
**Central Florida Regional Planning Model
Version 6.1
Supplemental User's Guide**



**Prepared for the
Florida Department of Transportation**



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None

List of Acronyms

CFRPM	Central Florida Regional Planning Model
FDOT	Florida Department of Transportation
GUI	Graphical User Interface
LRTP	Long Rang Transportation Plan
MOE	Measure(s) of Effectiveness
MPO	Metropolitan Planning Organization
TAZ	Transportation Analysis Zone
TPO	Transportation Planning Organization

1 INTRODUCTION

The Florida Department of Transportation (FDOT) District 5 developed a new version of the Central Florida Regional Planning Model (CFRPM) called CFRPM 6.0. This model was developed for the 2040 update to the L RTPs for the five MPO/TPOs within the District. The 6.0 model served as the officially adopted model for the region. Upon its release, the CFRPM 6.0 model was updated with changes made to the user interface and catalog to make it easier to perform standard model tasks, becoming CFRPM version 6.1

A complete user guide is not available for the CFRPM 6.0 version of the model, however this document serves as the guide for usage of the new components of CFRPM version 6.1.

The remaining sections of the document include:

- ☐ Use of the Model Control Menu
- ☐ Subarea Analysis Process
- ☐ Customized MPO Reporting
- ☐ Use of Dummy/Unused Zone Centroids

1.1 Official Model Download

To download the official CFRPM 6.1 model users must access the FDOT website:

<http://www.fsutmsonline.net/>

1. Once on this website the user can click on the “Model Download” menu on the left side of the page as shown in Figure 1-1.

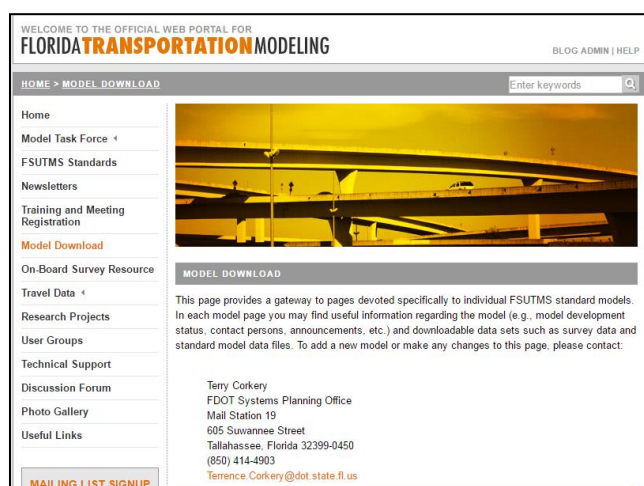


Figure 1-1: FSUTMS Website

2. Scroll down the webpage until the section for District 5 Models can be seen as shown in Figure 1-2 and click on the CFRPM model link.



Figure 1-2: District 5 Model Page

3. A new page will bring the user to the district page. Scroll down to the link to the CFRPM Version 6.1 post and click on the orange title (Figure 1-3) to get to the file download page as shown in Figure 1-4.

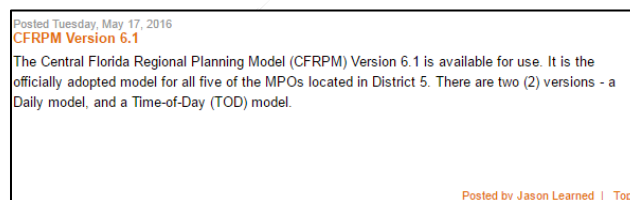


Figure 1-3: CFRPM Model Download Post

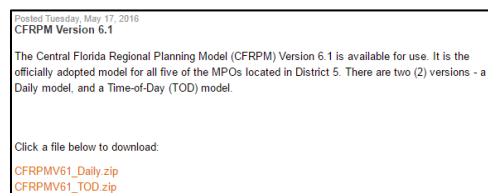


Figure 1-4: Model Download Links

4. Depending on the intended use, the user can download the daily model or the time of day (TOD) model from the links.

2 GRAPHICAL USER INTERFACE (GUI)

A GUI is a software interface designed to standardize and simplify the use of computer programs, by using a mouse to manipulate text and images on a display screen featuring icons, windows, drop down menus and text boxes. Several different models from around the state of Florida were obtained to see what components of their GUIs would be of interest for CFRPM. The result is the interface described in this section of the report. This section of the report will discuss the Design and Use of the Scenario Control for the GUI and the Catalog Keys.

2.1 Design and Use of the Scenario Control for the GUI

The scenario user control interface may be accessed by double-clicking on a scenario item in the scenario list, typically shown in the upper left corner of the user application window in CUBE, as shown in Figure 2-1.

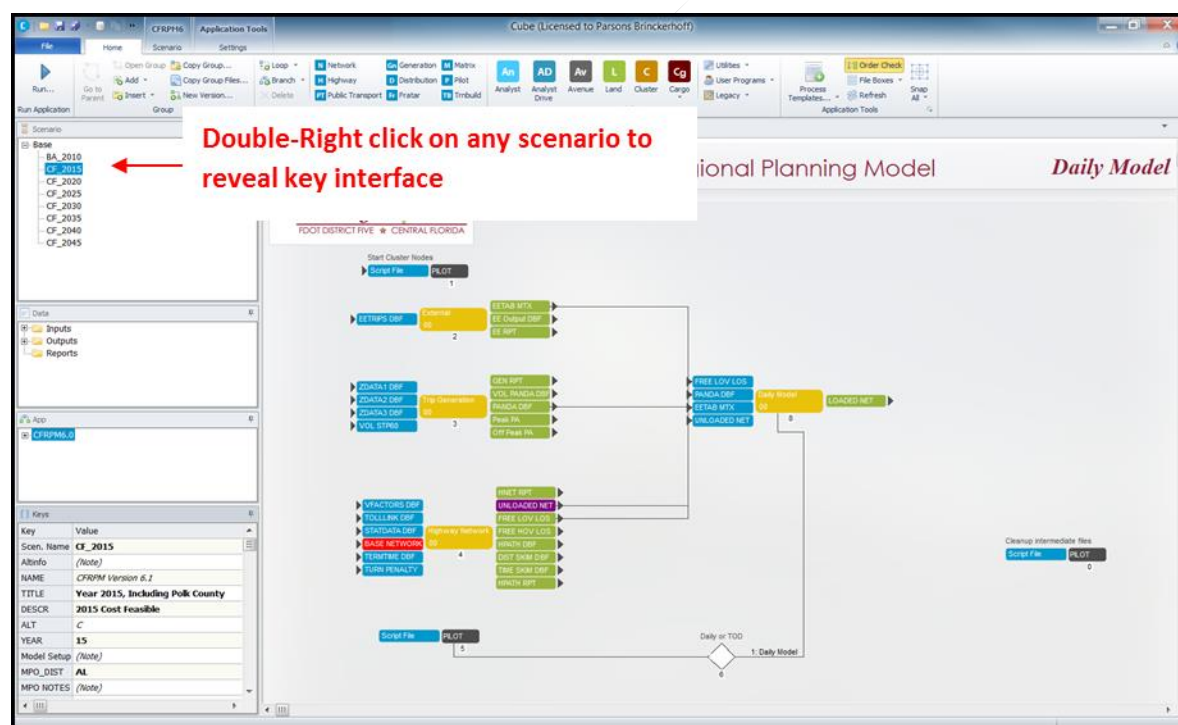


Figure 2-1: Opening the Scenario Control User Interface

This will reveal the first page of the scenario control user interface, which allows the user to specify various key values, both numeric and string-based that help define the scenario. The GUI varies slightly between the Daily and TOD models, therefore screenshots may be slightly different for a user depending on the version being used in application¹. The user can determine if they are using the daily or TOD

¹ In addition, the CUBE settings can be changed by the user to move GUI components so that logical groupings can appear on one screen.

models by referring to the top of the scenario screen as shown highlighted by the yellow box in Figure 2-2.

The GUI has multiple pages that help the user define the alternative being run, the steps of the model, as well as the model parameters. Figure 2-2 through Figure 2-7 show the pages of the CFRPM GUI.

