Data Type	Data Set	Data Source	Agency	Description	Attributes Used	Steps for Processing Data	Notes
Housing	Census Block	http://www.census.gov/data/data-tools.html https://www.census.gov/geo/maps-data/data/tiger-data.html	US Census Bureau	Household data collected by US Census Bureau during decennial census. Data is reported at the Census Block level of geography, which typically nests within TAZ's. Due to the fine level of geography and privacy concerns, detailed data concerning household demographics are suppressed.	Shapefile with data loaded; Housing10: total households Pop10: total population	Data ready for incorporation into TAZ data	
		http://www.iowadatacenter.org/2010-block-data	Iowa Data Center (by county)		Excel file; Total: total households	Requires separate geographic layer of census block geography to fully incorporate into TAZ data.	Does include ethnicity for later incorporation of EJ (minority) analysis within model
	ACS/ Census Block Group	https://www.census.gov/geo/maps-data/data/tiger-data.html 2009-2013 Detailed Tables	US Census Bureau	Household data collected by US Census Bureau through the American Community Survey (ACS) between 2009 and 2013. Geodatabase with Block Group geography and over 11,000 attributes for each Block Group.	Geodatabase with 21 tables. Specific attributes of interest include: B01003e1:total population (TAZ data reasonableness check) B08013e1-aggregate travel time to work by home geography (trip distribution reasonableness check) B08016xx-collection of place of work data for home geography (trip distribution reasonableness check) B08101xx and B08301xx: collection of means of trans to work for home geography(mode choice reasonableness check) B08132xx and B08302xx:collection of time of departure to work data (time of day reasonableness check) B08134xx: collection of mode to work by travel time by home geography (non-motorized and mode choice reasonableness checks) B08141xx: collection of mode to work by vehicles available by home geography (trip generation and mode choice reasonableness checks) B08201xx: collection of household size by vehicles available (cross-classification data) B08202xx: collection of household size by number of workers (cross-classification data) B08303xx:collection of travel times to work by time bins (trip distribution and traffic assignment reasonableness checks) B08501xx: collection of mode to work by workplace geography (mode choice reasonableness check) B08519xx: collection of mode to work by income (income-specific mode choice reasonableness check) B08522xx: collection of mode to work by poverty by workplace geography (mode choice reasonableness check) B08528xx: collection of mode of trans to work by workplace geography	Download geodatabase. Open geodatabase with ArcGIS. Export Blockgroup geography to ESRI shapefile format. Export tables from ESRI to dbf format including: X01_age_and_sex, X08_commuting, X11_household_family_subfamilies, X14_school_enrollment, X19_income , X23_employment_status and X25_housing_characteristics (may require txt format due to number of attributes in table) Open shapefile in TransCAD and convert to geographic file. Open geographic file and select Block Groups that correspond to the model area. Export selected Block Groups to new geographic file. Create two new tables, one for inputs and one for validation data with records equaling the number of records in the MPO-specific Block Group geographic file. Add fields to each table based on data in column to the left.	Poverty, ethnicity, sex and age data available if deemed appropriate to incorporate into demand model. Develop an aggregation file within TransCAD to aggregate TAZ's to match the Block Group data for validation and reasonableness checking purposes.

Data Type	Data Set	Data Source	Agency	Description	Attributes Used	Steps for Processing Data	Notes
					(mode choice reasonableness check)		
					B08532xx: collection of modal time of arrival to work data by workplace geography (time of day reasonableness check)		
					B08536xx: collection of aggregate travel time to work by workplace geography (trip distribution reasonableness check)		
					B08541xx: collection of mode to work by vehicle availability by workplace geography (mode choice reasonableness check)		
					B11005xx: collection of household data covering school-age children (school-specific model data)		
					B14007xx: collection of students enrolled in school (including college undergrad) (school and college-specific model data)		
					B19001xx: collection of household income data (income segregation reasonableness check)		
					B23022xx: collection of worker data by level of employment (full, part-time, etc) (cross-classification reasonableness check)		
					B25001e1: housing units (check against TAZ and block data)		
					B25002e1 & e2: total and occupied housing units (convert total households to occupied households)		
					B25003e2 & e3: owner and renter occupied housing units (reasonableness check against incomes)		
					B25024xx: collection of housing unit sizes to identify multi-unit complexes (reasonableness check for housing units)		
	ACS/ Census Tract	https://www.census.gov/geo/maps-data/data/tiger-data.html 2009-2013 Detailed Tables	US Census Bureau	Household data collected by US Census Bureau through the American Community Survey (ACS) between 2009 and 2013. Geodatabase with Tract geography and over 38,000 attributes for each Tract.	Geodatabase with 29 tables. Specific attributes of interest include: B26001e1: Group quarters population.	Download geodatabase to local server. Open geodatabase with ArcGIS. Export Tract geography to ESRI shapefile format. Export tables from ESRI to dbf format including: X26_group_quarters	
	PUMS			Public Use Microdata Sample (PUMS) is data for geographic areas of at least 100,000 people called Public Use Microdata Areas (PUMA).	Data is similar to ACS data at the Census Block Group and Tract level, but at too large of geographic extent to provide detailed data for travel demand model development within the model area.		
Employment	ES202		Iowa Workforce Development				

