



NERPM-AB 2.0 Update

June 2020

Presentation Outline

- Summary of Updates
- Parcel to Microzone
- Population Synthesis
- Model Calibration and Validation
- DaySim Data Editing
- Running the Model
- System Requirements



Model Training Resources

Model training webinars, slides and documentation can be found here -

<http://northfloridatpo.com/modelwiki/Support/Training>





Summary of Updates

Model Platform Updates

- Base year updated from 2010 to 2015
- Re-built all land use inputs for 2015 and future
 - Population
 - Enrollment
 - Employment
 - Parking
- Switched from parcels to microzones to ease data preparation
 - From ~700k parcels to ~50k microzones
- Re-built population synthesis
 - Switched from PopGen to PopulationSim



Model Platform Updates (Continued)

- Updated the highway network to 2015 (NFTPO)
- Updated the transit network to 2016 (JTA)
- Updated external traffic volumes and distributions based on Bluetooth OD data (FDOT)



Model Platform Updates (Continued)

- Upgraded from the NFTPO specific version of DaySim to the multiple-agency (a.k.a. core) version
 - Faster, more stable, and includes new features such as Transportation Network Companies (TNC) mode (i.e. Uber and Lyft)
- Updated future year scenarios
 - Interim Year: 2025 to 2030
 - Horizon Year: 2040 to 2045





Parcel to Microzone (MAZ)

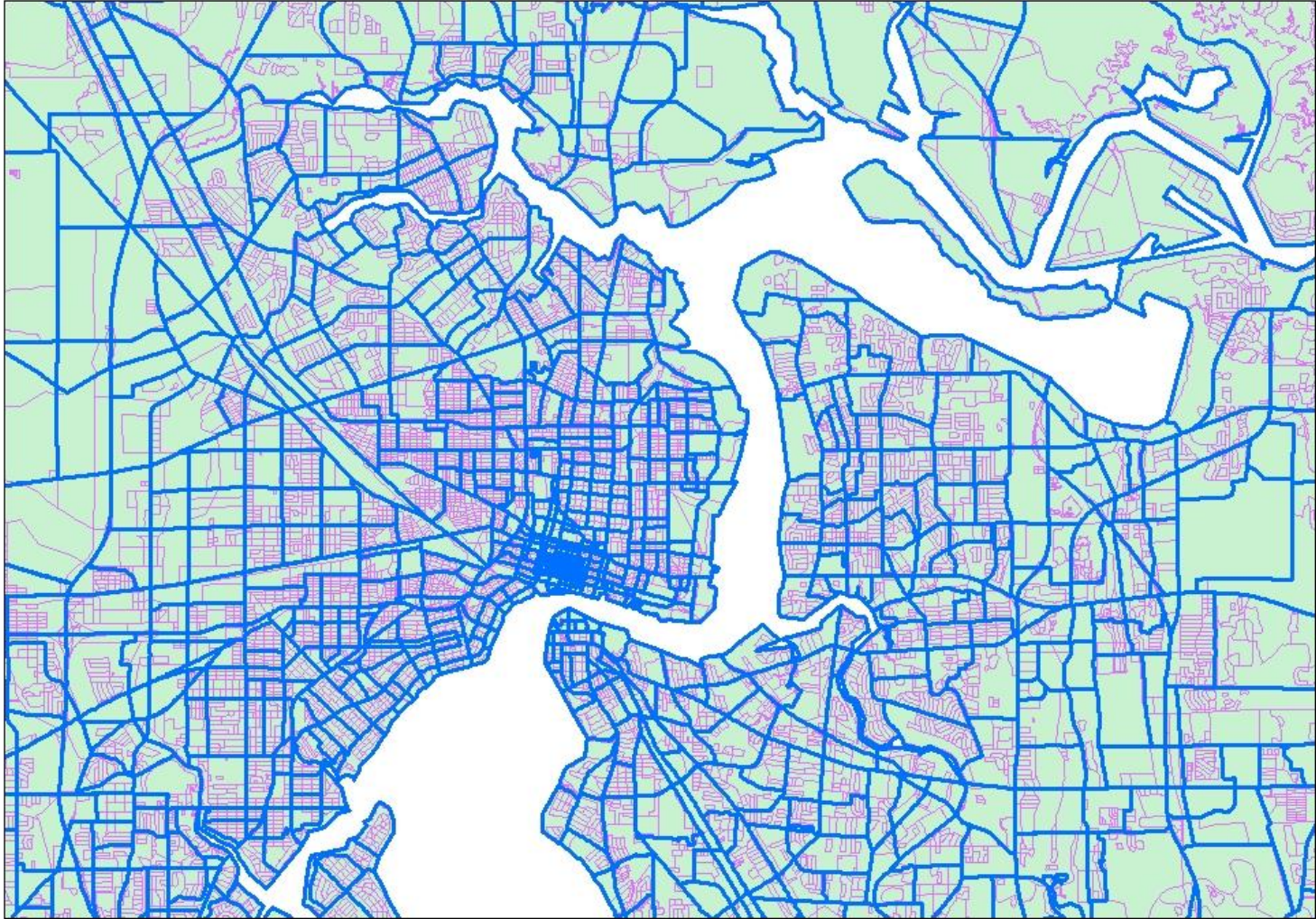
Parcel to MAZ - Summary

County	Number of Parcels	% Freq	Number of MAZ	% Freq	Number of TAZ	% Freq
Baker	12,490	1.78	1,735	3.14	29	1.56
Clay	84,529	12.02	7,796	14.13	184	9.88
Duval	355,805	50.59	28,263	51.22	1,281	68.80
Nassau	47,443	6.75	4,455	8.07	108	5.80
Putnam	102,053	14.51	6,652	12.05	44	2.36
St. Johns	100,950	14.35	6,283	11.39	216	11.60
Total	703,270	100.00	55,184	100.00	1,862	100.00

TAZ – Traffic Analysis Zone
 MAZ - Microzone



MAZ Layer



TAZ_updated
MAZ_updated





Population Synthesis

PopulationSim

- PopulationSim is an open platform for population synthesis
- Replaced PopGen in this version of NERPM-AB
- Has better demographic and geographic methods compared to PopGen
- Actively maintained by the travel modeling community
- Run only when there are major changes in the landuse data

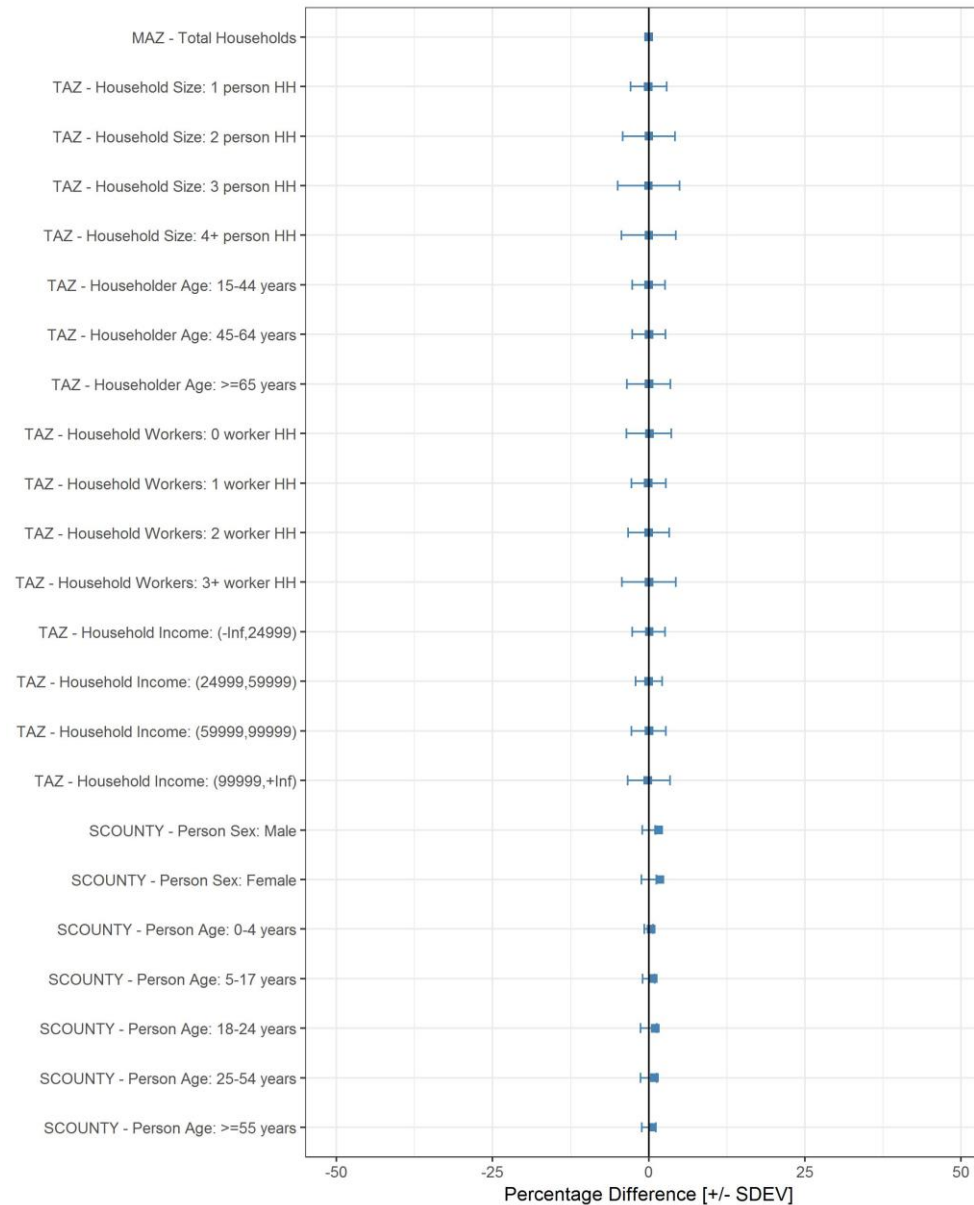
<https://activitysim.github.io/populationsim/>



