NextGen National Household Travel Survey

2022 NHTS Derived Variables

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Ipsos

US Department of Transportation

Federal Highway Administration

Derived Variables

Variable and Creation Instructions	Short Description and Ranges
AIRSIZE Creation: Use airport size related to domestic airport (AIRCODE)	Description: Domestic airport hub size based on FY23 NPIAS hub type status 01=Nonhub 02=Small 03=Medium 04=Large
ANNMILES Creation: If VEHOWNED=-7 or -8 or -9 OR VEHMILES=-7 or -8 or -77 or -88 or -9 or ESTMILES=-7 or -8 or -77 or -88 or -9 then ANNMILES=-9 Else If VEHOWNED=1 then ANNMILES=VEHMILES; /*This should result in positive values and values of -9*/ Else if VEHOWNED=2 then ANNMILES= (ESTMILES/VEHOWNEDMO)*12; If VEHOWNED=2 and VEHOWNMO=-7 or -8 or -9 then ANNMILES=-9 If ANNMILES > 200000 then ANNMILES=200000	Description: Self-reported annualized mile estimate. Ranges: Continuous variable
BEGTRIP Creation: Remove day of month information from LD5 (YYYYMMDD)	Description: Beginning date of trip (YYYYMM)
CDIVMSAR Creation:	Description: Grouping of household by combination of Census division, MSA status, and presence of rail Range:

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Variable and Creation Instructions	Short Description and Ranges
If CENSUS_D=1 then do; If MSACAT=1 then CDIVMSAR=11; If MSACAT=2 then CDIVMSAR=12; If MSACAT=3 then CDIVMSAR=13; If MSACAT=4 then CDIVMSAR=14; end; If CENSUS_D=2 then do; If MSACAT=1 then CDIVMSAR=21; If MSACAT=2 then CDIVMSAR=22; If MSACAT=3 then CDIVMSAR=23; If MSACAT=4 then CDIVMSAR=24; end; If CENSUS_D=3 then do; If MSACAT=1 then CDIVMSAR=31; If MSACAT=2 then CDIVMSAR=32; If MSACAT=3 then CDIVMSAR=33; If MSACAT=4 then CDIVMSAR=34; end; If CENSUS_D=4 then do; If MSACAT=1 then CDIVMSAR=41; If MSACAT=2 then CDIVMSAR=42; If MSACAT=3 then CDIVMSAR=43; If MSACAT=4 then CDIVMSAR=44; end; If CENSUS_D=5 then do; If MSACAT=1 then CDIVMSAR=51; If MSACAT=2 then CDIVMSAR=52; If MSACAT=3 then CDIVMSAR=53; If MSACAT=4 then CDIVMSAR=54; end; If CENSUS_D=6 then do; If MSACAT=1 then CDIVMSAR=61; If MSACAT=2 then CDIVMSAR=62; If MSACAT=3 then CDIVMSAR=63; If MSACAT=4 then CDIVMSAR=64; end; If CENSUS_D=7 then do; If MSACAT=1 then CDIVMSAR=71; If MSACAT=2 then CDIVMSAR=72; If MSACAT=3 then CDIVMSAR=73; If MSACAT=4 then CDIVMSAR=74;	11=New England (ME, NH, VT, CT, MA, RI) MSA or CMSA of 1 million or more with heavy rail 12=New England (ME, NH, VT, CT, MA, RI) MSA or CMSA of 1 million or more without heavy rail 13=New England (ME, NH, VT, CT, MA, RI) MSA of less than 1 million 14=New England (ME, NH, VT, CT, MA, RI) Not in a MSA 21=Mid-Atlantic (NY, NJ, PA) MSA or CMSA of 1 million or more with heavy rail 22=Mid-Atlantic (NY, NJ, PA) MSA or CMSA of 1 million or more without heavy rail 23=Mid-Atlantic (NY, NJ, PA) MSA of less than 1 million 24=Mid-Atlantic (NY, NJ, PA) Not in a MSA 31=East North Central (IL, IN, MI, OH, WI) MSA or CMSA of 1 million or more with heavy rail 32=East North Central (IL, IN, MI, OH, WI) MSA or CMSA of 1 million or more without heavy rail 33=East North Central (IL, IN, MI, OH, WI) MSA of less than 1 million 34=East North Central (IL, IN, MI, OH, WI) Not in a MSA 41=West North Central (IA, KS, MO, MN, ND, NE, SD) MSA or CMSA of 1 million or more with heavy rail 42=West North Central (IA, KS, MO, MN, ND, NE, SD) MSA or CMSA of 1 million or more without heavy rail 43=West North Central (IA, KS, MO, MN, ND, NE, SD) MSA of less than 1 million 44=West North Central (IA, KS, MO, MN, ND, NE, SD) Not in a MSA 51=South Atlantic (DC, DE, FL, GA, MD, NC, SC, WV, VA) MSA or CMSA of 1 million or more with heavy rail 52=South Atlantic (DC, DE, FL, GA, MD, NC,

