

Tech Memo	Improvement	Status
1	Add 130 TAZ splits	Completed
1	Implement multi-tiered zone numbering structure	Completed
2	Use Streetlight Data to estimate Internal-External and External-External trip-making behavior	<p>Metro Analytics completed an analysis comparing our Base Year 2015 model with Streetlight Data. However, when the Base Year 2020 model is being calibrated, <b>YOU</b> would need to examine Streetlight Data, analyze it for reasonableness, and make updates to the External trip table. However, as noted, traffic for 2020 should probably not be used for the analysis given that 2020 can not be considered a "typical" travel year.</p>
3	Convert socio-economic variables to new units	<p><b>YOU</b> will need to convert Census data into the number of "Households" for each TAZ. <b>YOU</b> will also need to input average persons per household, % 0, 1, 2, 3+ autos, % HHs by income quartile, and % 0, 1, 2+ workers per HH, as show on page 3 of Tech Memo 3. APO staff has already used InfoGroup data to estimate the number of employee for each job type (i.e., Office, Industrial, Retail, etc.) per TAZ. <b>YOU</b> will need to contact new hotels/motels to get the number of rooms in their facility. APO staff will work with school boards and universities to get student enrollment. <b>YOU</b> will be responsible for recommending the use of special generators for areas or zones for which the standard model does not appear to be adequate to accurately estimate ADT.</p>

4	Revisions to the roadway network	<p>Metro Analytics relocated centroids and connectors based on new zonal splits and added new centroids and connectors for new zones (see Tech Memo 1 above). However they do recommend that <u>YOU</u> do additional editing of centroid connectors during the 2020 Base Year calibration. Metro Analytics also wrote and added scripting to the model for pre-processing algorithms. YOU will be responsible for implementing UROAD factors and updated BPR curves. <u>YOU</u> will be responsible for implementing capacity and free-flow speed look-up tables.</p>
5	Implement files with new trip purposes (see Table 1 on page 2 of Tech Memo 5) and update trip production and trip attraction rates within the model.	<p>YOU should use the 2020 Household Travel Survey as the primary source for trip rates in the 2020 Base Year model. Where necessary, <u>YOU</u> may substitute other data sources. <u>YOU</u> should follow the recommendations of Tech Memo 5 when calibrating the 2020 Base Year model.</p>
6	Review and refine friction factors as needed. Explore the use of K-factors in specific areas and for specific trip purposes to better calibrate the model, but make every effort to keep K-factors to a minimum.	<p><u>YOU</u> should examine the 2020 Household Travel Survey results to determine if the trips captured via smart phone app can be used to reasonably estimate friction factors, and (if so) apply them to the model files. YOU should make an assessment during model calibration if one or more K-factors are necessary and reasonable to include in the model, but this should only be done when absolutely necessary and K-factors should be kept to an absolute minimum or zero if possible. <u>YOU</u> should also make an evaluation during calibration if trip penalties for bridge crossings are reasonable and necessary, but they should also be kept to a minimum if possible. <u>YOU</u> should make an assessment at the start of the calibration process if a destination choice model would be a superior option to our current gravity model. If so, <u>YOU</u> would be responsible for implementing the destination choice model.</p>
7	Mode Choice and Auto Occupancy	<p><u>YOU</u> would be responsible for completing the recommendations of this Tech Memo.</p>

8	Time-of-Day Trip Assignment	<u>YOU</u> will be responsible for implementing the time-of-day trip assignment for the model.
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