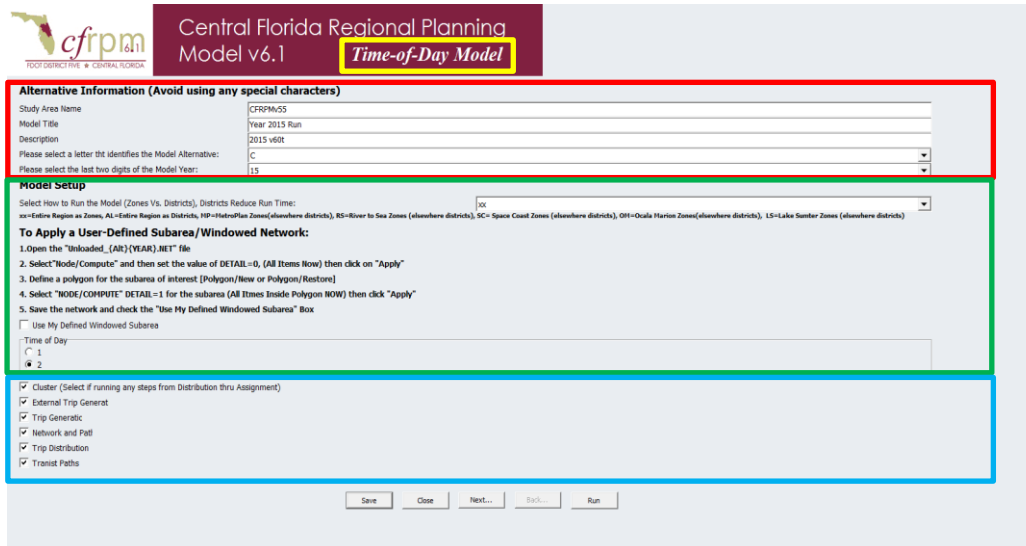


Figure 2-2: CFRPM GUI Page 1

The flow of the GUI begins with the Alternative Information which includes the Study Area Name, Model Title, Description, alternative letter, and last two digits of the alternative year as shown by the red highlighted box in Figure 2-2. The user should note that the Name, Title, and Description fields are character strings and should avoid special characters. Both the alternative letter and two digit year are drop down lists the user can use to specify the model scenario.

The next section of the GUI contains the Model Setup and is highlighted by the green box in Figure 2-2. This section allows the user to select how the model is to be run by allowing for the selection of districting (the implementation of districting allows the user to save significant model run time by reducing the number of zone to zone pairs required to be run by the model). The selections are to run the model for a single MPO where the selected MPO is run by TAZs and the remainder of the model is run by districts, or to run the entire model as districts or finally to run the entire model as TAZs. This is done through a drop down list and the explanation for each option are denoted under the drop down menu.

The user can choose to implement the subarea analysis option in this section of the GUI. The explanation of using the subarea process is outline in Section 3 of the guide.

The section of the GUI highlighted by the blue box in Figure 2-2 and continued in Figure 2-3 is where the user controls the execution of individual model steps. This is done by putting a check mark in the box of the step(s) the user wishes to run. This includes the activation of Cube Cluster and also the selection of

outputting MPO specific reports or the entire model report. Caution should be observed when selecting or de-selecting these steps so that the resulting model run does not skip intermediate model steps; and that the necessary input files are available when starting the model after the initial step. The details of the MPO Reporting are explained in Section 4 of the guide.

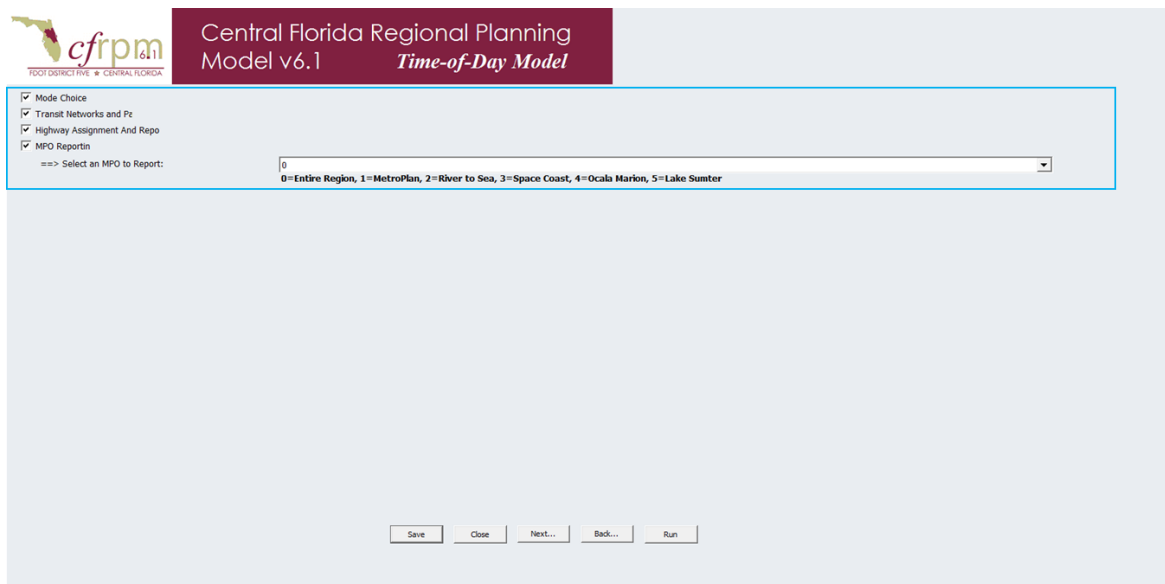



Figure 2-3: CFRPM GUI Page 2

Figure 2-4 through Figure 2-7 display the model parameters from the GUI. Generally these parameters should not be changed, as they specify basic behavioral parameters and model controls. ***The user should have a full understanding of any parameters he or she modifies on these pages, and what the likely implications are for the model results.***


The one exception is the “select link/select zone” parameter shown in Figure 2-5. The user must input the link(s) or zone(s) here. These fields are freeform and values must be correctly entered as character or the application(s) won’t work. Selected link and selected zone options are executed through separate model applications.



Central Florida Regional Planning Model v6.1
Time-of-Day Model

AM Peak Capacity Factor	2.5
Midday Capacity Factor	6
PM Peak Capacity Factor	3
Night Period Capacity Factor	10
Number of Internal Zones	5350
Total Numbers of Zones	5406
Minimum Non Centroid Node Number	10000
Print String	print=1

Figure 2-4: CFRPM GUI Page 3




Central Florida Regional Planning Model v6.1
Time-of-Day Model

Data

Toll Factor	0.06
Units	5280
Acceleration Rate	2.5
Detail Report	0
Path From Node	718
Path To Node	499
Skimmed Origin Zone	718
Highway Equilibrium Iterations	50
Iteration on Attraction	50
Maximum Purpose	9
Damping Factor Used in Highway Equilibrium	0.5
Analysis Mode (1=Analysis, 0=Validation)	0
Selected Zone	718
Selected Link	675024-25028
Number of Counties	12
Volusia Maximum Internal Zone Number	5350
Number of First External Volusia Zone	5351
Volusia Minimum Internal Zone Number	1
Orlando Airport Zone1	977
Orlando Airport Zone 2	978
XFERACC	0.6
MAXWLKACCLINKS	99
WALKACC	0.6
isMicroCode	0
AVGWLKSPD	2.5

Figure 2-5: CFRPM GUI Page 4




Central Florida Regional Planning
Model v6.1 *Time-of-Day Model*

AVGWALK	0.5
MINPCVW	15
CBDZone	718
AOC	9.5
InflTransitFare	0.836
InflAOC	1
InflParkingCost	1
MaxMode	67
AUTOCCPNR	1.2
AUTOCCNR	1.2
SelOrigin	0
SelDest	0
OC3	3.15 3.45 3.27 3.55 3.97
OCTA	1.2
MINRUN1	0.4
MINRUN2	0.4
MINRUN3	2
MINRUN4	1
isProjectModeExists	0
TermTime-AT1x	5
TermTime-AT2x	3
TermTime-AT3x	1
TermTime-AT4x	1
TermTime-AT5x	1
Number of Sectors in Trip Generation	11

1 if no HOV lane; 2 if 2 3+ carpools can use HOV lanes; 3 if only 3+ carpools can use HOV lanes; 4 if separate facilities for 2

Figure 2-6: CFRPM GUI Page 5



Central Florida Regional Planning
Model v6.1 *Time-of-Day Model*

External Trips Threshold	5000
occ3	3.37
occ3hbw	3.15
occ3hbo	3.45
occ3hbb	3.27

Figure 2-7: CFRPM GUI Page 6

2.2 Catalog Keys

There are 94 Keys in the CFRPM 6.1 catalog. The new and/or modified keys related to the GUI are shown in Table 2-1. Following Table 2-1 is



Key	Value
Scen. Name	BA_2010
Altinfo	(Note)
NAME	CFRPMv55
TITLE	Year 2010 Run w
DESCR	2010 v61t
ALT	A
YEAR	10
Model Setup	(Note)
MPO_DIST	0
MPO NOTES	(Note)
TOD	1
Model Steps	(Note)
Cluster_Start	1
EXT_STEP	0
TGEN_STEP	0
HNET_STEP	1
DISTR_STEP	1
TRANSIT_STEP	1
MODE_STEP	1
TASSIGN_STEP	1
HASSIGN_STEP	1
MPORPT_STEP	1
MPO	4
MPO_NOTE2	(Note)
Special Options	(Note)