Data Type	Data Set	Data Source	Agency	Description	Attributes Used	Steps for Processing Data	Notes
	Parcel Data		Iowa Counties				
	InfoGroup		InfoGroup				
	LEHD Resident and Worker Data	http://lehd.ces.census.gov/	US Census Bureau	Longitudinal Employer-Household Dynamics provides data on work location and housing location of income-specific groups	CSV files: IA_RAC_SE01 file provides number of low-income workers living at a location in the SE01 field. IA_RAC_SE02 file provides number of medium-income workers living at a location in the SE02 field IA_RAC_SE03 file provides number of high-income workers living at a location in the SE03 field IA_WAC_SE01 file provides number of low-income workers working at a location in the SE01 field. IA_WAC_SE02 file provides number of medium-income workers working at a location in the SE02 field IA_WAC_SE03 file provides number of high-income workers working at a location in the SE03 field	Appeared to be suppression at the Block level, so recommend aggregating data to the Block Group level. Calculate percent of HH's and employees in each income group, then apply those values to the TAZ-specific data.	
	LODES	http://lehd.ces.census.gov/	US Census Bureau	Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LODES) provides worker flows by income group	CSV file: W_geocode: geography of workplace R_geocode: geography of residence SE01: low income work trips SE02: medium income work trips SE03: high income work trips	Appeared to be suppression at the Block level, so recommend aggregating data to the Block Group level.	"Main" file contains records where residence and workplace are within the state. "Aux" file contains records for residence outside the state but workplace within the state.
Travel Characteristics	Journey to Work	https://www.census.gov/hhes/commuting/data/commutingflows.html Table 3 2009-2013 ACS Data	US Census Bureau	Journey to Work data by County and Minor Civil Division; worker flows from residence to workplace.	Excel spreadsheet: Residence>State Name Residence>County Residence>Metropolitan Statistical Area of County Workplace>State Name Workplace>County Workplace>Metropolitan Statistical Area of County Commuting Flow>Workers in Commuting Flow Commuting Flow>Margin of Error	Download spreadsheet to local server. Filter records by Header Row (Row 6). Display Residence>State Name as Iowa. Select appropriate counties under Residence>Counties. Record the flow of workers from the target Residence area to resultant Workplace areas. Reset filters, then develop filters for State and County of interest under the	Develop an aggregation file within TransCAD to aggregate TAZ's to match the JTW geography for validation and reasonableness checking purposes.

Data Type	Data Set	Data Source	Agency	Description	Attributes Used	Steps for Processing Data	Notes
						Workplace columns to identify commuter flows to specific areas.	
	NHTS-HH	http://nhts.ornl.gov/download.shtml	NHTS	Data unique to a household, or questions asked once for each sample household. Questions from interview sections: Number of vehicles Person Data, Telephone Data, Type of Residence, Location of Home, Household Income, Education of Household Respondent.	CSV file: HouseID, driver count, household size, vehicle count, worker count Local data will include latitude and longitude for geocoding to TAZ data.	Geocode HH table to TAZ	
	NHTS-Person	http://nhts.ornl.gov/download.shtml	NHTS	Data determined once for each completed person interview. Questions from interview sections: Age, Driver Status, Race & Ethnicity of Household Respondent Travel to Work, Miles driven, Customer Satisfaction, Born in US, Education, Person Income, Medical Condition, Internet Use.	CSV file: HouseID, personID, worker (work status), time to work	Join Person table to HH table	
	NHTS-Vehicle	http://nhts.ornl.gov/download.shtml	NHTS	Data relating to each of the household's vehicles. Questions from interview section: Vehicle Data, Type of Residence, Verified Vehicle Data, Annualized Vehicle Miles, Household Income.			
	NHTS-Trip	http://nhts.ornl.gov/download.shtml	NHTS	Data about each trip the person made on the household's randomly-assigned travel day. Questions from interview section Person Data, Travel Day Data.	CSV file: HouseID, PersonID, Trippurp (5 general trip purposes) Awayhome (detailed reason for trip) Drvr_flg (Driver flag), Endtime(trip end time) Numontrp (number on trip) Psgr_flg (passenger flag)	Geocode trip ends to TAZ to develop survey OD table and corresponding trip length frequency. Join Trip table to HH table to estimate production rates by HH type. Join Trip table to TAZ employment data for entry into regression analysis for attraction rates.	

Data Type	Data Set	Data Source	Agency	Description	Attributes Used	Steps for Processing Data	Notes
					Strttime(trip start time) Whyfrom (reason for previous trip) Whyto(reason for travel day trip) Dweltime(time at destination) TDTRPNUM(trip number for travel day) TDWKND (weekend trip flag) Wttrdfin (trip weigth to inflate tot total population) Local data will include latitude and longitude for geocoding to TAZ data.		
	Transfer ability	http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/subject_areas/national_household_travel_survey/index.html	NHTS	The purpose of the project was to develop estimates of average weekday household person trips, vehicle trips, person miles traveled, and vehicle miles traveled, for all census tracts in the United States. The estimates were made using national travel data collected in the 2009 National Household Travel Survey (NHTS), sponsored by the Federal Highway Administration, and applied to individual census tracts using the 2005 to 2009 American Community Survey (ACS) estimates from the Bureau of Census.	Text file at Census Tract level: Person Miles generated by tract, Person Trips generated by tract, Vehicle Miles generated by tract, Vehicle Trips generated by tract, trip gen rates for size/auto cross classification by person and vehicle, miles of travel by size/auto cross classification	Join to Census Tract geography	Provides a reasonableness check for trip generation rates estimated or borrowed for each Census Tract within the model area.
	Trip Chaining		NHTS	Dataset from 2009 NHTS that identifies how Tours are flagged in the data			Data not directly applicable
Network	Travel Time		INRIX, HERE				
	GIMS	http://www.iowadot.gov/gis/downloads/default.aspx	IowaDOT	Contains road centerlines, structures and rail crossing data, along with a variety of associated attributes.			
	Aerials						