Validation of Results

Standard deviation (SDEV) of the percentage difference

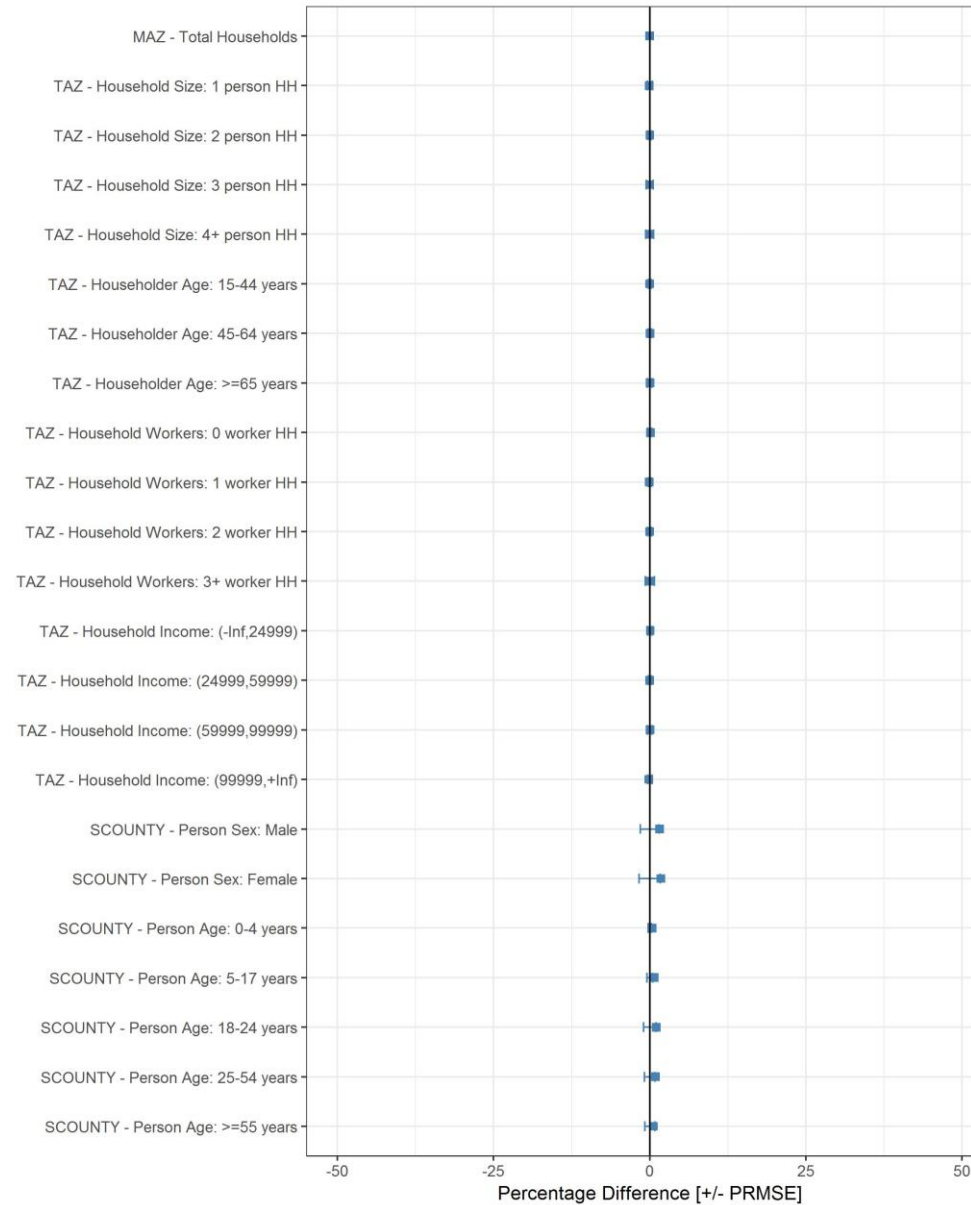
JAX PopulationSim Controls Validation



Validation of Results

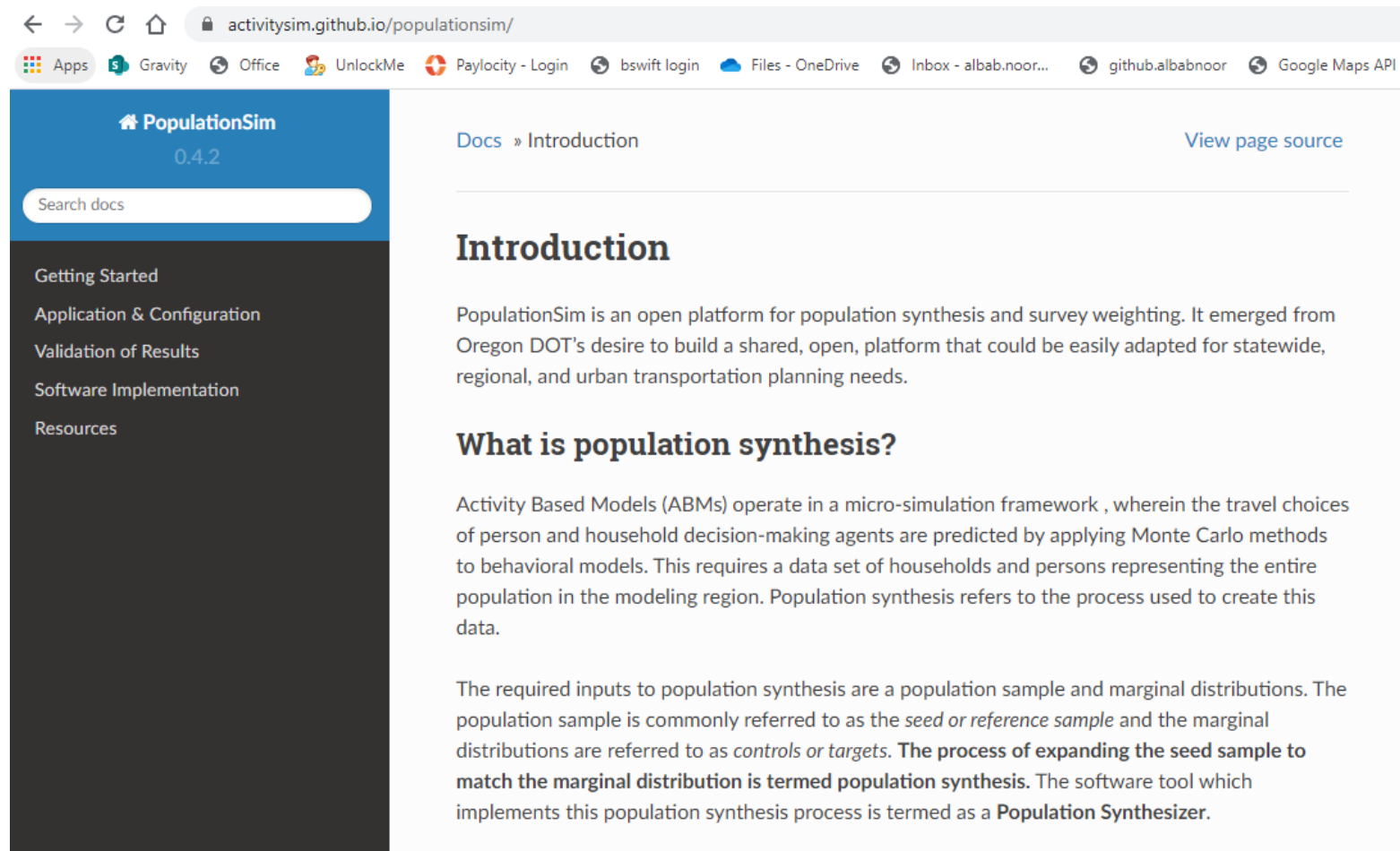
Percentage root mean square error (RMSE)

JAX PopulationSim Controls Validation



PopulationSim Wiki

<https://activitysim.github.io/populationsim/>



The screenshot shows a web browser displaying the PopulationSim Wiki introduction page. The browser's address bar shows the URL `activitysim.github.io/populationsim/`. The page has a dark blue header with the text "PopulationSim 0.4.2" and a search bar labeled "Search docs". A dark sidebar on the left contains a navigation menu with the following items: "Getting Started", "Application & Configuration", "Validation of Results", "Software Implementation", and "Resources". The main content area is white and features the following text:

Docs » Introduction [View page source](#)

Introduction

PopulationSim is an open platform for population synthesis and survey weighting. It emerged from Oregon DOT's desire to build a shared, open, platform that could be easily adapted for statewide, regional, and urban transportation planning needs.

What is population synthesis?

Activity Based Models (ABMs) operate in a micro-simulation framework , wherein the travel choices of person and household decision-making agents are predicted by applying Monte Carlo methods to behavioral models. This requires a data set of households and persons representing the entire population in the modeling region. Population synthesis refers to the process used to create this data.

The required inputs to population synthesis are a population sample and marginal distributions. The population sample is commonly referred to as the *seed or reference sample* and the marginal distributions are referred to as *controls or targets*. **The process of expanding the seed sample to match the marginal distribution is termed population synthesis.** The software tool which implements this population synthesis process is termed as a **Population Synthesizer**.

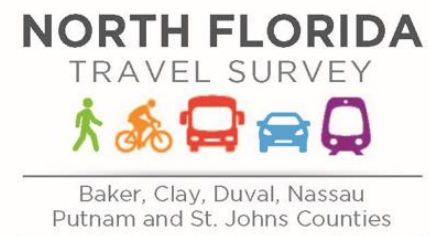




Model Calibration and Validation

Calibration and Validation Target Data

- Household travel demand models
 - 2017 North Florida Travel Survey
- Transit models
 - 2016 Onboard Rider Demographic Survey
- Highway models
 - Traffic counts from FDOT

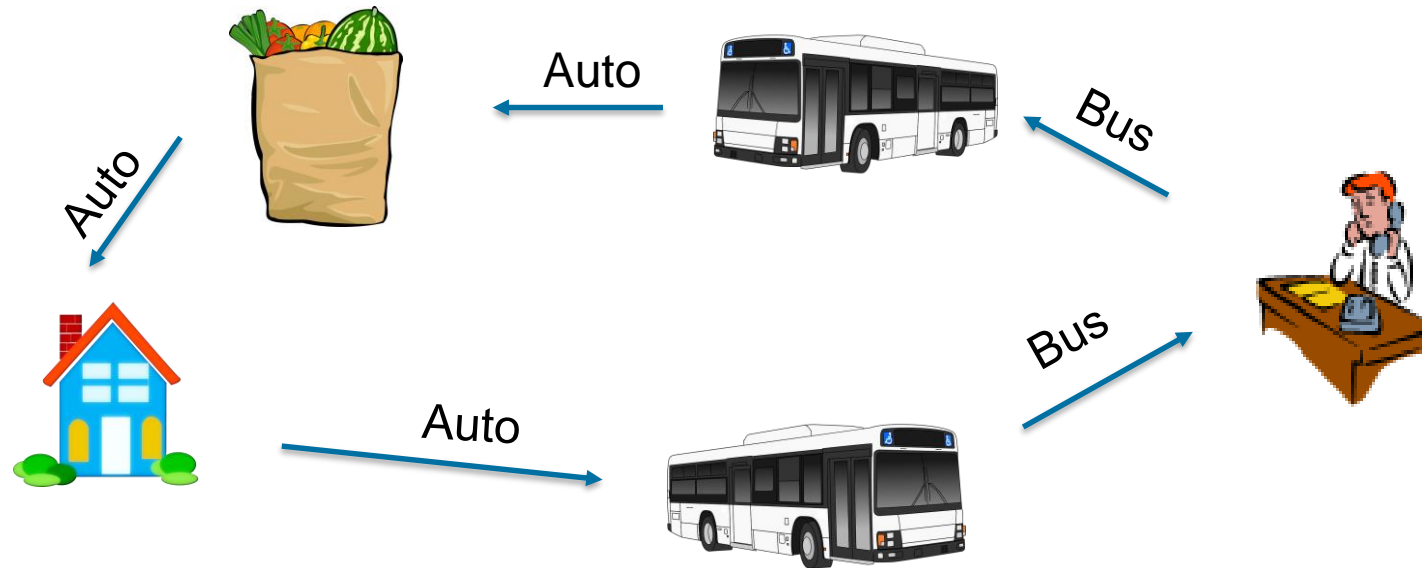


Population and Employment

County	2015 Population	2015 Employment	BEA 2015	2030 Population	2030 Employment	2045 Population	2045 Employment
Baker	23,138	9,649	9,695	32,340	15,876	37,723	20,123
Clay	189,600	68,871	69,317	263,882	120,166	321,984	156,073
Duval	854,757	624,952	623,596	1,078,136	786,052	1,231,564	888,333
Nassau	76,672	30,948	31,086	97,500	49,367	116,024	60,801
Putnam	71,687	22,605	22,780	78,328	34,695	84,790	38,102
St Johns	202,375	105,077	104,983	318,041	197,421	412,811	287,415
Grand Total	1,418,229	862,102	861,457	1,868,227	1,203,577	2,204,896	1,450,847



Tour Generation



Tour Generation Results

TOURS BY PURPOSE

Purpose	Survey	Model	Diff	% Diff
work	502,629	486,489	-16,140	-3%
school	220,485	247,492	27,007	12%
escort	226,101	261,698	35,597	16%
pers.bus	174,945	230,061	55,116	32%
shop	152,201	198,419	46,218	30%
meal	60,801	75,273	14,472	24%
soc/rec	182,200	224,374	42,174	23%
workbased	42,429	44,651	2,222	5%
Total	1,561,792	1,768,457	206,665	13%

TOURS BY PERSONTYPE

Persontype	Survey	Model	Diff	% Diff
ft worker	719,760	747,789	28,029	4%
pt worker	70,475	104,871	34,396	49%
retired	192,184	182,550	-9,634	-5%
nonworker	202,860	266,531	63,671	31%
univ.stud	47,126	54,164	7,038	15%
stud 16+	42,652	60,017	17,365	41%
stud.5-15	203,943	234,171	30,228	15%
under 5	82,792	118,364	35,572	43%
Total	1,561,792	1,768,457	206,665	13%

TOUR RATES BY PURPOSE

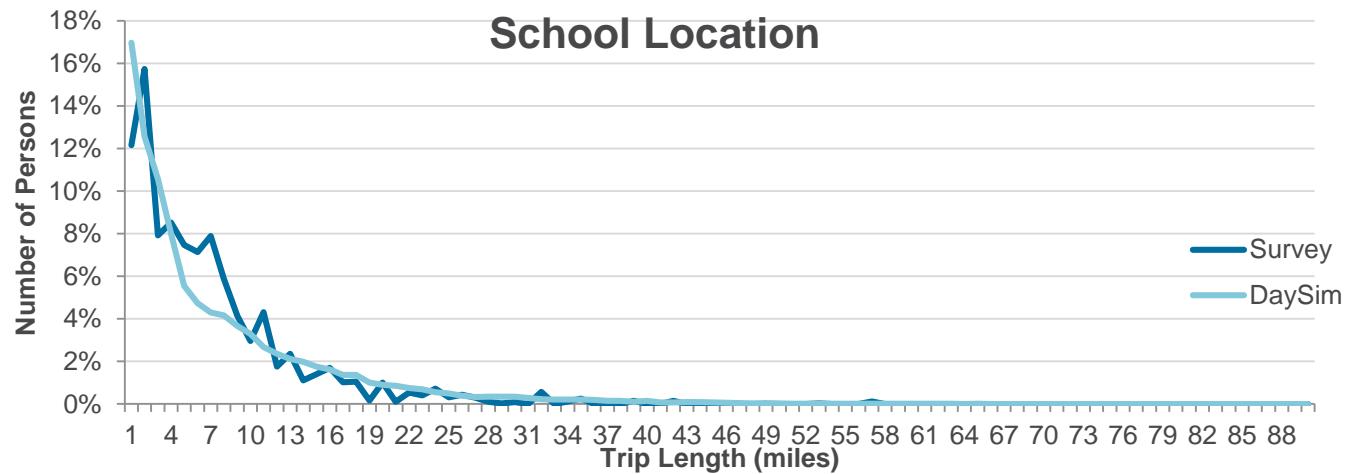
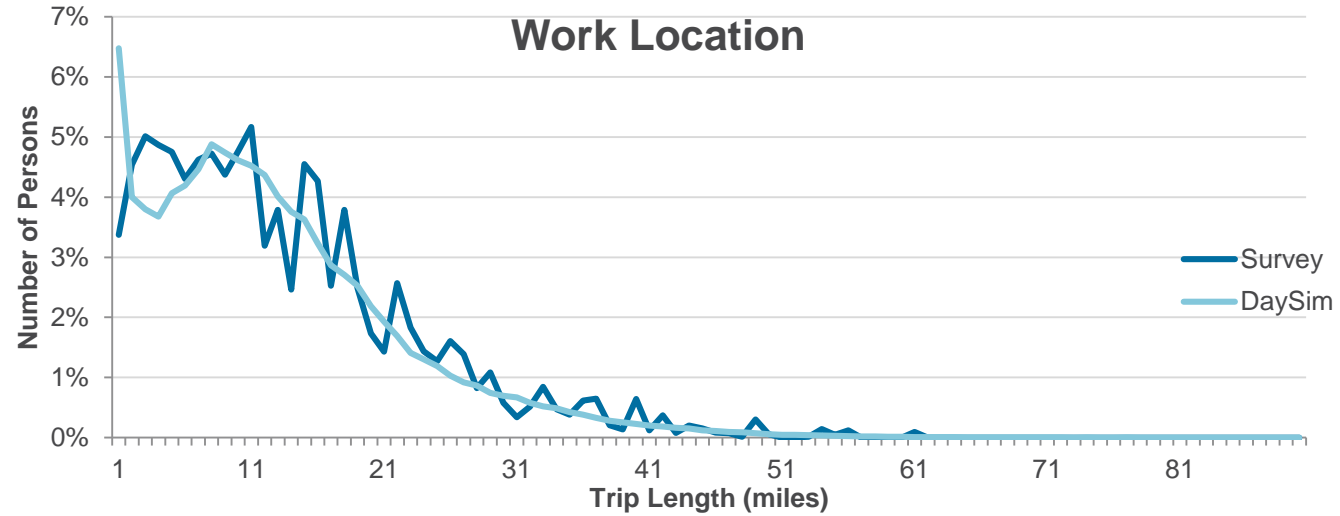
Survey	Model	Diff	% Diff
0.38	0.34	-0.04	-9%
0.17	0.17	0.01	5%
0.17	0.18	0.01	8%
0.13	0.16	0.03	23%
0.11	0.14	0.03	22%
0.05	0.05	0.01	16%
0.14	0.16	0.02	15%
0.03	0.03	0.00	-2%
1.18	1.25	0.07	6%