Key	Value
N1	(Note)
AMCAPFAC	2.5
MDCAPFAC	6
PMCAPFAC	3
NTCAPFAC	10
NODEMIN	10000
UNITS	5280
ACCELRATE	2.5
MAXPURP	9
COUNTY	12
OIA1	977
OIA2	978
XFERACC	0.6
MAXWLKACCLNKS	99
WALKACC	0.6
AVGWLKSPD	2.5
AVGWALK	0.5
MINPCW	15
CBDZone	718
AOC	9.5
InflTransitFare	0.836
InflAOC	1
InflParkingCost	1
MaxMode	67
AIITOCPPNR	1.2

Key	Value
Special Options	(Note)
SelectLink	L=25024-25028
SelectZone	718
Parameter Set 1	(Note)
DAMPING	0.5
ITER	50
ATITER	50
ZONES1	5350
ZONES	5406
ZONESIV	5350
ZONESEV	5351
ZONESAV	1
DetailReport	0
IsProjectModeExists	0
IsMicroCode	0
ANALYSIS	0
PRINTO	printo=1
CTOLL	0.06
ToNode	499
FromNode	718
SkimZone	718
HOVFlag	1
SelOrigin	0
SelDest	0
N1	(Note)

Key	Value
AUTOCCPNR	1.2
AUTOCCNR	1.2
N2	(Note)
OC3	3.15 3.45 3.27 3.
OCTA	1.2
MINRUN1	0.4
MINRUN2	0.4
MINRUN3	2
MINRUN4	1
TermTime-AT1x	5
TermTime-AT2x	3
TermTime-AT3x	1
TermTime-AT4x	1
TermTime-AT5x	1
SECTOR	11
ETRIPS	5000
occ3	3.37
occ3hbw	3.15
occ3hbo	3.45
occ3nhb	3.27

Figure 2-8 which shows the keys in the interface.

Table 2-1: New or Modified Catalog Keys

Key	Definition
Altinfo	New Note key used as a heading for the alternative information section of the GUI. Also informs the user to avoid using any special characters as this can cause the program to fail.
ALT	Modified key used to designate the alternative of the scenario. Represented by one of the 26 letters in the alphabet. Converted to a drop down list instead of free form input to avoid errant entries.
YEAR	Modified key used to designate the two digit year of the scenario. Represented by a number between 01 and 99. Converted to a drop down list instead of free form input to avoid errant entries.
Model Setup	New Note key used as a heading for the setup of the model to run model districting and either daily or time of day options in the GUI.
MPO_DIST	New key used to designate how the user wishes the districting to be run. Setup as a drop down list to avoid errant entries in the GUI.
MPO NOTES	New Note key used to define the districting options for selection in the MPO_DIST key in the GUI.
Model Steps	New Note key used as a heading for the steps of the model to run in the GUI.
EXT_STEP	New key used for the selection of the External Trip step in the GUI.
TGEN_STEP	New key used for the selection of the Trip Generation step in the GUI.
HNET_STEP	New key used for the selection of the Highway Network step in the GUI.
DISTR_STEP	New key used for the selection of the Trip Distribution step in the GUI.
TRANSIT_STEP	New key used for the selection of the Transit Network step in the GUI.
MODE_STEP	New key used for the selection of the Mode Choice step in the GUI.
TASSIGN_STEP	New key used for the selection of the Transit Assignment step in the GUI.
HASSIGN_STEP	New key used for the selection of the Highway Assignment step in the GUI.
MPORPT_STEP	New key used for the selection of the MPO Report step in the GUI.
MPO	New key used for the selection of which MPO to report in the MPO Report step in the GUI.
MPO_NOTE2	New Note key used to define the MPO numbers for selection in the GUI.
Special Option:	New Note key used as a heading for the Select Link and Zone applications in the GUI.
Parameter Set 1	New Note key used as a heading for the first page of Parameters in the GUI.
N1 & N2	New Note keys used as a heading for the second and third pages of Parameters in the GUI.

Key	Value
Scen. Name	BA_2010
Altinfo	(Note)
NAME	CFRPMv55
TITLE	Year 2010 Run w
DESCR	2010 v61t
ALT	A
YEAR	10
Model Setup	(Note)
MPO_DIST	0
MPO NOTES	(Note)
TOD	1
Model Steps	(Note)
Cluster_Start	1
EXT_STEP	0
TGEN_STEP	0
HNET_STEP	1
DISTR_STEP	1
TRANSIT_STEP	1
MODE_STEP	1
TASSIGN_STEP	1
HASSIGN_STEP	1
MPORPT_STEP	1
MPO	4
MPO_NOTE2	(Note)
Special Options	(Note)

Key	Value
N1	(Note)
AMCAPFAC	2.5
MDCAPFAC	6
PMCAPFAC	3
NTCAPFAC	10
NODEMIN	10000
UNITS	5280
ACCELRATE	2.5
MAXPURP	9
COUNTY	12
OIA1	977
OIA2	978
XFERACC	0.6
MAXWLKACCLNKS	99
WALKACC	0.6
AVGWLKSPD	2.5
AVGWALK	0.5
MINPCW	15
CBDZone	718
AOC	9.5
InflTransitFare	0.836
InflAOC	1
InflParkingCost	1
MaxMode	67
AITOCCPNR	1.2

Key	Value
Special Options	(Note)
SelectLink	L=25024-25028
SelectZone	718
Parameter Set 1	(Note)
DAMPING	0.5
ITER	50
ATITER	50
ZONESI	5350
ZONES	5406
ZONESIV	5350
ZONESEV	5351
ZONESAV	1
DetailReport	0
isProjectModeExists	0
isMicroCode	0
ANALYSIS	0
PRINTO	printo=1
CTOLL	0.06
ToNode	499
FromNode	718
SkimZone	718
HOVFlag	1
SelOrigin	0
SelDest	0
N1	(Note)

Key	Value
AUTOCCPNR	1.2
AUTOCCKNR	1.2
N2	(Note)
OC3	3.15 3.45 3.27 3.
OCTA	1.2
MINRUN1	0.4
MINRUN2	0.4
MINRUN3	2
MINRUN4	1
TermTime-AT1x	5
TermTime-AT2x	3
TermTime-AT3x	1
TermTime-AT4x	1
TermTime-AT5x	1
SECTOR	11
ETRIPS	5000
occ3	3.37
occ3hbw	3.15
occ3hbo	3.45
occ3nhb	3.27

Figure 2-8: Catalog Keys in GUI

3 SUBAREA APPLICATION

The CFRPM model incorporates the ability to perform a subarea analysis to allow for small-area traffic analysis and efficient evaluation of specific subarea planning issues.

The following sections describe how the SubArea application was created in both the Daily and Time of Day (TOD) versions of CFRPM and how to use it.

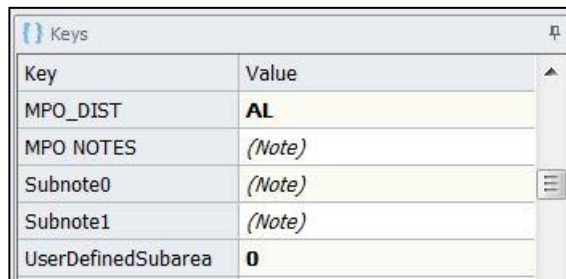
3.1 Catalog Keys

There are five (5) keys used in the SubArea application. These keys are described and shown in Table 3-1 and are found in the model as shown in the model interface shown in Figure 3-1. The first two keys used in the SubArea application already existed in the model and are documented in Table 2-1 and noted again in Table 3-1 for purposes of understanding this process.

There are three (3) new keys required for the SubArea application in both the Daily and TOD modes which include 2 note keys and 1 “check box” key as described in Table 3-1.

Table 3-1: SubArea Application Catalog Key Definitions

Key	Definition
MPO_DIST	Key used to designate how the user wishes the districting to be run. Setup as a drop down list to avoid errant entries in the GUI.
MPO NOTES	Note key used to define the districting options for selection in the MPO_DIST key in the GUI.
Subnote0	New Note key used as a heading for the User-Defined Subarea/Windowed Network section of the GUI.
Subnote1	New Note key used to define the steps the user must take to execute their own Subarea for selection.
UserDefinedSubarea	New key used to select the users Defined Windowed Subarea step in the GUI.



