Y	License Plate Number
vehicle_state	String(2)	Y	Vehicle State
reg_expir	Date		Registration Expiration Date (MM/DD/YYYY)
vehicle_color	String		Vehicle Color
vehicle_make	String		Vehicle Make
vehicle_model	String		Vehicle Model
vehicle_year	String		Vehicle Year
vehicle_id	String		Vehicle ID Number
acct_type	String		Account Type (PRIVATE, BUSINESS, COMMERCIAL, PVIDEOUNREG)

dl_number	String		Driver's License
dl_state	String		Driver's License
dob	Date		Driver's Date of Birth (MM/DD/YYYY)
gender	String		Driver's Gender
company	String(60)	(Y)	Company Name Only one of "lastname" or "company" is required.
email	String(100)		Primary email address on the account
phone	String(15)		Mobile Phone number (if not available day phone number will be provided)

Example:

```
{
  "file_type": "acct_info",
  "acct_id": 20140056,
  "firstname": "TIFFANY",
  "midname": "",
  "lastname": "CRANE",
  "address1": "590 CALIBRE CREST PKWY",
  "address2": "",
  "city": "ALTAMONTE SPRINGS",
  "state": "FL",
  "country": "USA",
  "zip": "32714",
  "zipplus": "1234",
  "lpn": "J409BI",
  "vehicle_state": "FL",
  "reg_expir": "04/15/2020",
  "vehicle_color": "BLUE",
  "vehicle_make": "ACURA",
  "vehicle_model": "ILX",
  "vehicle_year": "2013",
  "vehicle_id": "",
  "acct_type": "PRIVATE",
  "dl_number": "",
  "dl_state": "",
  "dob": "05/25/1982",
  "gender": "",
  "company": "",
  "email": "tcrane@conduent.com",
  "phone": "1234567890"}
```

## 1.2.2 Demographics Response Data Format

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	"acct_info"
result_code	String	Y	
message	String	Y	
acct_id	String	Y	Same as the Request data
error_field	Array		Optional list depending on "result_code"
field_name	String		Name of the field which has wrong data
error_code	String		Error reason for the field

Success Example:

```
$VAR1 = {
  'file_type' => 'acct_info',
  'result_code' => '200',
  'error_field' => [],
  'acct_id' => 95621,
  'message' => 'OK'
};
```

Failed Example:

```
$VAR1 = {
  "file_type":"acct_info",
  "result_code":"403",
  "message":"Validation failed",
  "acct_id":95621,
  "error_field":[{"field_name":"state","error_code":"14"},
                {"field_name":"country","error_code":"14"}]
};
```

## 1.2.3 UFM

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	"asso_ufm"
acct_id	Integer	Y	Customer account number
ufm_id	Integer	Y	UFM ID number
trans_date	Date	Y	MM/DD/YYYY
trans_time	Time	Y	HH:mm:ss
invoice1_id	String(20)	Y	
invoice2_id	String(20)	Y	
toll_plaza_name	String		

toll_plaza	String(6)	Y	
lane_id	String(2)	Y	
vehicle_class	Integer(2)	Y	



indicated_toll	Integer	Y	Toll amount (unit: cent)
actual_toll	Integer	Y	Prior paid amount (unit: cent)
amend_type	String		
plate_chars	String(10)	Y	
plate_state	String(2)	Y	
plate_type	String		
plate_type_suffix	String		
image_name	String		

Example:

```
{
  "file_type": "asso_ufm",
  "acct_id": 20140056,
  "ufm_id": 123456789,
  "trans_date": "03/22/2018",
  "trans_time": "18:45:52",
  "invoice1_id": "INV123456789",
  "invoice2_id": "INV014360079",
  "toll_plaza_name": "",
  "toll_plaza": "101720",
  "lane_id": "01",
  "vehicle_class": 2,
  "indicated_toll": 195,
  "actual_toll": 125,
  "amend_type": "TRANSACTION_RETURNED_TO_ORIGINATING_AGENCY",
  "plate_chars": "J409BI",
  "plate_state": "FL",
  "plate_type": "STATE",
  "plate_type_suffix": "WT",
  "image_name": "101765_65S_102590F92B80068_11.jpg"
}
```