TOUR RATES BY PERSONTYPE

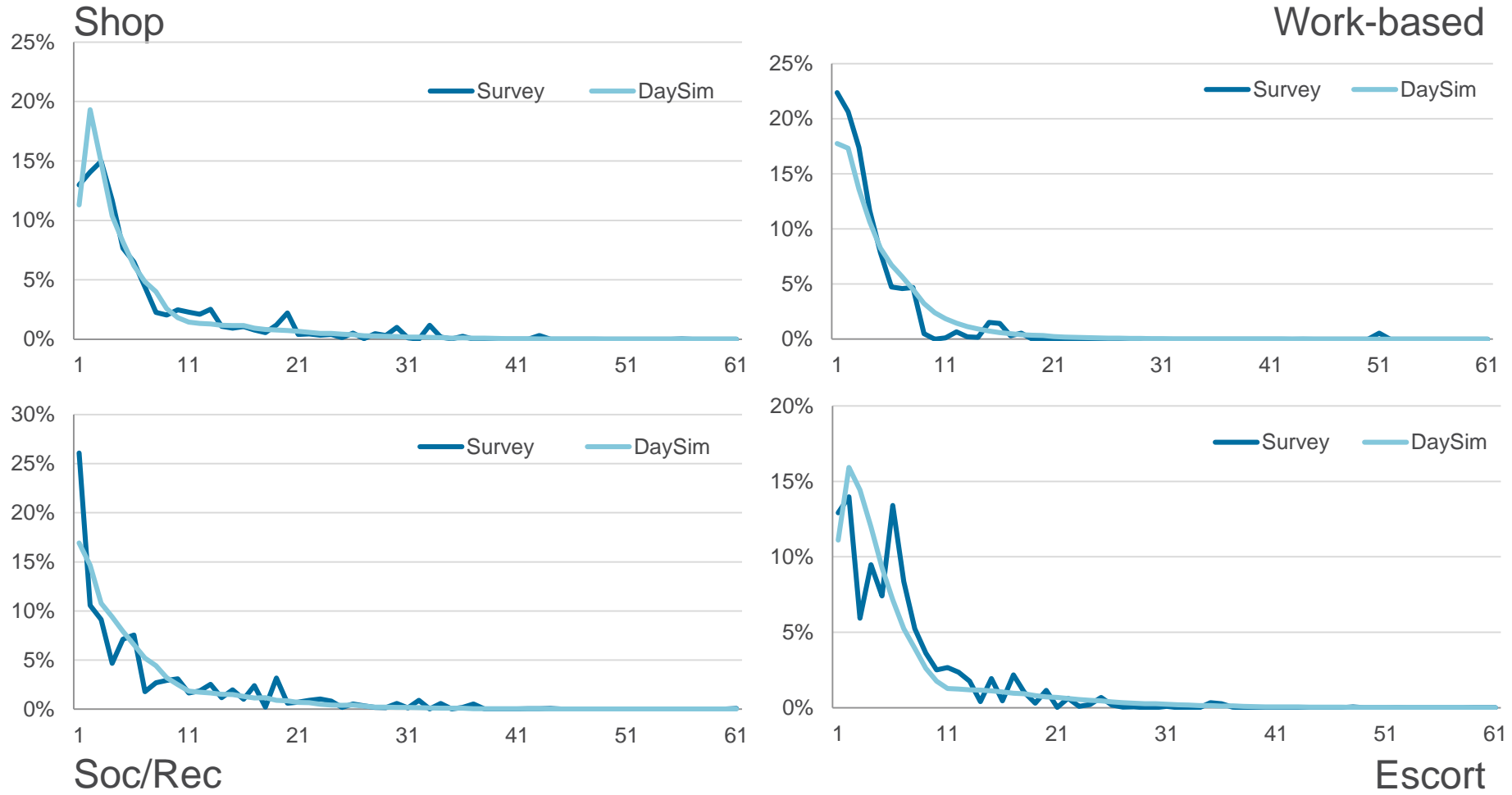
Survey	Model	Diff	% Diff
1.33	1.42	0.09	7%
1.19	1.22	0.02	2%
1.11	1.22	0.11	9%
1.00	1.08	0.09	9%
1.07	0.92	-0.16	-15%
1.13	1.22	0.10	9%
1.10	1.18	0.08	7%
0.99	1.16	0.16	17%
1.18	1.25	0.07	6%



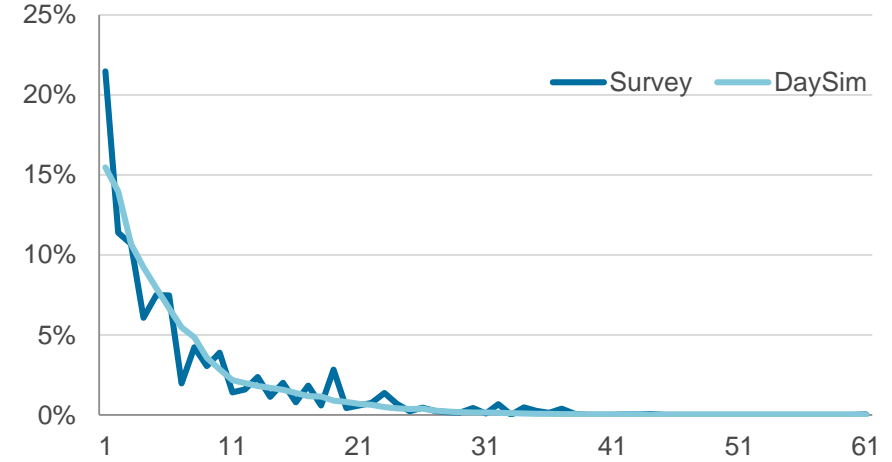
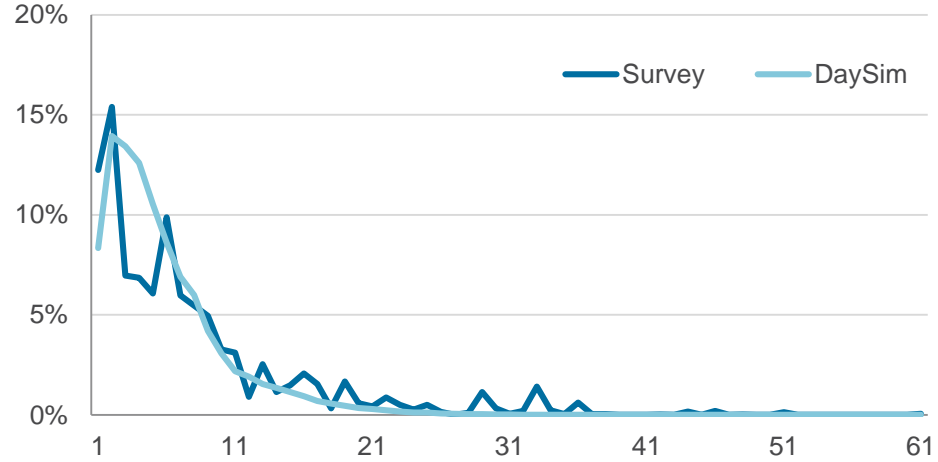
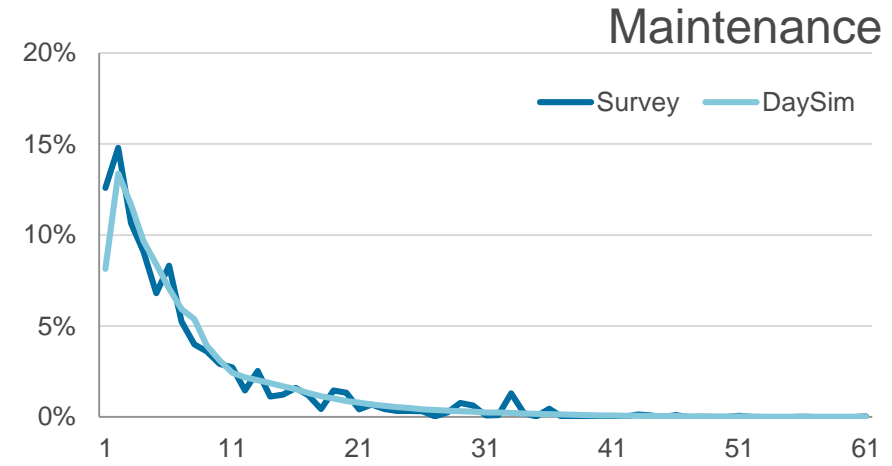
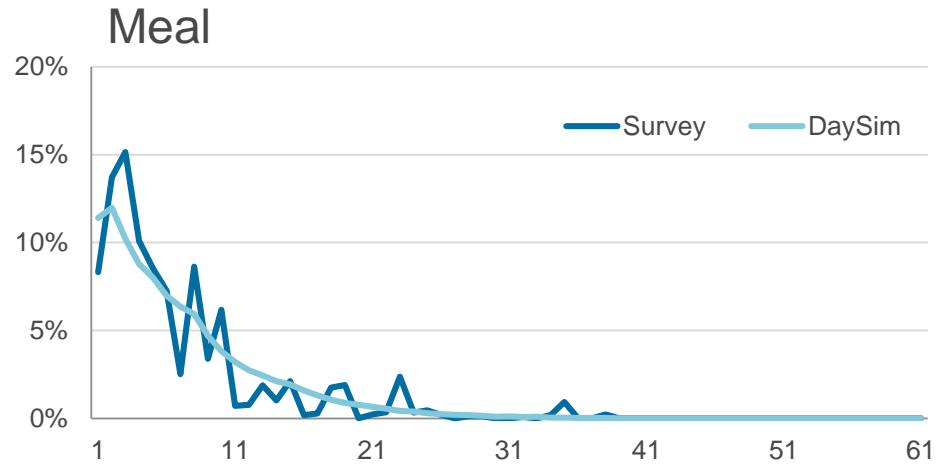
Work and School Location Results



Tour Destination Distances Results



Tour Destination Distances Results (2)