Key	Value
MPO_DIST	AL
MPO NOTES	(Note)
Subnote0	(Note)
Subnote1	(Note)
UserDefinedSubarea	0

Figure 3-1: SubArea Application Keys

3.2 Use of the SubArea Application

As shown in the description of the catalog keys in Section 2.2 of this guide in Figure 2-2, the subarea process requires the user to specify the necessary attributes required to properly perform the analysis. Table 3-2 shows the definition of the keys specific to running the SubArea procedure.

The SubArea section of the GUI in both the Daily and TOD models allow the user to select how the districting is implemented during the model run.

Table 3-2: MPO_DIST Catalog Key Definitions

Key Value	Definition
xx	This selection runs the Entire Region as Zones.
AL	This selection runs the Entire Region as Districts.
MP	This selection runs MetroPlan as Zones and the rest of the model area as Districts. *The MetroPlan area additionally includes all of Polk County.
RS	This selection runs River to the Sea TPO as Zones and the rest of the model area as Districts.
SC	This selection runs Space Coast TPO as Zones and the rest of the model area as Districts. *The Space Coast area additionally includes the northern half of Indian River County.
OM	This selection runs Ocala/Marion TPO as Zones and the rest of the model area as Districts.
LS	This selection runs Lake/Sumter MPO as Zones and the rest of the model area as Districts.

The model can be run four (4) different ways and is accomplished through a drop down list for the first three options and through a polygon procedure for the last. Table 3-2 shows the key needed for each option.

1. The user can select a specific MPO/TPO area. Once selected, the MPO/TPO area is run as TAZs with the rest of the model run as districts.
2. The user can select the entire region as a TAZ. Once selected, the whole model area is run as TAZs.
3. The user can select the entire region as districts. Once selected, the whole model area is run as districts.
4. The user can define their own SubArea. Once selected, the model is run with the selected SubArea as TAZs with the rest of the model run as districts.

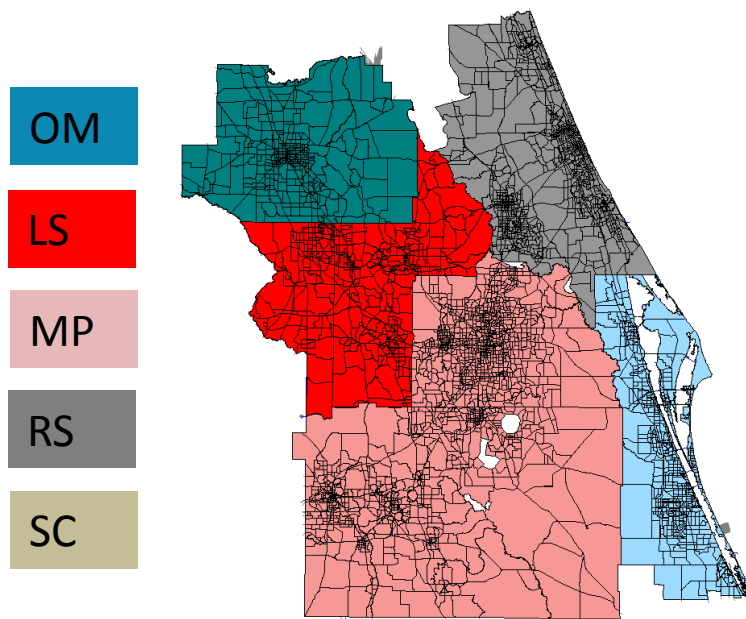
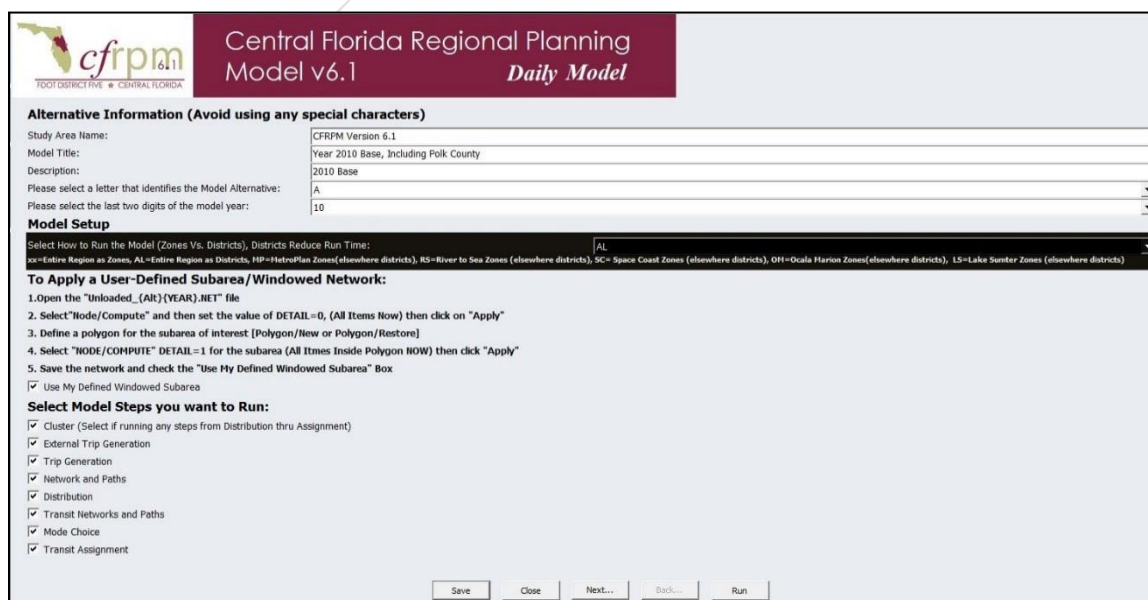


Figure 3-2: Pre-Defined Districts

To run the model by MPO, the entire region as DISTRICTS or TAZs the user simply selects that option from the drop down menu. As an example, Figure 3-3 shows the selection of “AL” to run the entire model as Districts.



Central Florida Regional Planning Model v6.1
Daily Model

Alternative Information (Avoid using any special characters)

Study Area Name: CFRPM Version 6.1
 Model Title: Year 2010 Base, Including Polk County
 Description: 2010 Base
 Please select a letter that identifies the Model Alternative: A
 Please select the last two digits of the model year: 10

Model Setup

Select How to Run the Model (Zones Vs. Districts). Districts Reduce Run Time: [AL]
 (AL=Entire Region as Zones, AL=Entire Region as Districts, MP=MetroPlan Zones (elsewhere districts), RS=River to Sea Zones (elsewhere districts), SC=Space Coast Zones (elsewhere districts), OH=Ocala Marion Zones (elsewhere districts), LS=Lake Sumter Zones (elsewhere districts))

To Apply a User-Defined Subarea/Windowed Network:

1. Open the "Unloaded_(Alt):(YEAR).NET" file
2. Select "Node/Compute" and then set the value of DETAIL=0, (All Items Now) then click on "Apply"
3. Define a polygon for the subarea of interest [Polygon/New or Polygon/Restore]
4. Select "NODE/COMPUTE" DETAIL=1 for the subarea (All Items Inside Polygon NOW) then click "Apply"
5. Save the network and check the "Use My Defined Windowed Subarea" Box

☒ Use My Defined Windowed Subarea

Select Model Steps you want to Run:

- ☒ Cluster (Select if running any steps from Distribution thru Assignment)
- ☒ External Trip Generation
- ☒ Trip Generation
- ☒ Network and Paths
- ☒ Distribution
- ☒ Transit Networks and Paths
- ☒ Mode Choice
- ☒ Transit Assignment

Save Close Next... Back... Run

Figure 3-3: Select District/Zone Option

To run the model with a user Defined Windowed SubArea the user follows the instructions located under the GUI heading “To Apply a User-Defined Subarea/Windowed Network”. Figure 3-4 shows a zoom-in of that portion of the GUI and explains the four user defined preparatory steps.

To Apply a User-Defined Subarea/Windowed Network:

1. Open the "Unloaded_{Alt}{YEAR}.NET" file
 2. Select "Node/Compute" and then set the value of DETAIL=0, (All Items Now) then click on "Apply"
 3. Define a polygon for the subarea of interest [Polygon/New or Polygon/Restore]
 4. Select "NODE/COMPUTE" DETAIL=1 for the subarea (All Itmes Inside Polygon NOW) then click "Apply"
 5. Save the network and check the "Use My Defined Windowed Subarea" Box
- ☒ Use My Defined Windowed Subarea

Figure 3-4: User Defined Subarea Steps

The UserDefinedSubarea Keys in Table 3-3 must also be used in the model run.

Table 3-3: UserDefinedSubarea Catalog Key Definitions

Key Value	Definition
0	Does not run the User Defined Subarea scripts
1	Runs the User Defined Subarea scripts

As shown in Figure 3-5, the first step is to open the input highway network.