#### 1.2.4 UFM Response Data Format

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	"asso_ufm"
result_code	String	Y	
message	String	Y	
acct_id	String	Y	Same as the Request data
error_field	Array		Optional list depending on "result_code"
field_name	String		Name of the field which has wrong data

error_code	String		Error reason for the field
------------	--------	--	----------------------------

Successful Example:

```
$VAR1 = {
  'file_type' => 'asso_ufm',
  'result_code' => '200',
  'error_field' => [],
  'acct_id' => 95621,
  'message' => 'OK'
};
```

Failed Example:

```
$VAR1 = {"file_type":"asso_ufm",
  "result_code":"403",
  "message":"Validation failed",
  "acct_id":67214871,
  "error_field":[{"field_name":"plate_chars","error_code":"12"},
    {"field_name":"plate_state","error_code":"12"}]
}
```

### 1.2.5 Recall File

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	“recall”
acct_id	Integer	Y	Customer account number
ufm_id	Integer	Y	UFM ID number
txn_date	Datetime	Y	YYYY-MM-DD HH:mm:ss
agency	String(10)		
transponder	String(11)		
lic_plate	String(10)	Y	
state	String(2)	Y	
event_date	Datetime	Y	YYYY-MM-DD HH:mm:ss
plaza	String(6)	Y	
lane	String(10)	Y	
avc	Integer	Y	
disc_fare	Integer	Y	
full_fare	Integer	Y	
ind_rev	Decimal	Y	
act_rev	Decimal	Y	

thea_id	String(20)	Y	
previous	String(40)		
current	String(40)		

Example:

```
{
  "file_type": "recall",
  "acct_id": 20140056,
  "ufm_id": 123456789,
  "txn_date": "2017-11-20 14:24:34",
  "agency": "",
  "transponder": "",
  "lic_plate": "J409BI",
  "state": "FL",
  "event_date": "2018-03-14 10:30:21",
  "plaza": "101720",
  "lane": "60S",
  "avc": 2,
  "disc_fare": 166,
  "full_fare": 191,
  "ind_rev": 0,
  "act_rev": 1.66,
  "thea_id": "5616E438004E",
  "previous": "",
  "current": ""
}
```

### 1.2.6 Recall Response Data Format

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	"recall"
result_code	String	Y	
message	String	Y	
acct_id	Integer	Y	Same as the Request data
error_field	Array		Optional list depending on "result_code"
field_name	String		Name of the field which has wrong data
error_code	String		Error reason for the field

Successful Example:

```
$VAR1 = {"file_type":"recall",
         "result_code":"200",
```

```

"message":"OK",
"acct_id":29452925,
"error_field":[]
};

```

Failed Example:

```

$VAR1 = {"file_type":"recall",
"result_code":"414",
"message":"UFM not found",
"acct_id":33859491,
"error_field":[]
}

```

## 1.3 UFM Reconciliation File Inventory and Specification

### 1.3.1 Overview

All previous day UFM activity is reported in the UFM reconciliation. The “Amendment Type” represents the activity completed (Paid in full, partially paid, and cancelled).

Amendment Types/Purpose:

- **RECALLED\_FROM\_COLLECTIONS:** Any UFM recalled or cancelled in the system on the previous day. This is both systematic recalls and CSR manual cancellation. The “Actual Toll” amount represents the toll amount cancelled/recalled.
- **PAID\_IN\_FULL\_FROM\_COLLECTIONS:** Any UFM that was paid in full in the system on the previous day. The “Actual Toll” amount represents the toll amount paid (should match the “indicated toll” amount).
- **PAID\_PARTIAL\_FROM\_COLLECTIONS:** Any UFM that was partially paid in the system on the previous day. The “Actual Toll” amount represents the partial toll amount paid.
- **PMT\_REVERSAL\_FROM\_COLLECTIONS :** Any UFM that was paid in the system previously but later reversed due to NSF, Chargeback, ect...