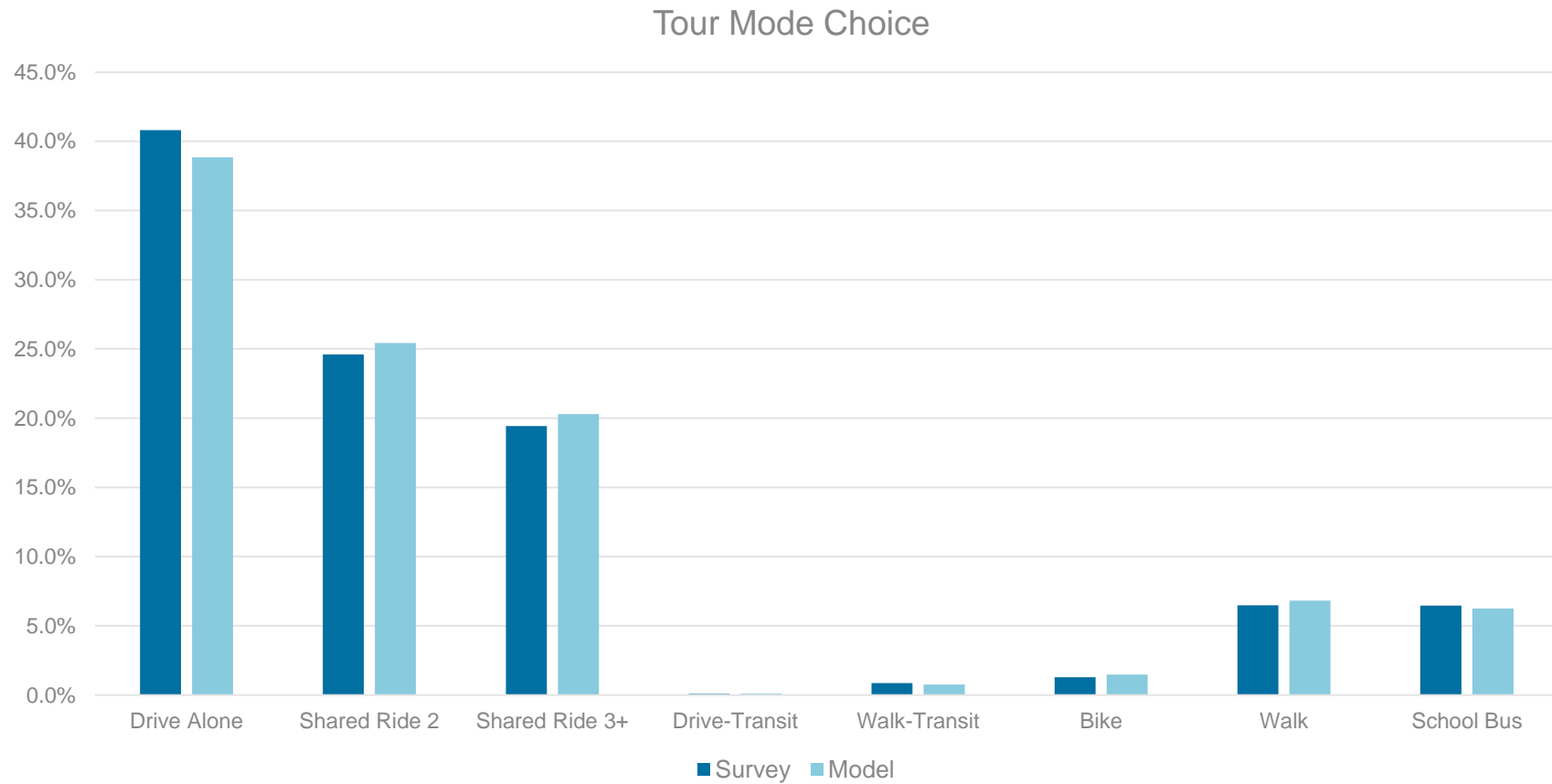


Personal Business

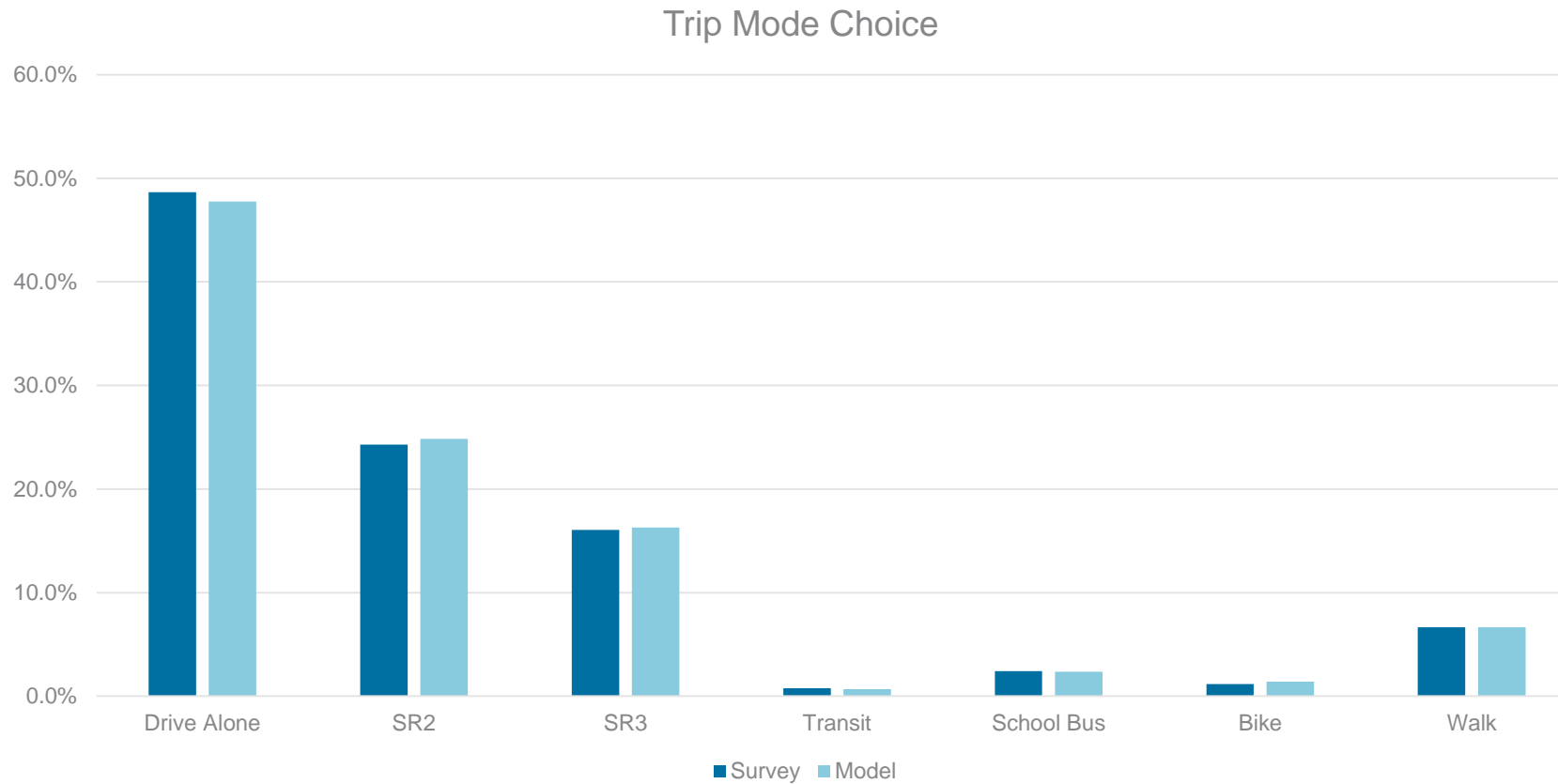
Discretionary



Tour Mode Choice Results

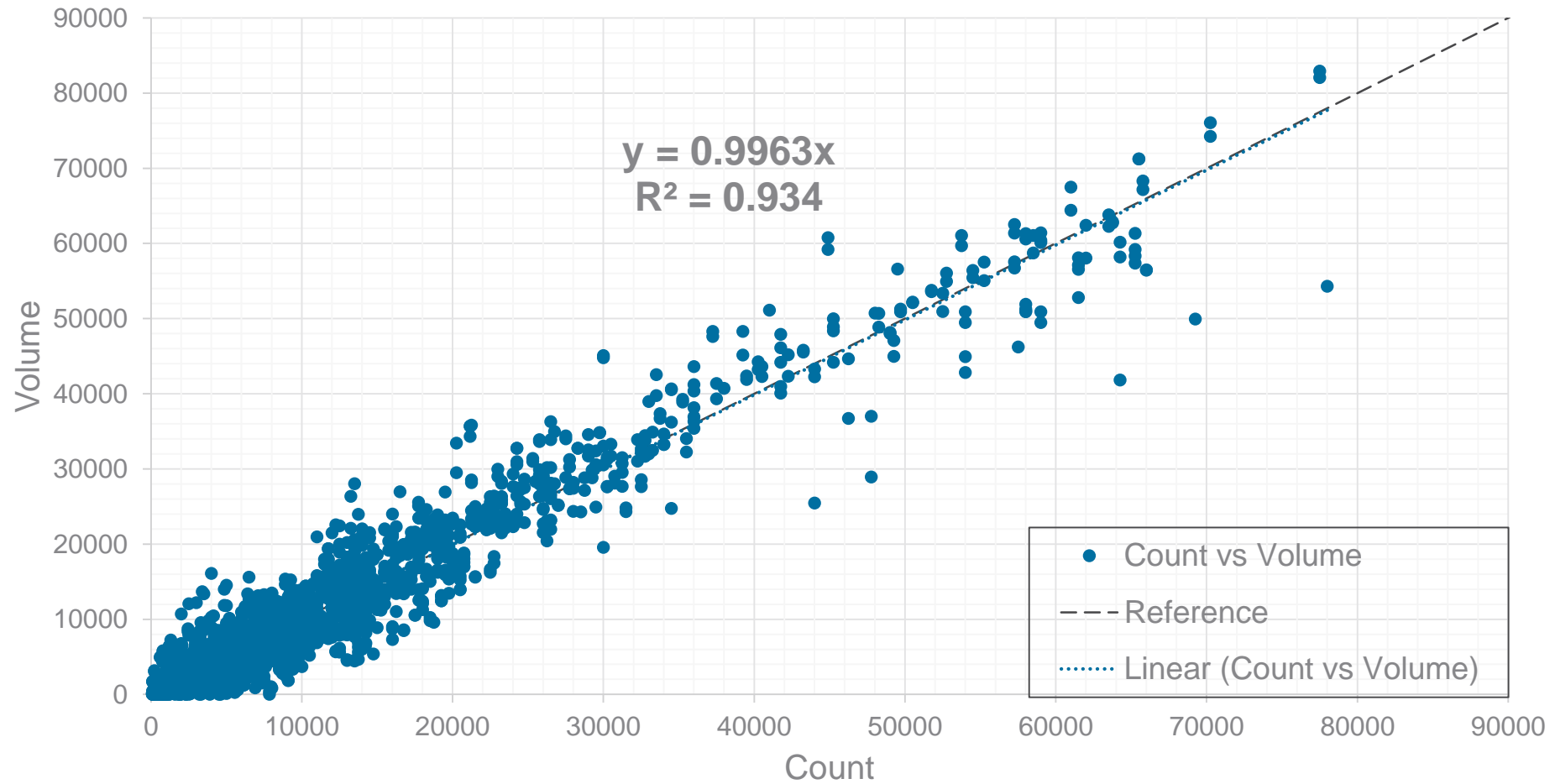


Trip Mode Choice Results



Highway Assignment Results

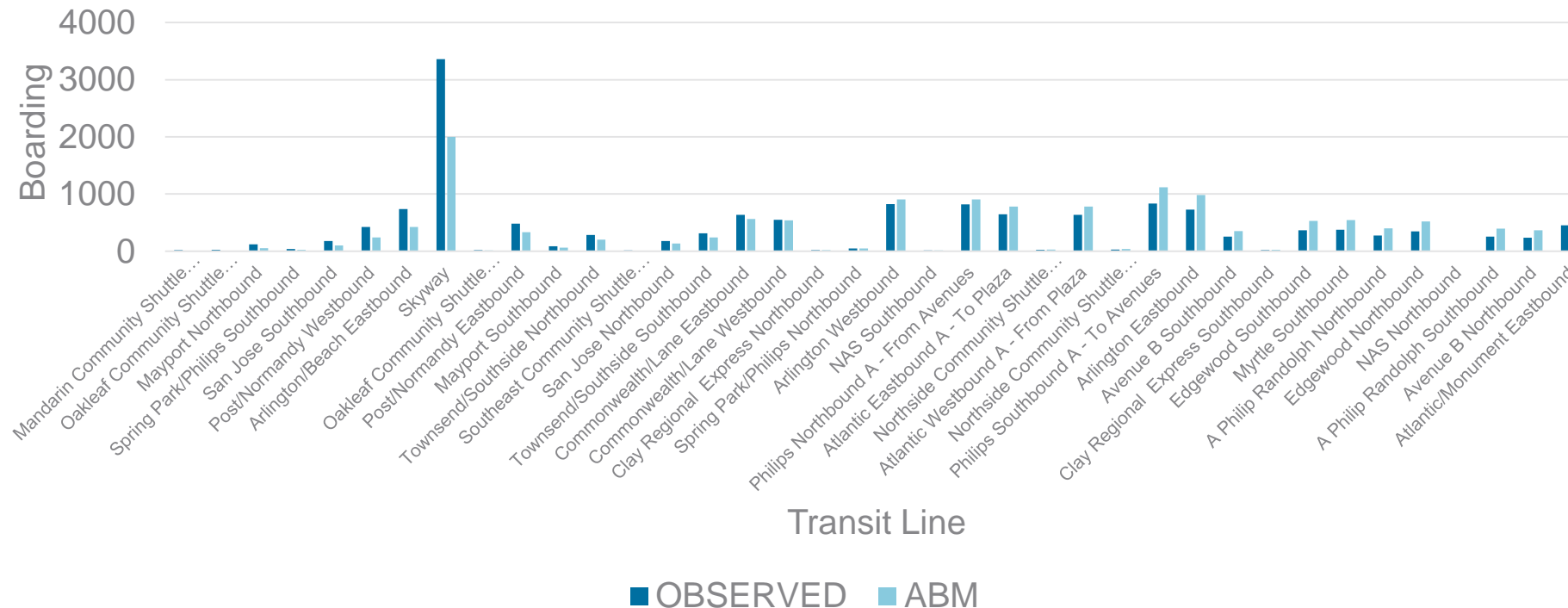
Daily Traffic Counts vs Model Flows



Transit Assignment Results

MEASURE	OBSERVED	ABM	DIFF	% DIFF
boardings	42,058	44,302	2,244	5%
trips	25,707	26,958	1,251	5%
boarding rate	1.60	1.64	(0.04)	0%

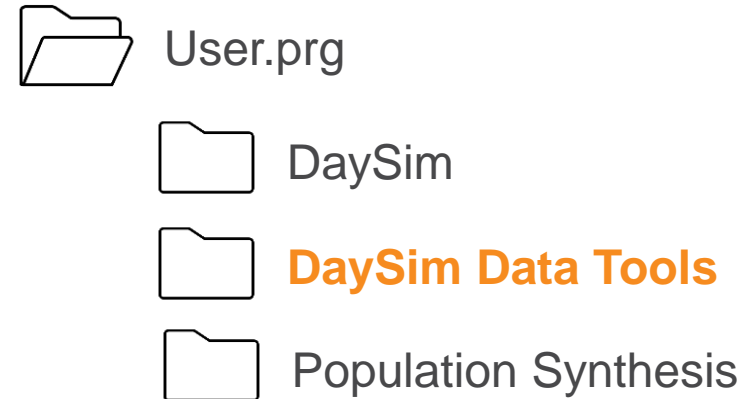
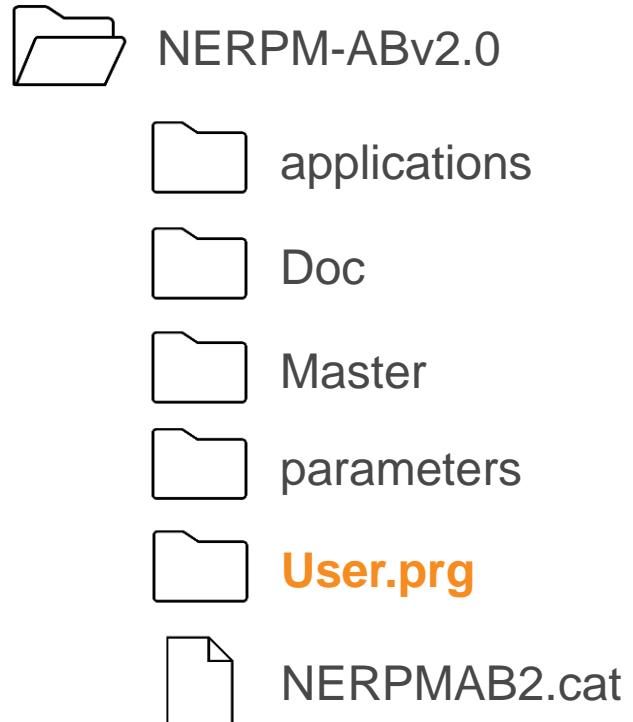
Transit Boarding for Select Line (Observed vs ABM)





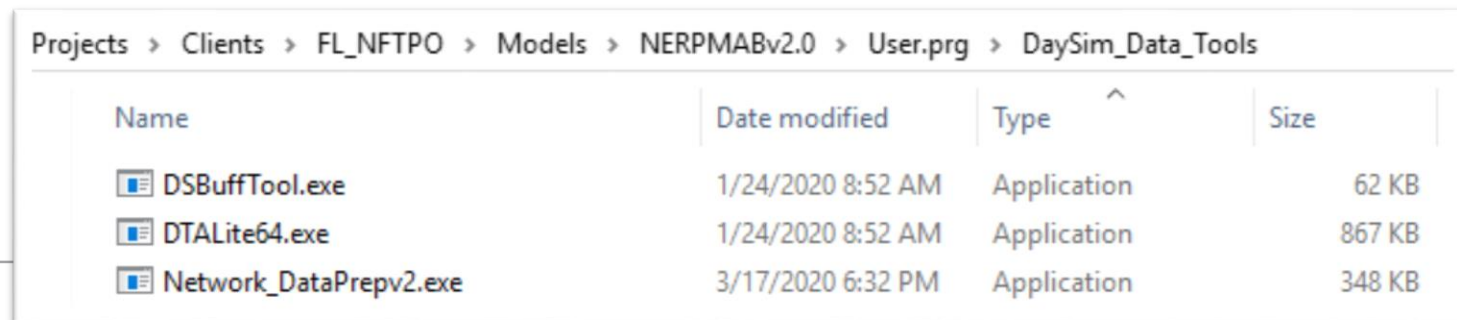
DaySim Data Editing

Model Directory Structure



DaySim Data Editing

- Network Data Preparation (*Network_DataPrepv2.exe*)
Function: This step calculates “nearby” pairs of microzones for shortest distance path calculations
- Shortest Path Update (*DTALite64.exe*)
Function: DTALite, a dynamic traffic assignment software, is used to generate node-to-node shortest path distances using the all streets network
- Buffering Microzones (*DSBuffTool.exe*)
Function: This step calculates the new Microzone buffer measures to be used in DaySim



Name	Date modified	Type	Size
DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
Network_DataPrepv2.exe	3/17/2020 6:32 PM	Application	348 KB



DaySim Data Editing

Network Data Preparation

- Tool: Network_DataPrepv2.exe
- Directory: \User.prg\DaySim_Data_Tools

Inputs:

- input_node.csv (Node x, y from an all-streets network)
- nftpo_MAZs_year.dat (The coordinates of the newly developed microzones)
- nftpo_netprep.ctl (Network prep control file)

Output:

- input_od_pairs.csv (for input to shortest path update tool)



DaySim Data Editing

Shortest Path Update

Tool: DTALite64.exe

Directory: \User.prg\DaySim_Data_Tools

Inputs:

- input_od_pairs.csv (from the Network Data Preparation tool)
- input_node.csv (from all-street network)
- input_link_type.csv (from all-street network)
- input_link.csv (from all-street network)
- DTASettings.ini (settings file)

Output:

- output_shortest_path.txt (for input to Buffering microzones)



DaySim Data Editing

Buffering micro-zones

Tool: DSBuffTool.exe

Directory: \User.prg\DaySim_Data_Tools

Inputs:

- nftpo_microzones_2015.csv (Base Microzone file)
- nftpo_Intersections.csv (Street intersections file)
- nftpo_transitstops.csv (Transit stops file)
- nftpo_openspaces.csv (Open spaces/parks file)
- input_node.csv (All-street Network nodes file)
- output_shortest_path.txt (Node-to-node shortest path distance file)

Output:

- buffered_microzone_2015.dat (to be used in DaySim)
- microzonenode.dat (to be used in DaySim)
- output_shortest_path.txt.bin (Change extension using batch file)
- output_shortest_path.txt.index (Change extension using batch file)



Changing Model Inputs

- Landuse Data
 - Open and edit the base microzone file (`nftpo_microzones_{year}.csv`)
 - Run DaySim Data Tools
 - Run PopulationSim (if required)
 - Copy outputs to the model input directory
 - Update the `emp_year.dbf` file (using Cube)
- Highway Network
 - Open and edit the `MicroCodedHnet42.net` file in Cube
- Transit Network
 - Open and edit the `TROUTE_{YEAR}.LIN` file for routes, stops, headways
 - Open and edit the `TFARES_{YEAR}.FAR` file for fares












Running Population Synthesis

Running PopulationSim

- For any changes in the household and population attribute, update control totals -
 - [control_totals_maz.csv](#)
 - [control_totals_taz.csv](#)
 - [control_totals_county.csv](#)








Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > Population_Synthesis > data