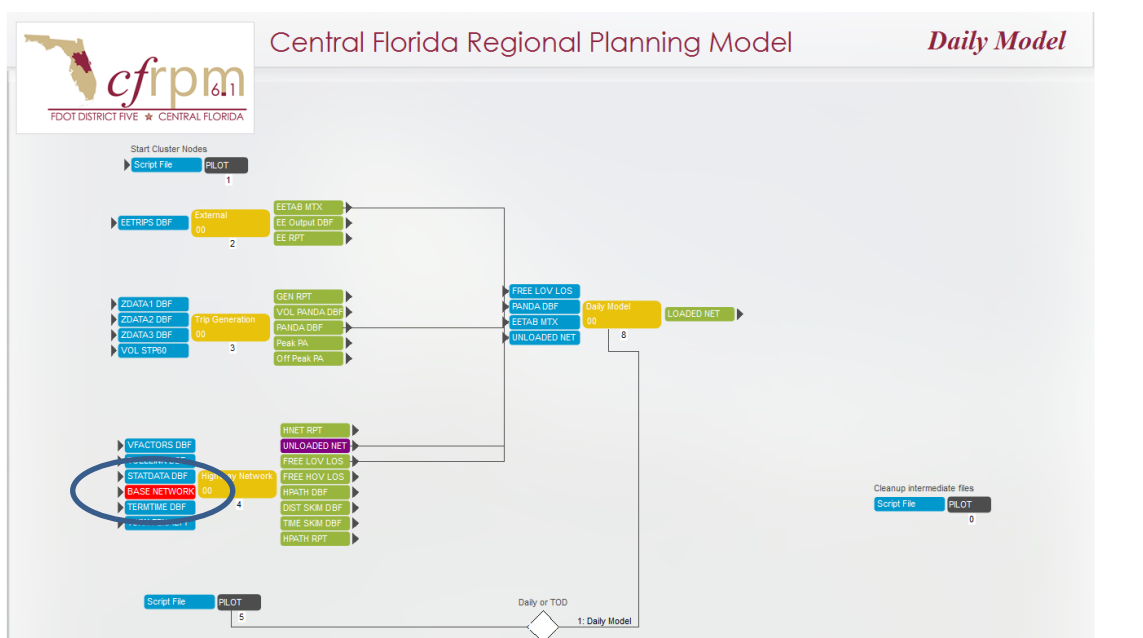


Figure 3-5: User Defined Subarea Step 1-Edit Network

As shown in Figure 3-6, the second step is to set the detail=0 to remove any previously selected sets in the model. This can be done by selecting the node menu, then use compute to set the value to zero.

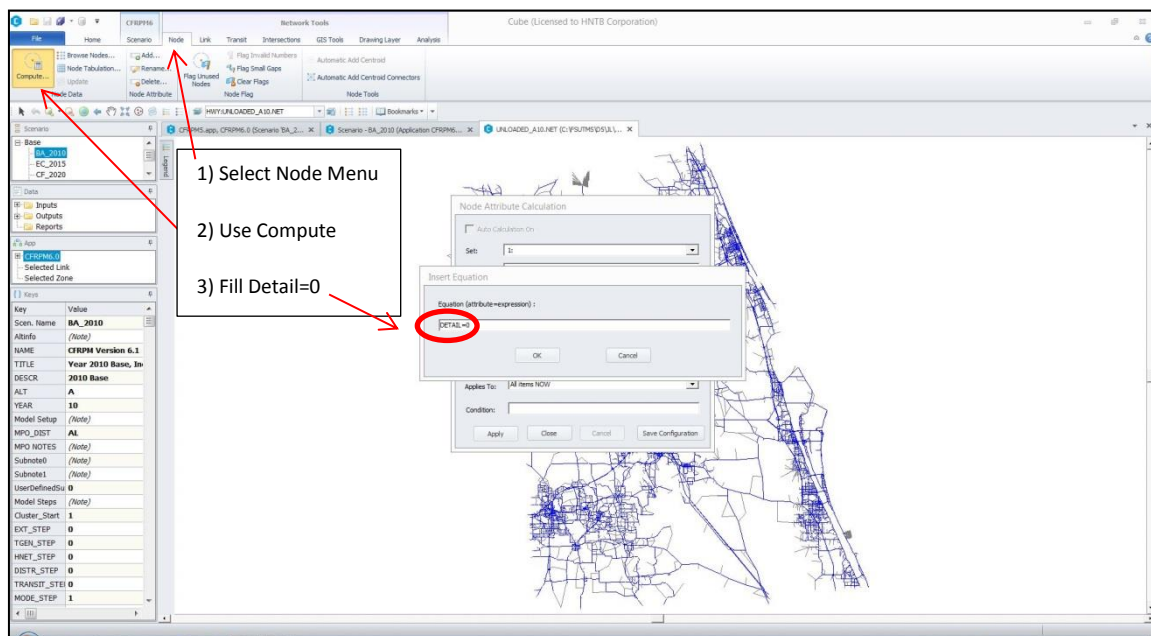


Figure 3-6: User Defined Subarea Step 2 – Clear Selection Sets

As shown in Figure 3-7, the third step is the user defining the subarea by drawing a polygon around the location they want to analyze. It is good practice is to avoid cutting centroid connectors, and to avoid concave boundary shapes when defining the subarea.

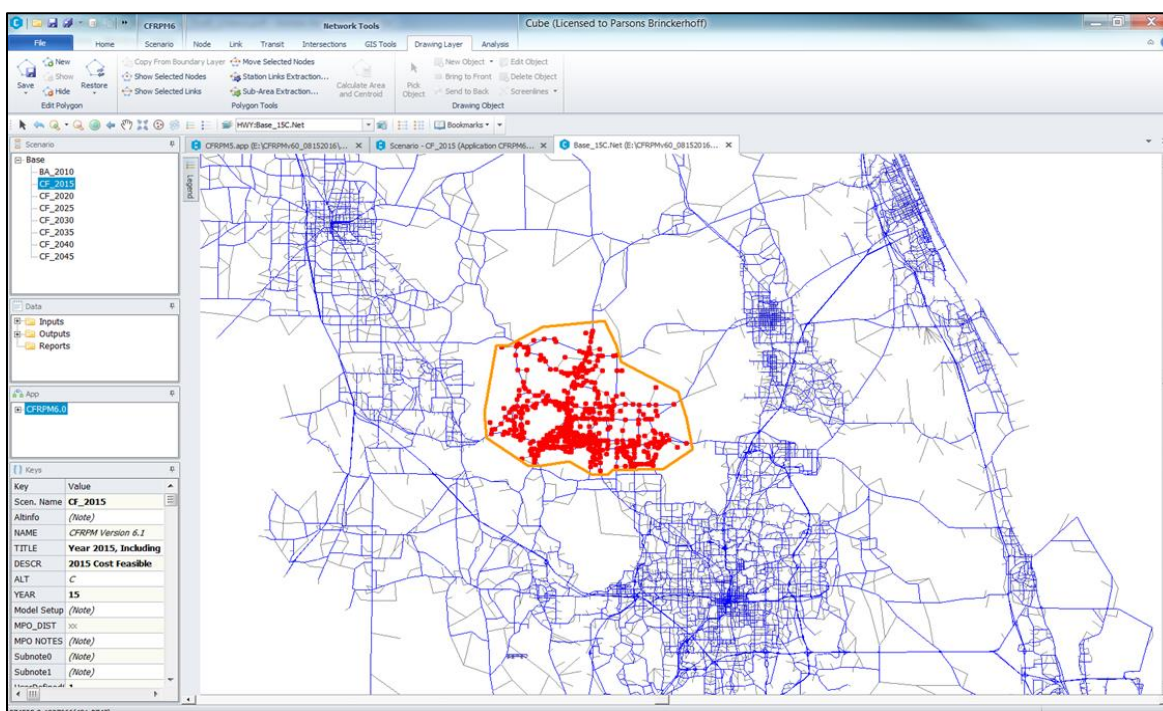


Figure 3-7: User Defined Subarea Step 3 – Select Subarea Polygon

Step four is to set the detail=1 as shown in Figure 3-8 to save this as your subarea selection set.