### 1.3.2 UFM Reconciliation

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	“reconciliation”
trans_date	Date		Transaction Date – Original Trip Date(MM/DD/YYYY)
trans_time	Time		Transaction Time – Original Trip Time(HH:mm:ss)
ufm_id	Integer	Y	Transaction UFM ID
invoice1_id	String(20)		Invoice 1 ID
invoice2_id	String(20)		Invoice 2 ID
toll_plaza_name	String(50)		Toll Plaza Name
toll_plaza	String(6)		Toll Plaza
lane_id	String		Lane ID
vehicle_class	Integer		Vehicle Class

indicated_toll	Integer	Y	Indicated Toll – Original toll Amount Reported to CA (unit: cent)
actual_toll	Integer	Y	Actual Toll – Toll amount of “Amendment Type” activity (i.e. if partially paid, only the paid amount will report) (unit: cent)
amend_type	String(50)	Y	Amendment Types: RECALLED_FROM_COLLECTIONS PAID_IN_FULL_FROM_COLLECTIONS PAID_PARTIAL_FROM_COLLECTIONS
plate_chars	String(10)		Plate Characters
plate_state	String(2)		Jurisdiction (LPN State)
plate_type	String		Vehicle Model
plate_type_suffix	String		Vehicle Year
activity_date	Date		CA system activity date (MM/DD/YYYY HH:MM:SS)

Example:

```
{
  "file_type": "reconciliation",
  "trans_date": "10/19/2013",
  "trans_time": "21:29:24",
  "ufm_id": 12697832,
  "invoice1_id": "INV016428279",
  "invoice2_id": "INV017037052",
  "toll_plaza_name": "SR618 SELMON EXPY EAST MAIN WB",
  "toll_plaza": "101760",
  "lane_id": "2",
  "vehicle_class": 2,
  "indicated_toll": 175,
  "actual_toll": 175,
  "amend_type": "PAID_IN_FULL_FROM_COLLECTIONS",
  "plate_chars": "CBFM35",
  "plate_state": "FL",
  "plate_type": "",
  "plate_type_suffix": "",
  "activity_date": "3/14/2018 08:15:22"
}
```

### 1.3.3 Response Data Format

Parameter	Data Type (Max Len)	Required	Description
file_type	String	Y	"reconciliation"
result_code	String	Y	
message	String	Y	

ufm_id	Integer	Y	Same as the Request data
error_field	Array		Optional list depending on "result_code"
field_name	String		Name of the field which has wrong data
error_code	String		Error reason for the field

Success Example:

```
{
  "file_type": "reconciliation",
  "result_code": "200",
  "message": "OK",
  "ufm_id": "239857585"
}
```

Failed Example:

```
{
  "file_type": "reconciliation",
  "result_code": "402",
  "message": "Data out of range",
  "ufm_id": "239857585",
  "error_field": [
    {"field_name": "invoice1_id", "error_code": "11"},
    {"field_name": "phone", "error_code": "13"}
  ]
}
```

## 1.4 Response and Response Error Code

### 1.4.1 Response Codes

Code	Description
200	Success
401	Data Package missing
402	Data Package parsing failed
403	Validation failed
411	Account not found
412	Account and UFM not match
413	UFM already exists
414	UFM not found
491	Out of Service Time
499	Unknown/Other error

### 1.4.1 Response Error Codes

Code	Description
11	Required Field missing
12	Required Field empty
13	Data type mismatch
14	Over-length data
15	Date Out of range
16	Actual is greater or equal to Indicated
99	Unknown/Other error