Name	Date modified	Type	Size
 .gitignore	1/24/2020 9:06 AM	Text Document	1 KB
 control_totals_county.csv	1/24/2020 9:06 AM	Microsoft Excel C...	1 KB
 control_totals_maz.csv	1/24/2020 9:06 AM	Microsoft Excel C...	1,647 KB
 control_totals_taz.csv	1/24/2020 9:06 AM	Microsoft Excel C...	132 KB
 geo_cross_walk.csv	1/24/2020 9:06 AM	Microsoft Excel C...	2,874 KB
 seed_households.csv	1/24/2020 9:06 AM	Microsoft Excel C...	15,338 KB
 seed_persons.csv	1/24/2020 9:06 AM	Microsoft Excel C...	47,233 KB



Running PopulationSim

- The controls for different scenarios are stored in following folders
 - 2015 – *data*
 - 2030 – *data_2030*
 - 2045 – *data_2045*

Name	Date modified	Type	Size
 Anaconda2	8/7/2020 12:50 PM	File folder	
 configs	10/16/2020 1:19 PM	File folder	
 data	10/16/2020 2:41 PM	File folder	
 data_2030	10/16/2020 2:58 PM	File folder	
 data_2045	10/16/2020 2:42 PM	File folder	
 output	10/5/2020 2:35 AM	File folder	
 popsim_to_daysim	10/5/2020 1:34 PM	File folder	



Running PopulationSim

- To run the PopulationSim for specific year the `data_dir` field in the `settings.yaml` file should be changed accordingly:
 - 2015 – `data`
 - 2030 – `data_2030`
 - 2045 – `data_2045`

\\:\ > Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > Population_Synthesis > configs

Name	Date modified	Type	Size
controls.csv	10/16/2020 1:19 PM	Microsoft Excel C...	2 KB
logging.yaml	8/7/2020 12:50 PM	YAML File	2 KB
settings.yaml	10/16/2020 3:02 PM	YAML File	4 KB

```
settings.yaml - Notepad
File Edit Format View Help
MAZ: 1
TAZ: 310

# Data Directory
# -----
data_dir: data

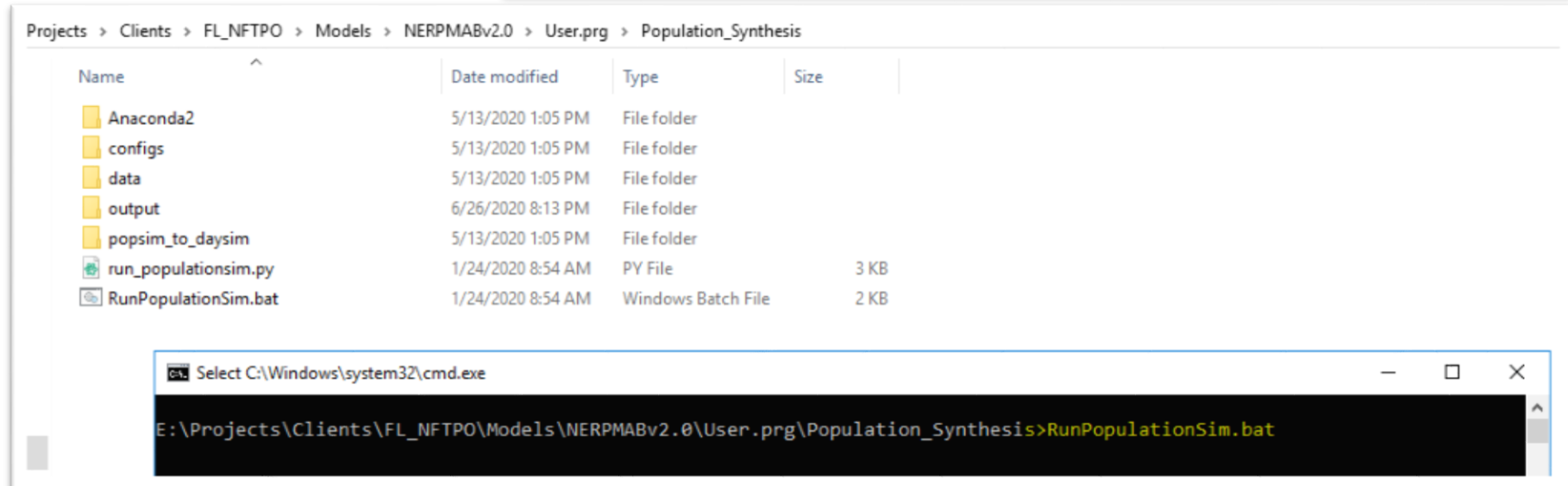
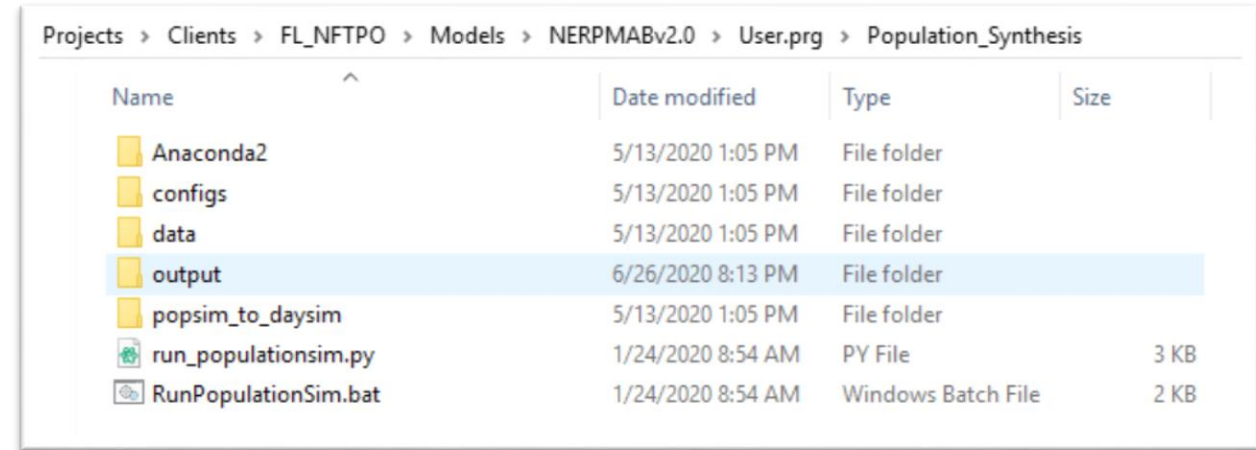
# Input Data Tables
# -----
# input_pre_processor input_table_list
input_table_list:
- tablename: households
  filename : seed_households.csv
  index_col: hh_id
- tablename: persons
  filename : seed_persons.csv
  column_map:
    SPORDER: per_num
```



Running PopulationSim

Step 1: Run PopulationSim

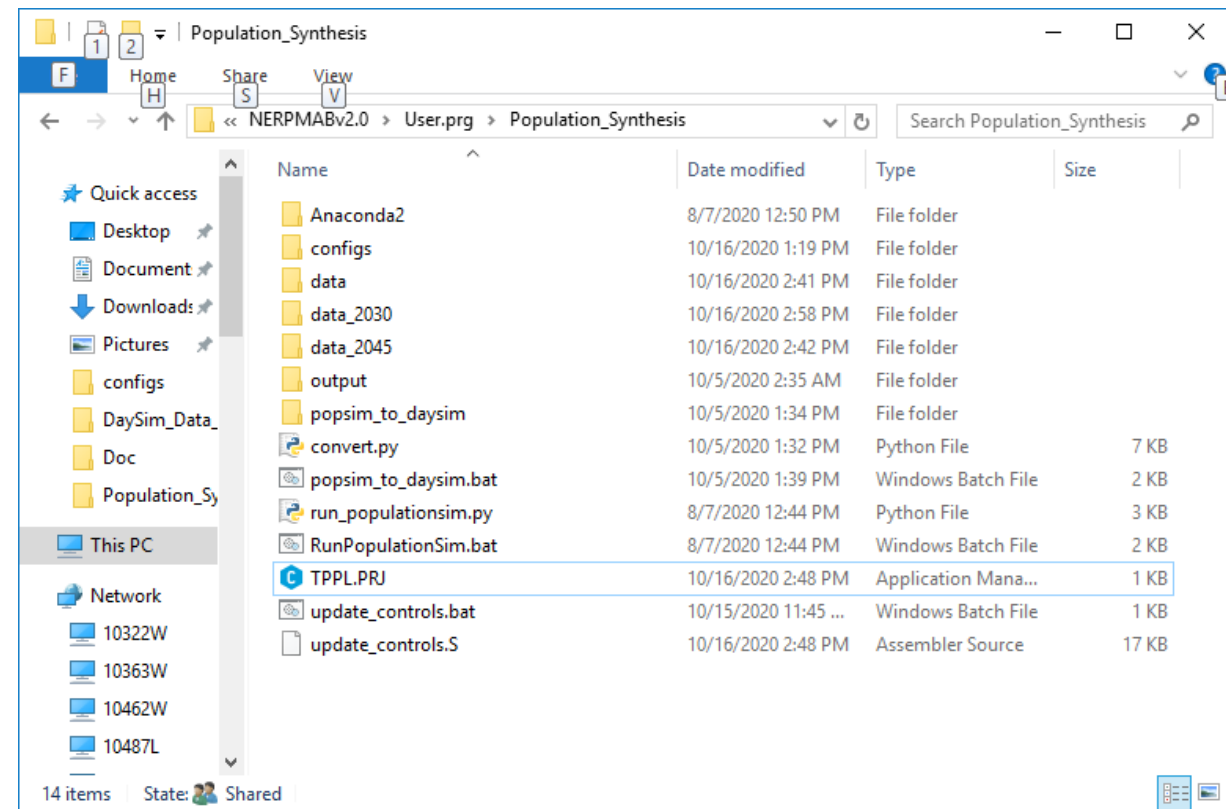
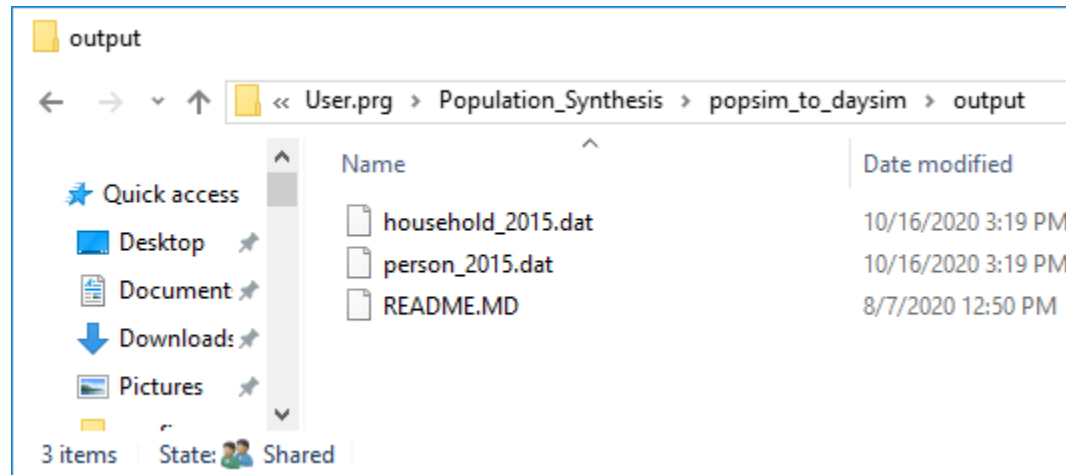
- Open command window in the *Population_Synthesis* directory
- run **RunPopulationSim.bat** file



Running PopulationSim

Step 2: popsim_to_daysim

- Run `popsim_to_daysim.bat` file by double-clicking.
- Rename and copy the household and person file to the appropriate scenario input directory





Example Changes

Adding 100 households to an MAZ

To add 100 additional households to an MAZ, the user needs to run the DaySim data tools, PopulationSim, and the model

1. Update the base microzone file (`nftpo_microzones_year.csv`)
2. Run DaySim data tools (`DSBuffTool.exe`)
3. Copy outputs (`buffered_maz_year.csv`) to the model scenario input directory
4. Update PopulationSim controls (`update_controls.bat`)
5. Run PopulationSim
6. Convert PopulationSim output to DaySim input (`popsim_to_daysim.bat`)
7. Rename the outputs.
8. Copy outputs to the model scenario input directory
9. Run the model



Adding 100 households to an MAZ

1. Update the base microzone file
([nftpo_microzones_year.csv](#))

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > DaySim_Data_Tools

Name	Date modified	Type	Size
DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
Network_DataPrep2.exe	3/17/2020 6:32 PM	Application	348 KB
DTASettings.ini	7/7/2020 2:41 PM	Configuration sett...	2 KB
nftpo_netprep.ctl	6/26/2020 3:47 PM	CTL File	2 KB
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
buffered_maz_2030.dat	4/27/2020 6:31 PM	DAT File	23,110 KB
buffered_maz_2045.dat	7/7/2020 3:02 PM	DAT File	23,158 KB
microzonenode.dat	7/7/2020 2:51 PM	DAT File	686 KB
netout.dat	7/7/2020 2:25 PM	DAT File	2,184 KB
nftpo_MAZs_2015.dat	1/24/2020 8:53 AM	DAT File	1,175 KB
output_shortest_path_txt_bin.dat	7/7/2020 3:02 PM	DAT File	1,509,646 KB
output_shortest_path_txt_index.dat	7/7/2020 3:02 PM	DAT File	2,395 KB
MAZ_2015_2045_2030.dbf	1/24/2020 8:53 AM	DBF File	30,936 KB
input_link.csv	1/24/2020 8:52 AM	Microsoft Excel C...	7,468 KB
input_link_type.csv	1/24/2020 8:52 AM	Microsoft Excel C...	1 KB
input_node.csv	1/24/2020 8:52 AM	Microsoft Excel C...	2,156 KB
input_od_pairs.csv	7/7/2020 2:41 PM	Microsoft Excel C...	4,222,276 KB
maz_15_30_45.csv	1/24/2020 8:53 AM	Microsoft Excel C...	8,428 KB
nftpo_Intersections.csv	1/24/2020 8:53 AM	Microsoft Excel C...	2,996 KB
nftpo_microzones_2015.csv	4/27/2020 5:06 PM	Microsoft Excel C...	3,829 KB



Adding 100 households to an MAZ

1. Update the base microzone file
([nftpo_microzones_year.csv](#))

BEFORE

	A	B	C	D	E	F	G	H	I	J	K
1	parcelid	xcoord_p	ycoord_p	sqft_p	taz_p	lotype_p	hh_p	stugrd_p	stuhgh_p	stuuni_p	empedu_p
1424	1423	477647	2129269	102674	520	0	0	0	0	0	0
1425	1424	477337	2130010	2184456	2081	0	0	0	0	0	0
1426	1425	477319	2130433	693	504	0	0	0	0	0	0
1427	1426	472323	2180956	1659670	284	0	20	0	0	0	0
1428	1427	472740	2182080	162	273	0	0	0	0	0	0
1429	1428	472688	2182045	7	1962	0	0	0	0	0	0
1430	1429	472784	2181336	20999	282	0	0	0	0	0	0
1431	1430	495699	2195004	1205877	235	0	76	0	0	0	0
1432	1431	422484	2164912	292686	1018	0	0	0	0	0	0
1433	1432	421877	2165601	4494	1015	0	0	0	0	0	0
1434	1433	421559	2166214	10468	999	0	0	0	0	0	0
1435	1434	463951	2173515	15	307	0	0	0	0	0	0
1436	1435	464071	2172590	68413	311	0	0	0	0	0	0
1437	1436	463823	2172584	274658	318	0	0	0	0	0	0
1438	1437	435857	2169191	8407	2218	0	0	0	0	0	0
1439	1438	463753	2130094	223	519	0	0	0	0	0	0
1440	1439	463505	2129968	291531	2079	0	16	0	0	0	0
1441	1440	458482	2154100	647	2046	0	0	0	0	0	0
1442	1441	459242	2154012	1280310	479	0	134	0	0	0	0
1443	1442	445638	2178125	23179	757	0	0	0	0	0	0