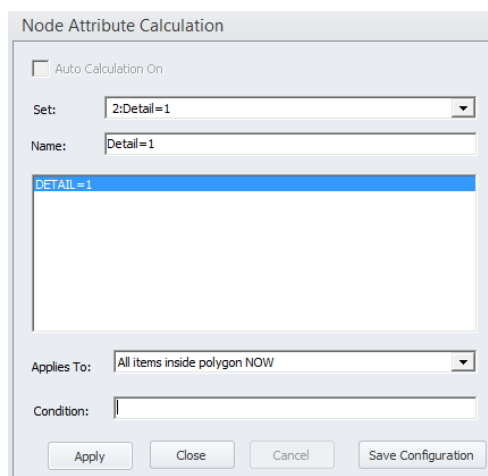
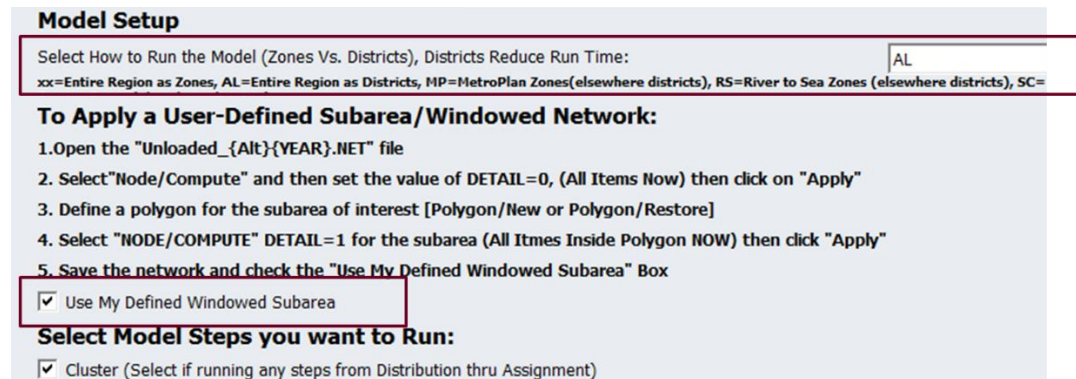


Figure 3-8: User Defined Subarea Step 4- Save/Set Selection Set

The final step is to select the “check box” for “Use My Defined Windowed Subarea” on the GUI as shown in Figure 3-9.



Model Setup

Select How to Run the Model (Zones Vs. Districts), Districts Reduce Run Time:

xx=Entire Region as Zones, AL=Entire Region as Districts, MP=MetroPlan Zones (elsewhere districts), RS=River to Sea Zones (elsewhere districts), SC=

To Apply a User-Defined Subarea/Windowed Network:

1. Open the "Unloaded_{Alt}{YEAR}.NET" file
2. Select "Node/Compute" and then set the value of DETAIL=0, (All Items Now) then click on "Apply"
3. Define a polygon for the subarea of interest [Polygon/New or Polygon/Restore]
4. Select "NODE/COMPUTE" DETAIL=1 for the subarea (All Items Inside Polygon NOW) then click "Apply"
5. Save the network and check the "Use My Defined Windowed Subarea" Box

☒ Use My Defined Windowed Subarea

Select Model Steps you want to Run:

☒ Cluster (Select if running any steps from Distribution thru Assignment)

Figure 3-9: User Defined Subarea Final Step

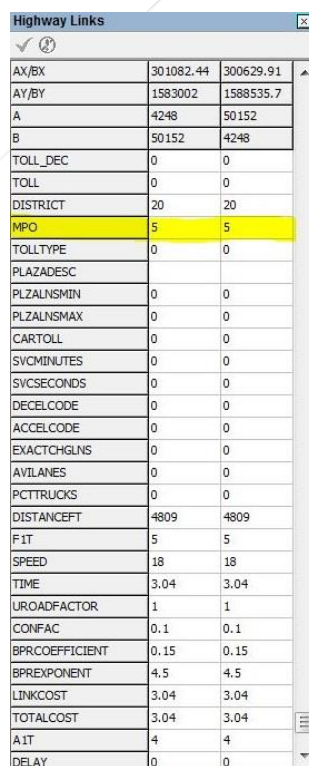
4 MPO REPORTING

Having MPO/TPO specific model validation reports allows for understanding impacts in just those areas instead of getting a regional impact. It is also useful for easily calculating MOEs for alternatives analysis at the MPO/TPO scale. Therefore, a series of reports are produced as a part of the CFRPMV6.1 regular model runs².

4.1 Network Preparation

The CFRPMV6.1 network was modified to include a new link attribute called “MPO” for every link in the network. This attribute is used to group all the links in the model by their respective MPO/TPO areas so that reports can be generated for each MPO/TPO. **In order for a user to assure the MPO/TPO reports are valid, the user must assure that the links in those regions are properly attributed.** Any network changes made by a user requires that the MPO attribute field be updated.

Figure 4-1 shows the attribute on the network layer in the model.



Highway Links		
AX/BX	301082.44	300629.91
AY/BY	1583002	1588535.7
A	4248	50152
B	50152	4248
TOLL_DEC	0	0
TOLL	0	0
DISTRICT	20	20
MPO	5	5
TOLLTYPE	0	0
PLAZADESC		
PLZALNSMIN	0	0
PLZALNSMAX	0	0
CARTOLL	0	0
SVCMINUTES	0	0
SVCSECONDS	0	0
DECELCODE	0	0
ACCELCODE	0	0
EXACTCHGLNS	0	0
AVILANES	0	0
PCTTRUCKS	0	0
DISTANCEFT	4809	4809
FIT	5	5
SPEED	18	18
TIME	3.04	3.04
UROADFACOR	1	1
CONFAC	0.1	0.1
BPRCOEFFICIENT	0.15	0.15
BPREXPONENT	4.5	4.5
LINKCOST	3.04	3.04
TOTALCOST	3.04	3.04
AIT	4	4
DELAY	0	0

Figure 4-1: MPO Attribute

² This was done for both the Daily and the Time of Day models. The Time of Day model was only modified for the AM and PM peak periods and not for all time periods at the request of the FDOT.

The MPO numbers corresponding to each MPO/TPO are shown in Table 4-1. These are the values the user must code on the network link.

Table 4-1: MPO Numbers in Highway Network

MPO #	MPO/TPO Name
0	Polk & Northern ½ of Indian River Counties
1	MetroPlan Orlando
2	River to Sea TPO
3	Space Coast TPO
4	Ocala/Marion TPO
5	Lake – Sumter MPO

A step has been added to the CFRPM to check for the potential of the following coding errors:

- Any TAZ's MPO attribute that does not reflect the proper coding based on the current CFRPM 6 internal TAZ range shown in Table 4-2.
- The MPO attribute was found to be coded as 0 for any roadway input network node

Table 4-2: MPO Specific Range

MPO/TPO	MPO Code	CFRPM 6.1
MetroPlan Orlando and Polk County	1	1-1600 (Metroplan) 5101-5850 (Polk)
River to Sea TPO and Flagler County	2	2051-3250 (River to Sea) 4851-5100 (Flagler)
Space Coast TPO and northern Indian River County	3	3251-4050 (Space Coast) 5851-6000 (Indian River)
Ocala/Marion TPO	4	4051-4600 (Ocala/Marion TPO)
Lake-Sumter TPO	5	1601-2050 (Lake) 4601-4850 (Sumter)

If an error occurs related to the MPO coding issue the model will stop processing.

4.2 Summary Reports

The CFRPM includes summary reports at the regional and district level and includes each major model step for each of the MPO/TPOs in the region. Figure 4-2 displays the model reporting application screen that shows the scripts for each MPO/TPO.

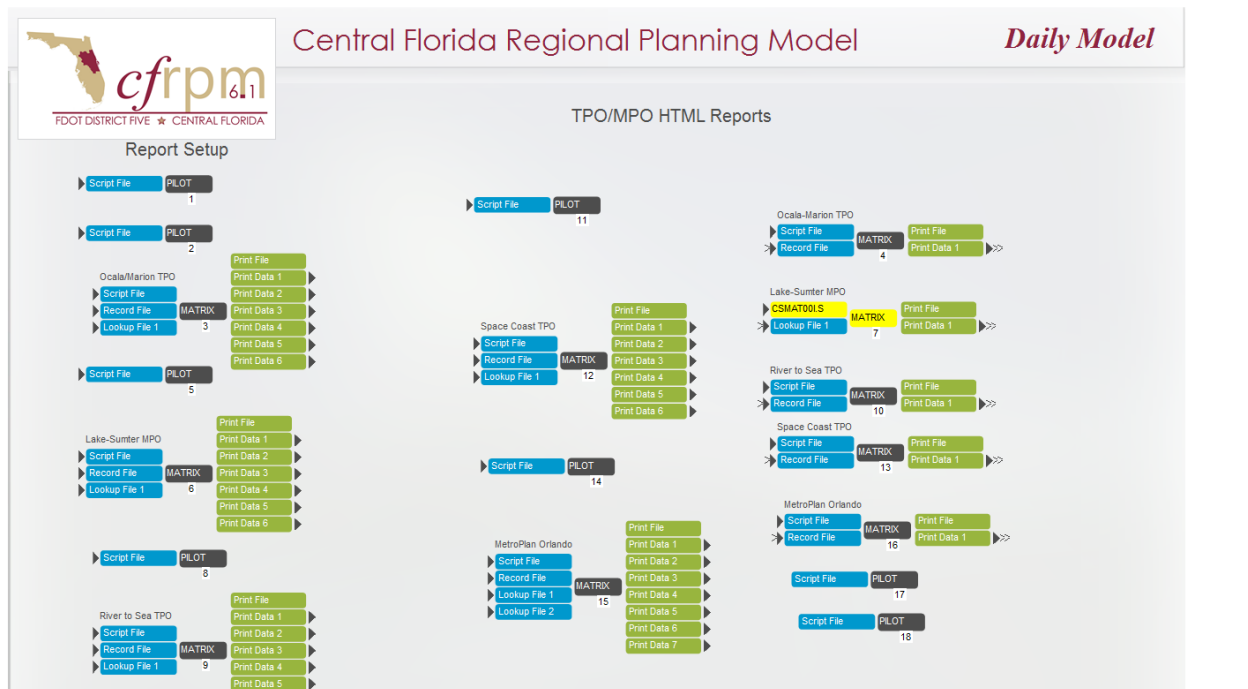


Figure 4-2: Model Report Application

The CFRPM utilizes HTML for its current reporting format. The HTML formatting was retained and updated to include the individual MPO/TPO reports. Figure 4-3 shows the user where to find the summary reports generated during the model run. Figure 4-4 shows the report initial page where the user can choose what reports to view.

These reports may be viewed by dragging the *.rpt files to an open excel application window to edit them or in an internet window for viewing.



Figure 4-5 shows an example of what a user will see if they click on the “Trip Generation” report link from Figure 4-4.

Trip Generation Summary Report													
CFRPM STANDARD TRIP GENERATION SUMMARY													
Trip Purpose	Seminole	Orange	Osceola	Lake	Volusia	Brevard	Marion	Sumter	Flagler	Polk	Indian River	Total	
PRODUCTIONS													
HBW	237,668	641,295	176,945	148,767	249,912	274,112	155,387	39,327	51,473	496,794	26,355	2,498,035	
HBSH	130,641	546,298	122,587	100,553	152,663	159,610	99,430	33,851	37,372	190,727	16,593	1,590,325	
HBSR	104,057	478,722	227,279	78,759	214,020	98,102	69,710	21,634	27,866	183,338	12,435	1,515,922	
HBO	352,771	1,115,859	304,346	261,378	376,848	423,677	260,574	81,214	92,609	524,050	42,889	3,836,215	
NHB	510,266	1,829,068	257,255	286,555	462,266	505,814	279,964	76,369	65,116	549,801	43,170	4,865,644	
LTK	131,137	450,855	120,770	89,962	182,562	169,754	97,339	29,289	26,399	117,731	13,455	1,429,253	
HTK	33,780	111,539	26,126	23,445	25,869	38,106	25,837	8,573	4,926	36,296	4,713	339,210	
TAXI	1,615	5,315	1,424	1,120	1,731	1,937	1,162	366	288	1,011	179	16,148	
EI	0	0	20,547	0	4,084	0	90,429	46,720	59,290	199,400	59,216	479,686	
TOTAL	1,501,935	5,178,951	1,257,279	990,539	1,669,955	1,671,112	1,079,832	337,343	365,339	2,299,148	219,005	16,570,438	
ATTRACTIONS													
HBW	176,317	870,649	95,386	142,517	196,876	269,442	168,331	44,001	41,279	429,879	23,553	2,458,230	
HBSH	95,335	656,885	55,973	94,888	161,982	152,201	97,610	26,582	25,507	200,098	15,271	1,582,331	
HBSR	105,716	666,235	76,267	106,272	212,492	117,096	107,437	39,675	23,797	236,628	7,700	1,699,314	
HBO	339,991	1,225,902	172,558	246,563	409,692	409,883	255,836	55,902	74,895	489,888	32,562	3,713,672	
NHB	491,871	1,808,451	266,125	303,283	460,087	518,278	290,942	77,354	66,857	549,656	44,056	4,876,960	
LTK	131,137	450,855	120,770	89,962	182,562	169,754	97,339	29,289	26,399	117,731	13,455	1,429,253	
HTK	33,780	111,539	26,126	23,445	25,869	38,106	25,837	8,573	4,926	36,296	4,713	339,210	
TAXI	1,615	5,315	1,424	1,120	1,731	1,937	1,162	366	288	1,011	179	16,148	
EI	0	0	23,333	25,976	34,750	22,133	97,060	39,588	787,571	887,893	45,506	2,002,003	
TOTAL	1,388,430	5,821,357	837,962	1,034,025	1,686,041	1,698,830	1,141,554	321,329	1,051,519	2,949,080	186,995	18,117,121	
Trip Generation Rates													
Trip Production Rates (/Total Occupied DUs)													
	Seminole	Orange	Osceola	Lake	Volusia	Brevard	Marion	Sumter	Flagler	Polk	Indian River	Total	
HBW	1.27	1.23	1.25	0.97	0.96	0.96	0.92	0.62	1.01	1.72	1.14	1.16	
HBSH	0.7	1.05	0.86	0.65	0.59	0.56	0.59	0.54	0.73	0.66	0.72	0.74	
HBSR	0.56	0.92	1.59	0.51	0.82	0.34	0.41	0.34	0.55	0.63	0.54	0.71	
HBO	1.89	2.14	2.14	1.7	1.45	1.48	1.54	1.28	1.82	1.81	1.85	1.79	
HB TOTAL	4.41	5.33	5.85	3.83	3.82	3.34	3.47	2.78	4.11	4.82	4.24	4.4	
NHB	2.73	3.51	1.8	1.86	1.78	1.77	1.66	1.21	1.28	1.9	1.86	2.27	
LTK	0.7	0.86	0.85	0.58	0.7	0.59	0.58	0.46	0.52	0.41	0.58	0.67	
HTK	0.18	0.21	0.18	0.15	0.1	0.13	0.15	0.14	0.1	0.13	0.2	0.16	
EI	0	0	0.14	0	0.02	0	0.54	0.74	1.16	0.69	2.56	0.22	
TOTAL P _s	8.03	9.93	8.84	6.43	6.42	5.83	6.4	5.34	7.18	7.95	9.46	7.72	
Trip Attraction Rates (/Total Employment)													
	Seminole	Orange	Osceola	Lake	Volusia	Brevard	Marion	Sumter	Flagler	Polk	Indian River	Total	
HBW	0.7	0.99	0.8	1.02	0.92	1.1	1.21	1.14	1.43	1.41	1.06	1.03	
HBSH	0.38	0.75	0.47	0.68	0.76	0.62	0.7	0.69	0.88	0.66	0.69	0.66	
HBSR	0.42	0.76	0.64	0.76	0.99	0.48	0.77	1.03	0.82	0.78	0.35	0.71	
HBO	1.35	1.39	1.45	1.77	1.92	1.67	1.84	1.45	2.59	1.61	1.47	1.56	
HB TOTAL	2.85	3.88	3.35	4.23	4.59	3.86	4.52	4.32	5.73	4.46	3.57	3.96	
NHB	1.95	2.05	2.23	2.17	2.15	2.11	2.09	2.01	2.31	1.81	1.99	2.05	
LTK	0.52	0.51	1.01	0.65	0.85	0.69	0.7	0.76	0.91	0.39	0.61	0.6	
HTK	0.13	0.13	0.22	0.17	0.12	0.15	0.19	0.22	0.17	0.12	0.21	0.14	
EI	0.05	0.03	0.2	0.19	0.16	0.09	0.7	1.03	27.27	2.92	2.05	0.84	
TOTAL A _s	5.51	6.61	7.02	7.41	7.89	6.91	8.21	8.35	36.4	9.7	8.44	7.6	

Figure 4-5: Example Trip Generation Report

The traditional “HEVAL” reports are stratified by MPO, number of lanes and facility type, along with specific MPO reports and can be found in the report called HASSIGN.RPT. The information output is:

HEVAL Reports

- By Area Type, number of Lanes and Facility Types
- Links and percent of links
- Percent of Links with Counts
- System Miles, Lane miles
- Average Link Length
- Volume, VMT and VHT for Counted Links – assigned and counts
- Volume, VMT and VHT for all links
- Freeflow and congested speeds
- Screenline volumes
- RMSE reports
- By MPO

In addition, several graphical outputs of charts and figures are produced to help users interpret the data. Figure 4-6 shows one of those graphics.