AFTER

	A	B	C	D	E	F	G	H	I	J	K
1	parcelid	xcoord_p	ycoord_p	sqft_p	taz_p	lotype_p	hh_p	stugrd_p	stuhgh_p	stuuni_p	emp
1424	1423	477647	2129269	102674	520	0	0	0	0	0	0
1425	1424	477337	2130010	2184456	2081	0	0	0	0	0	0
1426	1425	477319	2130433	693	504	0	0	0	0	0	0
1427	1426	472323	2180956	1659670	284	0	20	0	0	0	0
1428	1427	472740	2182080	162	273	0	0	0	0	0	0
1429	1428	472688	2182045	7	1962	0	0	0	0	0	0
1430	1429	472784	2181336	20999	282	0	0	0	0	0	0
1431	1430	495699	2195004	1205877	235	0	76	0	0	0	0
1432	1431	422484	2164912	292686	1018	0	0	0	0	0	0
1433	1432	421877	2165601	4494	1015	0	0	0	0	0	0
1434	1433	421559	2166214	10468	999	0	0	0	0	0	0
1435	1434	463951	2173515	15	307	0	0	0	0	0	0
1436	1435	464071	2172590	68413	311	0	0	0	0	0	0
1437	1436	463823	2172584	274658	318	0	0	0	0	0	0
1438	1437	435857	2169191	8407	2218	0	0	0	0	0	0
1439	1438	463753	2130094	223	519	0	0	0	0	0	0
1440	1439	463505	2129968	291531	2079	0	116	0	0	0	0
1441	1440	458482	2154100	647	2046	0	0	0	0	0	0
1442	1441	459242	2154012	1280310	479	0	134	0	0	0	0
1443	1442	445638	2178125	23179	757	0	0	0	0	0	0



Adding 100 households to an MAZ

2a. Run DaySim data tools
(DSBuffTool.exe)

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > DaySim_Data_Tools

Name	Date modified	Type	Size
DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
Network_DataPrep2.exe	3/17/2020 6:32 PM	Application	348 KB
DTASettings.ini	7/7/2020 2:41 PM	Configuration sett...	2 KB
nftpo_netprep.ctl	6/26/2020 3:47 PM	CTL File	2 KB
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
buffered_maz_2030.dat	4/27/2020 6:31 PM	DAT File	23,110 KB
buffered_maz_2045.dat	7/7/2020 3:02 PM	DAT File	23,158 KB
microzonenode.dat	7/7/2020 2:51 PM	DAT File	686 KB
netout.dat	7/7/2020 2:25 PM	DAT File	2,184 KB
nftpo_MAZs_2015.dat	1/24/2020 8:53 AM	DAT File	1,175 KB
output_shortest_path_txt_bin.dat	7/7/2020 3:02 PM	DAT File	1,509,646 KB
output_shortest_path_txt_index.dat	7/7/2020 3:02 PM	DAT File	2,395 KB
MAZ_2015_2045_2030.dbf	1/24/2020 8:53 AM	DBF File	30,936 KB
input_link.csv	1/24/2020 8:52 AM	Microsoft Excel C...	7,468 KB
input_link_type.csv	1/24/2020 8:52 AM	Microsoft Excel C...	1 KB
input_node.csv	1/24/2020 8:52 AM	Microsoft Excel C...	2,156 KB
input_od_pairs.csv	7/7/2020 2:41 PM	Microsoft Excel C...	4,222,276 KB
maz_15_30_45.csv	1/24/2020 8:53 AM	Microsoft Excel C...	8,428 KB
nftpo_Intersections.csv	1/24/2020 8:53 AM	Microsoft Excel C...	2,996 KB
nftpo_microzones_2015.csv	4/27/2020 5:06 PM	Microsoft Excel C...	3,829 KB



Adding 100 households to an MAZ

2b. Run DaySim data tools (DSBuffTool.exe)

The screenshot shows the 'DaySim Buffering Tool' window. It is divided into several sections: 'Read XML Input', 'INPUT', and 'OUTPUT'. The 'Read XML Input' section has a text box for 'XML Input File' containing the path 'E:\Projects\Clients\FL_NFTPO\Models\NERPMAbv2.0\User.prg\DaySim_Data_Tools\nftpo_r' and a 'Browse' button. The 'INPUT' section contains various file paths and settings. Under 'Distance Calculation', 'Node-to-Node' is selected. File paths include 'Parcel Data File' (nftpo_microzones_2015.csv), 'Intersection Data File' (nftpo_intersections.csv), 'Transit Stops File' (nftpo_transitstops.csv), 'Open Spaces File' (nftpo_openspaces.csv), 'Circuitry Data File' (empty), 'Node Data File' (input_node.csv), 'Node to Node Distance File' (output_shortest_path.bt), 'Parcel-Node Correspondence File (Intermediate File)' (microzonenode.dat), and 'Open Spaces-Node Correspondence File (Intermediate File)' (parksnode.dat). Under 'Node Distance File Format', 'DTA Lite Output' is selected. Under 'Buffer Type', 'Logistic decay' is selected. Numerical values for Buffer 1 and Buffer 2 are provided for Distance (ft), Decay Slope, Offset, and Exponential Decay Parameter. The 'OUTPUT' section has 'Buffered Output File' (buffered_maz_2015.dat) and 'Output XML file (optional)' (nftpo_mz_allstreets.xml), both with 'Browse' buttons. 'Cancel' and 'Run' buttons are at the bottom.

Section	Field	Value
Read XML Input	XML Input File	E:\Projects\Clients\FL_NFTPO\Models\NERPMAbv2.0\User.prg\DaySim_Data_Tools\nftpo_r
	Distance Calculation	Euclidean <input type="radio"/> Circuitry <input type="radio"/> Node-to-Node <input checked="" type="radio"/>
INPUT	Parcel Data File	nftpo_microzones_2015.csv
	Intersection Data File	nftpo_intersections.csv
	Transit Stops File	nftpo_transitstops.csv
	Open Spaces File	nftpo_openspaces.csv
	Circuitry Data File	
	Node Distance File Format	DTA Lite Output <input checked="" type="radio"/> DaySim Format <input type="radio"/>
	Node Data File	input_node.csv
	Node to Node Distance File	output_shortest_path.bt
	Parcel-Node Correspondence File (Intermediate File)	microzonenode.dat
	Open Spaces-Node Correspondence File (Intermediate File)	parksnode.dat
Buffer Type	Flat <input type="radio"/> Logistic decay <input checked="" type="radio"/> Exponential decay <input type="radio"/>	
	Buffer 1 Distance (ft)	660
	Buffer 2 Distance (ft)	1320
	Buffer 1 Decay Slope	0.76
	Buffer 2 Decay Slope	0.76
	Buffer 1 Offset	2640
	Buffer 2 Offset	2640
	Buffer 1 Exponential Decay Parameter	-2.5205
	Buffer 2 Exponential Decay Parameter	-0.4365
OUTPUT	Buffered Output File	buffered_maz_2015.dat
	Output XML file (optional)	nftpo_mz_allstreets.xml



Adding 100 households to an MAZ

3. Copy outputs (buffered_maz_year.csv) to the model scenario input directory

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > DaySim_Data_Tools

Name	Date modified	Type	Size
DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
Network_DataPrepv2.exe	3/17/2020 6:32 PM	Application	348 KB
DTASettings.ini	7/7/2020 2:41 PM	Configuration sett...	2 KB
nftpo_netprep.ctl	6/26/2020 3:47 PM	CTL File	2 KB
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
buffered_maz_2030.dat	4/27/2020 6:31 PM	DAT File	23,110 KB
buffered_maz_2045.dat	7/7/2020 3:02 PM	DAT File	23,158 KB
microzonenode.dat	7/7/2020 2:51 PM	DAT File	686 KB
netout.dat	7/7/2020 2:25 PM	DAT File	2,184 KB
nftpo_MAZs_2015.dat	1/24/2020 8:53 AM	DAT File	1,175 KB
output_shortest_path_txt_bin.dat	7/7/2020 3:02 PM	DAT File	1,509,646 KB
output_shortest_path_txt_index.dat	7/7/2020 3:02 PM	DAT File	2,395 KB
MAZ_2015_2045_2030.dbf	1/24/2020 8:53 AM	DBF File	30,936 KB
input_link.csv	1/24/2020 8:52 AM	Microsoft Excel C...	7,468 KB
input_link_type.csv	1/24/2020 8:52 AM	Microsoft Excel C...	1 KB
input_node.csv	1/24/2020 8:52 AM	Microsoft Excel C...	2,156 KB
input_od_pairs.csv	7/7/2020 2:41 PM	Microsoft Excel C...	4,222,276 KB
maz_15_30_45.csv	1/24/2020 8:53 AM	Microsoft Excel C...	8,428 KB
nftpo_Intersections.csv	1/24/2020 8:53 AM	Microsoft Excel C...	2,996 KB
nftpo_microzones_2015.csv	4/27/2020 5:06 PM	Microsoft Excel C...	3,829 KB

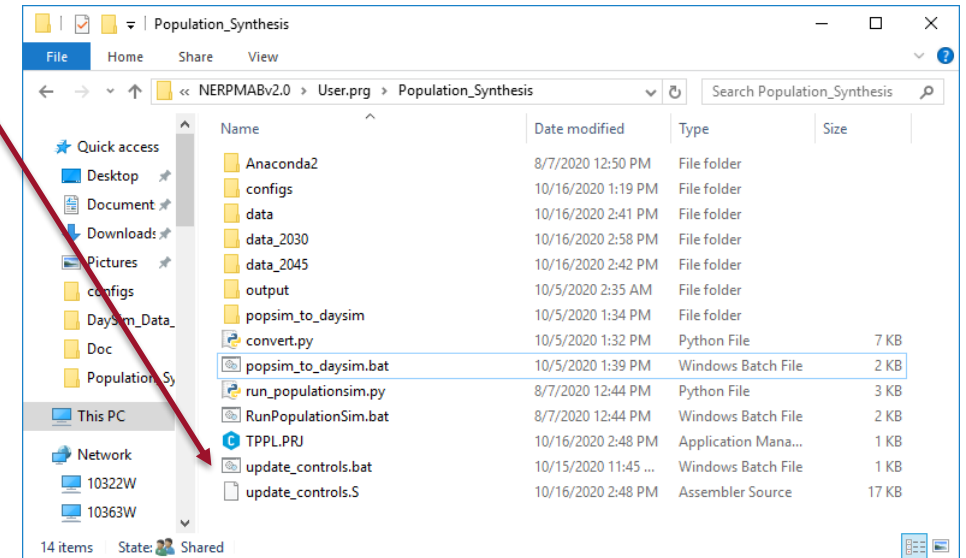
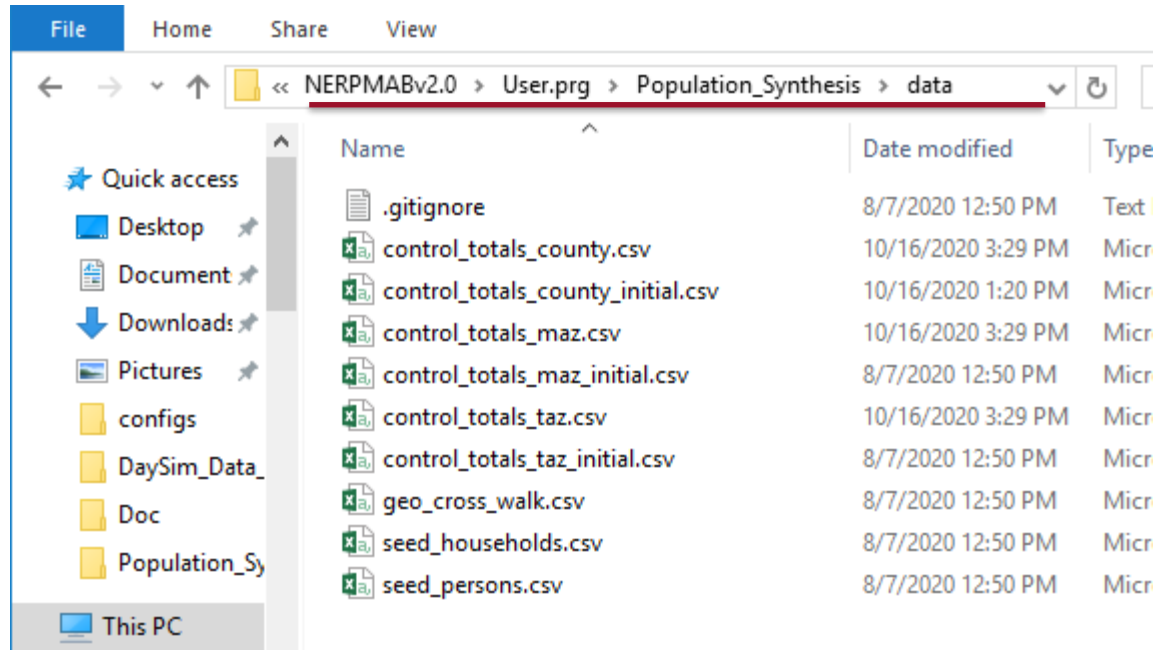
Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > Master > Base2015 > Input > DaySimInput > O2_Parcel

Name	Date modified	Type	Size
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
emp_2015.dbf	4/27/2020 5:22 PM	DBF File	268 KB
Hotel_Motel_TAZ_summary.txt	1/24/2020 8:49 AM	Text Document	2 KB



Adding 100 households to an MAZ

4. Update PopulationSim controls ([update_controls.bat](#))

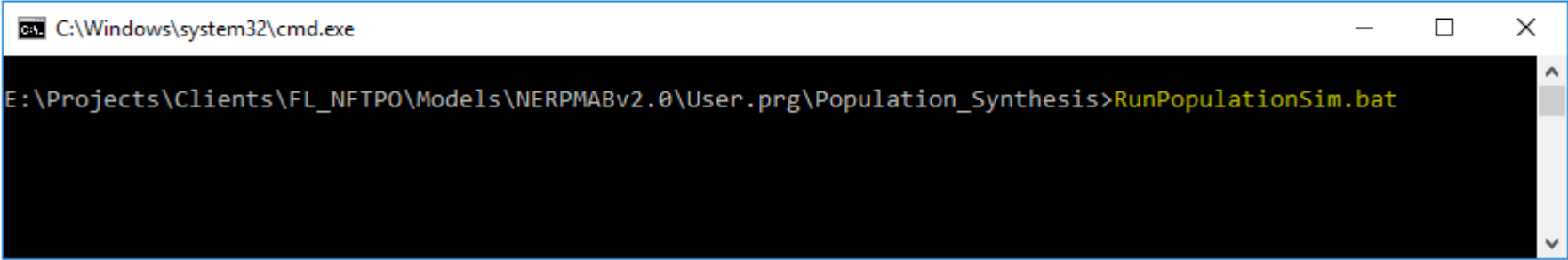


Adding 100 households to an MAZ

5. Run PopulationSim

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > Population_Synthesis

Name	Date modified	Type	Size
Anaconda2	5/13/2020 1:05 PM	File folder	
configs	5/13/2020 1:05 PM	File folder	
data	5/13/2020 1:05 PM	File folder	
output	7/7/2020 3:43 PM	File folder	
popsim_to_daysim	5/13/2020 1:05 PM	File folder	
run_populationsim.py	1/24/2020 8:54 AM	PY File	3 KB
RunPopulationSim.bat	1/24/2020 8:54 AM	Windows Batch File	2 KB



```
C:\Windows\system32\cmd.exe
E:\Projects\Clients\FL_NFTPO\Models\NERPMABv2.0\User.prg\Population_Synthesis>RunPopulationSim.bat
```



Adding 100 households to an MAZ

6. Convert PopulationSim output to DaySim input (`popsim_to_daysim.bat`)

File Explorer window showing the directory structure for Population_Synthesis. The file `popsim_to_daysim.bat` is highlighted with a red arrow.