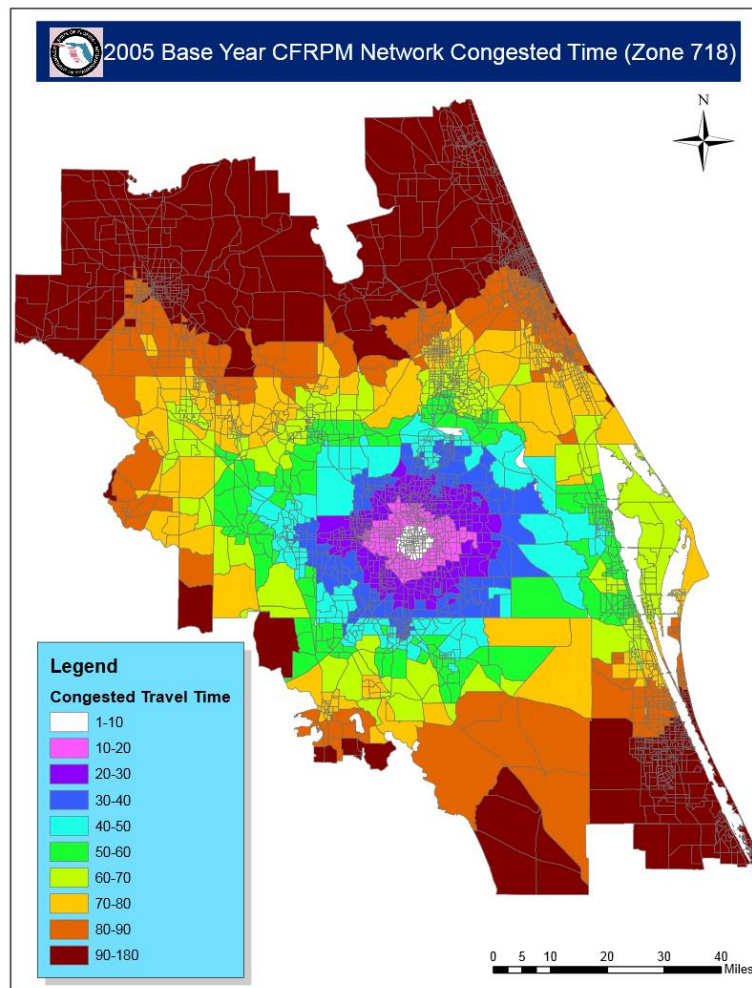


Figure 4-6: Example Congested Travel Time Graphic

5 USING UNUSED ZONES

The CFRPM network contains a set of unused, or dummy zone centroids, which can be used for specialized studies where more detail is required like subdividing zones to reflect transit service improvements or to represent new development or special generators.

There are 612 unused or dummy zone centroids reserved for use in subdividing existing zones in the CFRPM. Figure 5-1 shows a map of MPO/TPO districts color coded and the location of available unused centroids, designated by the thick colored lines on the figure.

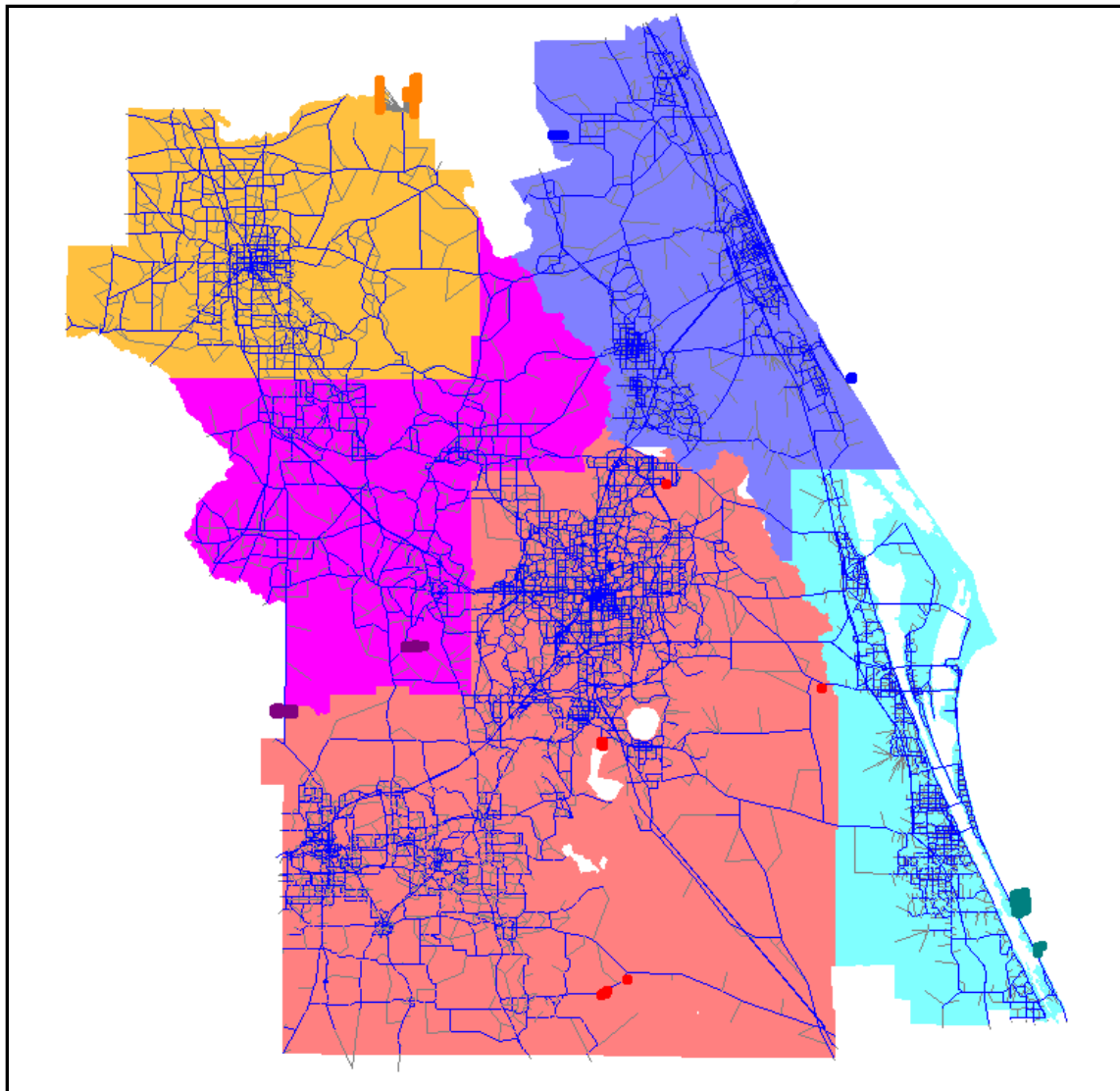


Figure 5-1: Districts and Unused Zones

Users can use those dummy zones but must edit them using the following steps:

1. Disconnect the dummy zone – select an unused zone centroid in the MPO/TPO area where you will be subdividing zones. See Table 5 1 for the list of available unused zones for each MPO/TPO area. Disconnect by deleting the link connected to the selected dummy zone centroid.
2. Move to desired location by dragging the node to the new location. Save the network.
3. Re-connect the new centroid to the network with a centroid connector. Copy a nearby centroid connector to obtain the link attributes. Check to make sure that the new link and node attributes are correct, including the TSNAME node field.
4. Make any necessary modifications to other existing zone centroids to reflect new subdivided zone boundaries.
5. Update and modify the socioeconomic data ZDATA files to reflect the new subdivided zones.

Table 5-1: MPO/TPO Zone Ranges

MPO Code	MPO/TPO	Zones (6.0)	Unused Zones
1	MetroPlan Orlando and Polk county	1-1400, 4601-5300 (MetroPlan, Polk)	231, 233-300, 1012-1015, 1098-1100, 1353-1400, 4677-4688, 4804, 4824, 4835, 5023, 5176-5177, 5230-5300
2	River to Sea TPO and Flagler County	1801-2900, 4401-4600 (River To Sea, Flagler)	2878-2900, 4542-4553, 4562-4564, 4579, 4586-4600
3	Space Coast TPO and Indian River County	2901-3700, 5301-5350 (Space Coast, Indian River)	3492-3497, 3601-3700, 5338-5350
4	Ocala/Marion TPO	3701-4200 (Ocala/Marion TPO)	3721-3724, 3745-3749, 3764-3767, 3881-3883, 3899-3900, 4035-4036, 4057-4058, 4089, 4111-4112, 4121-4125, 4128-4131, 4151-4200
5	Lake-Sumter TPO	1401-1800, 4201-4400 (Lake, Sumter)	1413-1416, 1433-1438, 1450-1454, 1493-1497, 1512-1514, 1579-1584, 1640-1641, 1662-1667, 1679-1681, 1693-1696, 1705, 1720, 1773-1776, 4348-4400