Name	Date modified	Type	Size
Anaconda2	8/7/2020 12:50 PM	File folder	
configs	10/16/2020 1:19 PM	File folder	
data	10/16/2020 3:28 PM	File folder	
data_2030	10/16/2020 3:28 PM	File folder	
data_2045	10/16/2020 2:42 PM	File folder	
output	10/5/2020 2:35 AM	File folder	
popsim_to_daysim	10/5/2020 1:34 PM	File folder	
convert.py	10/5/2020 1:32 PM	Python File	7 KB
popsim_to_daysim.bat	10/5/2020 1:39 PM	Windows Batch File	2 KB
run_populationsim.py	8/7/2020 12:44 PM	Python File	3 KB
RunPopulationSim.bat	8/7/2020 12:44 PM	Windows Batch File	2 KB
TPPL.PRJ			
update_controls.bat			
update_controls.S			

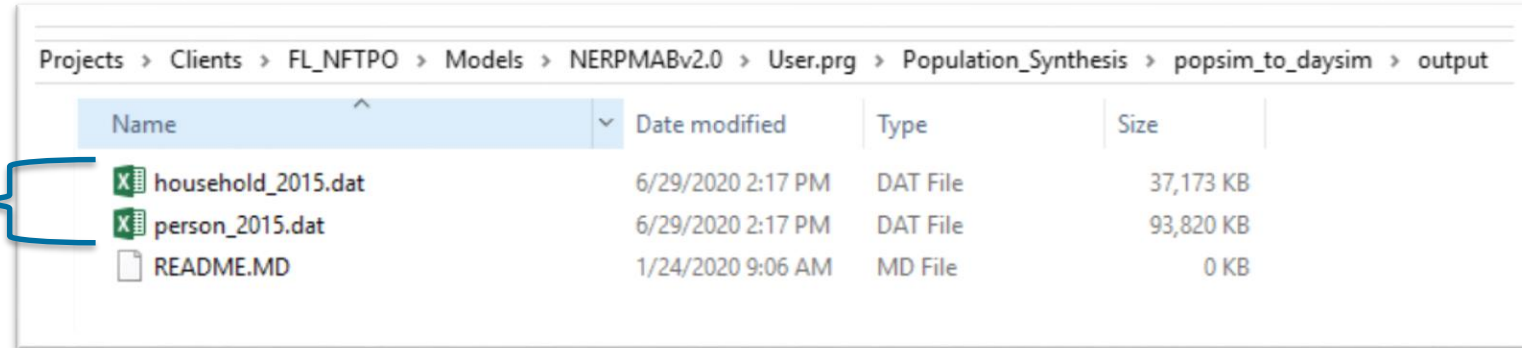
```
Command Prompt
E:\Projects\Clients\FL_NFTPO\Models\NERPMABv2.0\User.prg\Population_Synthesis>popsim_to_daysim.bat_
```



Adding 100 households to an MAZ

7. Rename the outputs

Rename the output



Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > Population_Synthesis > popsim_to_daysim > output

Name	Date modified	Type	Size
household_2015.dat	6/29/2020 2:17 PM	DAT File	37,173 KB
person_2015.dat	6/29/2020 2:17 PM	DAT File	93,820 KB
README.MD	1/24/2020 9:06 AM	MD File	0 KB

OUTPUT FILE	RENAME FILE		
	BASE2015	INT2030	CF2045
household_2015.dat	household_2015.dat	household_2030.dat	household_2045.dat
person_2015.dat	person_2015.dat	person_2030.dat	person_2045.dat



Adding 100 households to an MAZ

8. Copy outputs to the model scenario input directory

PopSim_to_DaySim.R
output

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > Population_Synthesis > popsim_to_daysim > output

Name	Date modified	Type	Size
household_2015.dat	6/29/2020 2:17 PM	DAT File	37,173 KB
person_2015.dat	6/29/2020 2:17 PM	DAT File	93,820 KB
README.MD	1/24/2020 9:06 AM	MD File	0 KB

Model Inputs

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > Master > Base2015 > Input > DaySimInput > 03_Household

Name	Date modified	Type	Size
household_2015.dat	1/24/2020 8:49 AM	DAT File	37,161 KB

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > Master > Base2015 > Input > DaySimInput > 04_Person

Name	Date modified	Type	Size
person_2015.dat	1/24/2020 8:49 AM	DAT File	93,730 KB



Adding 100 households to an MAZ

9. Run the model

Step 2

- applications
- Doc
- Input_ParcelData
- input_SWM
- Master
- MAZ_2015_2030_2045
- media
- OMX
- output_SWM
- parameters
- R-3.4.4
- User.prg
- NERPMAB2.cat**

Step 1

Model Description

Alternative Letter (1 Character) A

Model Year (2 digits) 15

ClusterHandle NERPM

Number of CPUs (for Cube Cluster Function) 48

Global Feedback Iterations 4

DaySim Parameters (Users should adjust these values correspondingly)

Parameter	Value	Browse ...	Edit ...
Number of processors (DaySim Parallel Processing Parameters)	20		
DaySim TAZ Index (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\01_TAZ_Index\jax_taz_indexes.dat	Browse ...	Edit ...
DaySim parcels (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\02_Parcel\buffered_maz_2015.dat	Browse ...	Edit ...
DaySim HH File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\03_Household\household_2015.dat	Browse ...	Edit ...
DaySim Person File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\04_Person\person_2015.dat	Browse ...	Edit ...
WorkerIDXIFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\05_xxi\jax_worker_ixifractions.dat	Browse ...	Edit ...
ParkAndRide	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\05_pnr\jax_p_rNodes.txt	Browse ...	Edit ...
Availability of Mode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\06_Roster\roster_jax.csv	Browse ...	Edit ...
DSRosterCombinationFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\06_Roster\roster_combinations_15.csv	Browse ...	Edit ...
Employment	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\02_Parcel\emp_2015.dbf	Browse ...	Edit ...
SeedShadowFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\09_SeedShadow\shadow_prices_15A.txt	Browse ...	Edit ...
MicrozoneNode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\microzononode.dat	Browse ...	Edit ...
ShortestPathIndex	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_index.dat	Browse ...	Edit ...
ShortestPathBin	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_bin.dat	Browse ...	Edit ...

Check box below if there are changes in employment distribution and you are running the scenario the first time

 Update Shadow Price

Check box below if there are changes in population synthesis and microzone data

 DaySimDataTools

User-specified Values

PROFILE.MAS Entries (Not Normally Changed)

Parameter	Value
Maximum internal zone number	2526
Maximum external zone number	2578

Buttons: Save, Close, Next..., Back..., Run

Step 3



Adding 100 employment to an MAZ

To add 100 additional employment to an MAZ, the user needs to run the DaySim data tools and the model

1. Update the base microzone file (*nftpo_microzones_year.csv*)
2. Run DaySim data tools (*DSBuffTool.exe*)
3. Copy outputs to the model scenario input directory
4. Update the *emp_year.dbf* file
5. Run the model



Adding 100 employment to an MAZ

1. Update the base microzone file
([nftpo_microzones_year.csv](#))

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > DaySim_Data_Tools






















Name	Date modified	Type	Size
DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
Network_DataPrep2.exe	3/17/2020 6:32 PM	Application	348 KB
DTASettings.ini	7/7/2020 2:41 PM	Configuration sett...	2 KB
nftpo_netprep.ctf	6/26/2020 3:47 PM	CTL File	2 KB
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
buffered_maz_2030.dat	4/27/2020 6:31 PM	DAT File	23,110 KB
buffered_maz_2045.dat	7/7/2020 3:02 PM	DAT File	23,158 KB
microzonenode.dat	7/7/2020 2:51 PM	DAT File	686 KB
netout.dat	7/7/2020 2:25 PM	DAT File	2,184 KB
nftpo_MAZs_2015.dat	1/24/2020 8:53 AM	DAT File	1,175 KB
output_shortest_path_txt_bin.dat	7/7/2020 3:02 PM	DAT File	1,509,646 KB
output_shortest_path_txt_index.dat	7/7/2020 3:02 PM	DAT File	2,395 KB
MAZ_2015_2045_2030.dbf	1/24/2020 8:53 AM	DBF File	30,936 KB
input_link.csv	1/24/2020 8:52 AM	Microsoft Excel C...	7,468 KB
input_link_type.csv	1/24/2020 8:52 AM	Microsoft Excel C...	1 KB
input_node.csv	1/24/2020 8:52 AM	Microsoft Excel C...	2,156 KB
input_od_pairs.csv	7/7/2020 2:41 PM	Microsoft Excel C...	4,222,276 KB
maz_15_30_45.csv	1/24/2020 8:53 AM	Microsoft Excel C...	8,428 KB
nftpo_Intersections.csv	1/24/2020 8:53 AM	Microsoft Excel C...	2,996 KB
nftpo_microzones_2015.csv	4/27/2020 5:06 PM	Microsoft Excel C...	3,829 KB



Adding 100 employment to an MAZ

2a. Run DaySim data tools
(DSBuffTool.exe)

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > User.prg > DaySim_Data_Tools

Name	Date modified	Type	Size
 DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
 DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
 Network_DataPrep2.exe	3/17/2020 6:32 PM	Application	348 KB
 DTASettings.ini	7/7/2020 2:41 PM	Configuration sett...	2 KB
 nftpo_netprep.ctl	6/26/2020 3:47 PM	CTL File	2 KB
 buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
 buffered_maz_2030.dat	4/27/2020 6:31 PM	DAT File	23,110 KB
 buffered_maz_2045.dat	7/7/2020 3:02 PM	DAT File	23,158 KB
 microzonenode.dat	7/7/2020 2:51 PM	DAT File	686 KB
 netout.dat	7/7/2020 2:25 PM	DAT File	2,184 KB
 nftpo_MAZs_2015.dat	1/24/2020 8:53 AM	DAT File	1,175 KB
 output_shortest_path_txt_bin.dat	7/7/2020 3:02 PM	DAT File	1,509,646 KB
 output_shortest_path_txt_index.dat	7/7/2020 3:02 PM	DAT File	2,395 KB
 MAZ_2015_2045_2030.dbf	1/24/2020 8:53 AM	DBF File	30,936 KB
 input_link.csv	1/24/2020 8:52 AM	Microsoft Excel C...	7,468 KB
 input_link_type.csv	1/24/2020 8:52 AM	Microsoft Excel C...	1 KB
 input_node.csv	1/24/2020 8:52 AM	Microsoft Excel C...	2,156 KB
 input_od_pairs.csv	7/7/2020 2:41 PM	Microsoft Excel C...	4,222,276 KB
 maz_15_30_45.csv	1/24/2020 8:53 AM	Microsoft Excel C...	8,428 KB
 nftpo_Intersections.csv	1/24/2020 8:53 AM	Microsoft Excel C...	2,996 KB
 nftpo_microzones_2015.csv	4/27/2020 5:06 PM	Microsoft Excel C...	3,829 KB



Adding 100 employment to an MAZ

2b. Run DaySim data tools (DSBuffTool.exe)

The screenshot shows the 'DaySim Buffering Tool' window. It is divided into several sections: 'Read XML Input', 'INPUT', and 'OUTPUT'. The 'Read XML Input' section has a text box for 'XML Input File' containing the path 'E:\Projects\Clients\FL_NFTPO\Models\NERPMAbv2.0\User.prg\DaySim_Data_Tools\nftpo_r' and a 'Browse' button. The 'INPUT' section contains various file paths and settings. Under 'Distance Calculation', 'Node-to-Node' is selected. Under 'Node Distance File Format', 'DTA Lite Output' is selected. The 'OUTPUT' section has a 'Buffered Output File' path 'buffered_maz_2015.dat' and an 'Output XML file (optional)' path 'nftpo_mz_allstreets.xml'. At the bottom, there are 'Cancel' and 'Run' buttons.

Section	Field	Value	Action
Read XML Input	XML Input File	E:\Projects\Clients\FL_NFTPO\Models\NERPMAbv2.0\User.prg\DaySim_Data_Tools\nftpo_r	Browse
	Distance Calculation	<input checked="" type="radio"/> Euclidean <input type="radio"/> Circuity <input checked="" type="radio"/> Node-to-Node	
INPUT	Parcel Data File	nftpo_microzones_2015.csv	Browse
	Intersection Data File	nftpo_intersections.csv	Browse
	Transit Stops File	nftpo_transitstops.csv	Browse
	Open Spaces File	nftpo_openspaces.csv	Browse
	Circuity Data File		Browse
	Node Distance File Format	<input checked="" type="radio"/> DTA Lite Output <input type="radio"/> DaySim Format	
	Node Data File	input_node.csv	Browse
	Node to Node Distance File	output_shortest_path.bt	Browse
	Parcel-Node Correspondence File (Intermediate File)	microzonenode.dat	Browse
	Open Spaces-Node Correspondence File (Intermediate File)	parksnode.dat	Browse
Buffer Type	<input type="radio"/> Flat <input checked="" type="radio"/> Logistic decay <input type="radio"/> Exponential decay		
	Buffer 1 Distance (ft)	660	Buffer 2 Distance (ft) 1320
	Buffer 1 Decay Slope	0.76	Buffer 2 Decay Slope 0.76
	Buffer 1 Offset	2640	Buffer 2 Offset 2640
	Buffer 1 Exponential Decay Parameter	-2.5205	Buffer 2 Exponential Decay Parameter -0.4365
OUTPUT	Buffered Output File	buffered_maz_2015.dat	Browse
	Output XML file (optional)	nftpo_mz_allstreets.xml	Browse



Adding 100 employment to an MAZ

3. Copy outputs (buffered_maz_year.csv) to the model scenario input directory

Projects > Clients > FL_NFTPO > Models > NERPMAbv2.0 > User.prg > DaySim_Data_Tools

Name	Date modified	Type	Size
DSBuffTool.exe	1/24/2020 8:52 AM	Application	62 KB
DTALite64.exe	1/24/2020 8:52 AM	Application	867 KB
Network_DataPrepv2.exe	3/17/2020 6:32 PM	Application	348 KB
DTASettings.ini	7/7/2020 2:41 PM	Configuration sett...	2 KB
nftpo_netprep.ctl	6/26/2020 3:47 PM	CTL File	2 KB
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
buffered_maz_2030.dat	4/27/2020 6:31 PM	DAT File	23,110 KB
buffered_maz_2045.dat	7/7/2020 3:02 PM	DAT File	23,158 KB
microzonenode.dat	7/7/2020 2:51 PM	DAT File	686 KB
netout.dat	7/7/2020 2:25 PM	DAT File	2,184 KB
nftpo_MAZs_2015.dat	1/24/2020 8:53 AM	DAT File	1,175 KB
output_shortest_path_txt_bin.dat	7/7/2020 3:02 PM	DAT File	1,509,646 KB
output_shortest_path_txt_index.dat	7/7/2020 3:02 PM	DAT File	2,395 KB
MAZ_2015_2045_2030.dbf	1/24/2020 8:53 AM	DBF File	30,936 KB
input_link.csv	1/24/2020 8:52 AM	Microsoft Excel C...	7,468 KB
input_link_type.csv	1/24/2020 8:52 AM	Microsoft Excel C...	1 KB
input_node.csv	1/24/2020 8:52 AM	Microsoft Excel C...	2,156 KB
input_od_pairs.csv	7/7/2020 2:41 PM	Microsoft Excel C...	4,222,276 KB
maz_15_30_45.csv	1/24/2020 8:53 AM	Microsoft Excel C...	8,428 KB
nftpo_Intersections.csv	1/24/2020 8:53 AM	Microsoft Excel C...	2,996 KB
nftpo_microzones_2015.csv	4/27/2020 5:06 PM	Microsoft Excel C...	3,829 KB

Projects > Clients > FL_NFTPO > Models > NERPMAbv2.0 > Master > Base2015 > Input > DaySimInput > O2_Parcel




Name	Date modified	Type	Size
buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
emp_2015.dbf	4/27/2020 5:22 PM	DBF File	268 KB
Hotel_Motel_TAZ_summary.txt	1/24/2020 8:49 AM	Text Document	2 KB



Adding 100 employment to an MAZ

4. Update the `emp_year.dbf` file

Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > Master > Base2015 > Input > DaySimInput > 02_Parcel

Name	Date modified	Type	Size
 buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
 emp_2015.dbf	4/27/2020 5:22 PM	DBF File	268 KB
 Hotel_Motel_TAZ_summary.txt	1/24/2020 8:49 AM	Text Document	2 KB



Adding 100 employment to an MAZ

5. Run the model

Step 2

- applications
- Doc
- Input_ParcelData
- input_SWM
- Master
- MAZ_2015_2030_2045
- media
- OMX
- output_SWM
- parameters
- R-3.4.4
- User.prg
- NERPMAB2.cat**

Step 1

Base2015

Model Description

Alternative Letter (1 Character)	A
Model Year (2 digits)	15
ClusterHandle	NERPM
Number of CPUs (for Cube Cluster Function)	48
Global Feedback Iterations	4

DaySim Parameters (Users should adjust these values correspondingly)

Number of processors (DaySim Parallel Processing Parameters)	20		
DaySim TAZ Index (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\01_TAZ_Index\jax_taz_indexes.dat	Browse ...	Edit ...
DaySim parcels (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\02_Parcel\buffered_maz_2015.dat	Browse ...	Edit ...
DaySim HH File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\03_Household\household_2015.dat	Browse ...	Edit ...
DaySim Person File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\04_Person\person_2015.dat	Browse ...	Edit ...
WorkerIDXIFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\05_xxi\jax_worker_ixifractions.dat	Browse ...	Edit ...
ParkAndRide	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\05_pnr\jax_p_rNodes.txt	Browse ...	Edit ...
Availability of Mode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\06_Roster\roster_jax.csv	Browse ...	Edit ...
DSRosterCombinationFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\06_Roster\roster.combinations_15.csv	Browse ...	Edit ...
Employment	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\02_Parcel\emp_2015.dbf	Browse ...	Edit ...
SeedShadowFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\09_SeedShadow\shadow_prices_15A.txt	Browse ...	Edit ...
MicrozoneNode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\microzonenode.dat	Browse ...	Edit ...
ShortestPathIndex	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_index.dat	Browse ...	Edit ...
ShortestPathBin	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_bin.dat	Browse ...	Edit ...

Check box below if there are changes in employment distribution and you are running the scenario the first time

Update Shadow Price

Check box below if there are changes in population synthesis and microzone data

DaySimDataTools

User-specified Values

PROFILE.MAS Entries (Not Normally Changed)

Maximum internal zone number	2526
Maximum external zone number	2578

Save Close Next... Back... **Run**

Step 3



Adding additional Hotel rooms to a TAZ

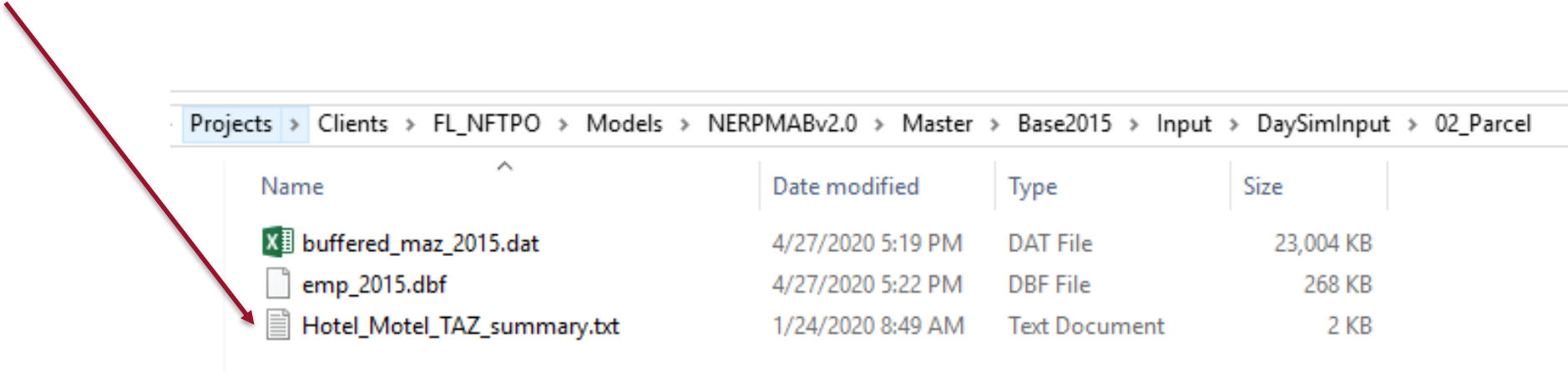
To add additional hotel rooms to a TAZ, the user needs to -

1. Update the `Hotel_Motel_TAZ_summary.txt` file
2. Run the model






Adding additional Hotel rooms to a TAZ

1. Update the [Hotel_Motel_TAZ_summary.txt](#) file



The screenshot shows a file explorer window with the following breadcrumb path: Projects > Clients > FL_NFTPO > Models > NERPMABv2.0 > Master > Base2015 > Input > DaySimInput > 02_Parcel. Below the path is a table of files:

Name	Date modified	Type	Size
 buffered_maz_2015.dat	4/27/2020 5:19 PM	DAT File	23,004 KB
 emp_2015.dbf	4/27/2020 5:22 PM	DBF File	268 KB
 Hotel_Motel_TAZ_summary.txt	1/24/2020 8:49 AM	Text Document	2 KB



Adding additional Hotel rooms to a TAZ

2. Run the model

Step 2

- applications
- Doc
- Input_ParcelData
- input_SWM
- Master
- MAZ_2015_2030_2045
- media
- OMX
- output_SWM
- parameters
- R-3.4.4
- User.prg
- NERPMAB2.cat**

Step 1

The screenshot shows the DaySim software interface with the following components:

- File Tree (Left):** Shows a project structure with folders like 'applications', 'Doc', 'Input_ParcelData', etc., and a file 'NERPMAB2.cat' highlighted.
- Model Selection (Top Left):** A tree view showing 'Master' > 'Base2015' selected, with sub-items 'INT2030' and 'CF2045'.
- App Properties (Middle Left):** A table listing model parameters:

Key	Value
Scen. Name	Base2015
DESCR	Base Year 2015 Network
alt	A
Year	15
ClusterHandle	NERPM
ClusterNodes	48
GbIterations	4
DaySim Parame	(Note)
NProcessors	20
TAZIndexFile	E:\... \jax taz_indexes.dat
ParcelFile	buffered_maz_2015.dat
HouseholdFile	... \household_2015.dat
PersonFile	E:\... \person_2015.dat
WorkerDXXIFile	jax_worker_ixifractions.da
ParkAndRide	E:\... \jax_p_rNodes.txt
DSRosterFile	E:\... \roster_jax.csv
DSRosterComb	roster.combinations_15.
Employment	E:\... \emp_2015.dbf
SeedShadowFil	shadow_prices_15A.txt
MicrozoneNode	E:\... \microzonenode.dat
ShortestPathIn	output_shortest_path_t
ShortestPathBin	output_shortest_path_t
NOTE1	(Note)
UDShadow	0
NOTED	(Note)
DaySimDataTo	0
NOTEA	(Note)
NOTER	(Note)
- Model Description (Top Right):** Fields for 'Base Year 2015 Networks and SE Data', 'Alternative Letter (1 Character): A', 'Model Year (2 digits): 15', 'ClusterHandle: NERPM', 'Number of CPUs (for Cube Cluster Function): 48', and 'Global Feedback Iterations: 4'.
- DaySim Parameters (Middle Right):** A section titled 'DaySim Parameters (Users should adjust these values correspondingly)' with a table of file paths and 'Browse ...' / 'Edit ...' buttons:

Parameter	Value	Actions
Number of processors (DaySim Parallel Processing Parameters)	20	
DaySim TAZ Index (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\01_TAZ_Index\jax taz_indexes.dat	Browse ... Edit ...
DaySim parcels (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\02_Parcel\buffered_maz_2015.dat	Browse ... Edit ...
DaySim HH File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\03_Household\household_2015.dat	Browse ... Edit ...
DaySim Person File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\04_Person\person_2015.dat	Browse ... Edit ...
WorkerDXXIFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\05_ixxi\jax_worker_ixifractions.dat	Browse ... Edit ...
ParkAndRide	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\05_pnr\jax_p_rNodes.txt	Browse ... Edit ...
Availability of Mode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\06_Roster\roster_jax.csv	Browse ... Edit ...
DSRosterCombinationFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\06_Roster\roster.combinations_15.csv	Browse ... Edit ...
Employment	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\02_Parcel\emp_2015.dbf	Browse ... Edit ...
SeedShadowFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\09_SeedShadow\shadow_prices_15A.txt	Browse ... Edit ...
MicrozoneNode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\10_Node_to_Node\microzonenode.dat	Browse ... Edit ...
ShortestPathIndex	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_index.dat	Browse ... Edit ...
ShortestPathBin	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\Input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_bin.dat	Browse ... Edit ...
- User-specified Values (Bottom Right):** Fields for 'Maximum internal zone number: 2526' and 'Maximum external zone number: 2578'.
- Buttons (Bottom):** 'Save', 'Close', 'Next...', 'Back...', and 'Run' (highlighted with a red arrow).

Step 3





Running the Model

Running Scenarios

Step 2

- applications
- Doc
- Input_ParcelData
- input_SWM
- Master
- MAZ_2015_2030_2045
- media
- OMX
- output_SWM
- parameters
- R-3,4,4
- User.prg
- NERPMAB2.cat**

Step 1

Base2015

Key	Value
Scen. Name	Base2015
DESCR	Base Year 2015 Network
alt	A
Year	15
ClusterHandle	NERPM
ClusterNodes	48
GbIterations	4
DaySim Parame	(Note)
NProcessors	20
TAZIndexFile	E:\... \jax taz_indexes.dat
ParcelFile	buffered_maz_2015.dat
HouseholdFile	... \household_2015.dat
PersonFile	E:\... \person_2015.dat
WorkerDOXFile	_jax_worker_ixifractions.da
ParkAndRide	E:\... \jax_p_rNodes.txt
DSRosterFile	E:\... \roster_jax.csv
DSRosterComb	roster.combinations_15.v
Employment	E:\... \emp_2015.dbf
SeedShadowFil	shadow_prices_15A.txt
MicrozoneNode	E:\... \microzonenode.dat
ShortestPathIn	output_shortest_path_t
ShortestPathBin	output_shortest_path_t
NOTEC	(Note)
UDShadow	0
NOTED	(Note)
DaySimDataTot	0
NOTEA	(Note)
NOTER	(Note)

Model Description

Alternative Letter (1 Character): A

Model Year (2 digits): 15

ClusterHandle: NERPM

Number of CPUs (for Cube Cluster Function): 48

Global Feedback Iterations: 4

DaySim Parameters (Users should adjust these values correspondingly)

Parameter	Value	Browse ...	Edit ...
Number of processors (DaySim Parallel Processing Parameters)	20		
DaySim TAZ Index (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\01_TAZ_Index\jax taz_indexes.dat	Browse ...	Edit ...
DaySim parcels (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\02_Parcel\buffered_maz_2015.dat	Browse ...	Edit ...
DaySim HH File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\03_Household\household_2015.dat	Browse ...	Edit ...
DaySim Person File (Do not begin file name with f, n or r)	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\04_Person\person_2015.dat	Browse ...	Edit ...
WorkerDOXFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\05_pnr\jax_worker_ixifractions.dat	Browse ...	Edit ...
ParkAndRide	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\05_pnr\jax_p_rNodes.txt	Browse ...	Edit ...
Availability of Mode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\06_Roster\roster_jax.csv	Browse ...	Edit ...
DSRosterCombinationFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\06_Roster\roster.combinations_15.csv	Browse ...	Edit ...
Employment	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\02_Parcel\emp_2015.dbf	Browse ...	Edit ...
SeedShadowFile	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\09_SeedShadow\shadow_prices_15A.txt	Browse ...	Edit ...
MicrozoneNode	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\microzonenode.dat	Browse ...	Edit ...
ShortestPathIndex	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_index.dat	Browse ...	Edit ...
ShortestPathBin	E:\Projects\Clients\VL_NFTPO\Models\NERPMABv_1_MAR2020\Master\Base2015\input\DaySimInput\10_Node_to_Node\output_shortest_path_txt_bin.dat	Browse ...	Edit ...

Check box below if there are changes in employment distribution and you are running the scenario the first time

Update Shadow Price

Check box below if there are changes in population synthesis and microzone data

DaySimDataTools

User-specified Values

PROFILE.MAS Entries (Not Normally Changed)

Maximum internal zone number: 2526

Maximum external zone number: 2578

Buttons: Save, Close, Next..., Back..., Run

Step 3

- Videos at <http://northfloridatpo.com/modelwiki/Support/Training>





System Requirements

System Requirements

Software Version Used for Model Development:

- Cube 6.4.4 with Cluster
- DaySim
- R (bundled with model setup)

Recommended Hardware Minimum:

- RAM 8 GB
- 4 Core Processors
- 100 GB of Storage





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