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Variable and Creation Instructions	Short Description and Ranges
end; If CENSUS_D=8 then do; If MSACAT=1 then CDIVMSAR=81; If MSACAT=2 then CDIVMSAR=82; If MSACAT=3 then CDIVMSAR=83; If MSACAT=4 then CDIVMSAR=84; end; If CENSUS_D=9 then do; If MSACAT=1 then CDIVMSAR=91; If MSACAT=2 then CDIVMSAR=92; If MSACAT=3 then CDIVMSAR=93; If MSACAT=4 then CDIVMSAR=94; end;	SC, WV, VA) MSA or CMSA of 1 million or more without heavy rail 53=South Atlantic (DC, DE, FL, GA, MD, NC, SC, WV, VA) MSA of less than 1 million 54=South Atlantic (DC, DE, FL, GA, MD, NC, SC, WV, VA) Not in a MSA 62=East South Central (AL, KY, MS, TN) MSA or CMSA of 1 million or more without heavy rail 63=East South Central (AL, KY, MS, TN) MSA of less than 1 million 64=East South Central (AL, KY, MS, TN) Not in a MSA 71=West South Central (AR, LA, OK, TX) MSA or CMSA of 1 million or more with heavy rail 72=West South Central (AR, LA, OK, TX) MSA or CMSA of 1 million or more without heavy rail 73=West South Central (AR, LA, OK, TX) MSA of less than 1 million 74=West South Central (AR, LA, OK, TX) Not in a MSA 81=Mountain (AZ, CO, ID, MT, NM, NV, UT, WY) MSA or CMSA of 1 million or more with heavy rail 82=Mountain (AZ, CO, ID, MT, NM, NV, UT, WY) MSA or CMSA of 1 million or more without heavy rail 83=Mountain (AZ, CO, ID, MT, NM, NV, UT, WY) MSA of less than 1 million 84=Mountain (AZ, CO, ID, MT, NM, NV, UT, WY) Not in a MSA 91=Pacific (AK, CA, HI, OR, WA) MSA or CMSA of 1 million or more with heavy rail 92=Pacific (AK, CA, HI, OR, WA) MSA or CMSA of 1 million or more without heavy rail 93=Pacific (AK, CA, HI, OR, WA) MSA of less than 1 million

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Variable and Creation Instructions	Short Description and Ranges
	94=Pacific (AK, CA, HI, OR, WA) Not in a MSA
CENSUS_D Creation: Based on CONFIRMEDHOME_STATE; 1= ME, NH, VT, CT, MA, RI; 2= NY, NJ, PA; 3=IL, IN, MI, OH, WI; 4= IA, KS, MO, MN, ND, NE, SD 5= DC, DE, FL, GA, MD, NC, SC, WV, VA; 6= AL, KY, MS, TN; 7= AR, LA, OK, TX; 8= AZ, CO, ID, MT, NM, NV, UT, WY; 9= AK, CA, HI, OR, WA	Description: Census division classification for the respondent's confirmed home address. Range: 01=New England 02=Middle Atlantic 03=East North Central 04=West North Central 05=South Atlantic 06=East South Central 07=West South Central 08=Mountain 09=Pacific
CENSUS_R Creation: If CENSUS_D in (1,2) then CENSUS_R=1; If CENSUS_D in (3,4,) then CENSUS_R=2; If CENSUS_D in (5,6,7) then CENSUS_R=3; If CENSUS_D in (8,9) then CENSUS_R=4;	Description: Census region classification for confirmed home address. Range: 01=Northeast 02=Midwest 03=South 04=West
CNTTDHH Creation**:** CNTTDHH= the COUNT of trip records within each HOUSEID from the TRIPS file contained in the HOUSEHOLD file.	Description: Total number of trips for all household members ages 5+on travel day. Range: 0-45

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Variable and Creation Instructions	Short Description and Ranges
CNTTDTR Creation: If B1A=2 then CNTTDTR=0 Otherwise CNTTDTR = the total number of trips a person reported. COUNT of trip records within PERSONID from the TRIPS file contained in the PERSON file.	Description: Total number of trips a person entered in their travel record on travel day. Range: 0-36
DRIVER Creation: If R_AGE>0 and R_AGE<15 then DRIVER=-1; Else If R_AGE>=15 and DRVR = 1 THEN DRIVER=01; Else IF COUNT(TRIPID WHERE WHODROVE = PERSONID) > 0 THEN DRIVER=01; Else IF COUNT(TRIPID WHERE WHODROVE = PERSONID) = 0 THEN DRIVER=02;	Description: Driver status, derived. Range: 01= Yes 02= No -1=Valid skip

DRVR_FLG
 	
Creation:
If (TRPTRANS equal to 1, 2, 3, 4, 6, or 7) and WHODROVE_IMP=PERSONID then DRVR_FLG=01;
If (TRPTRANS equal to 1, 2, 3, 4, 6, or 7) and WHODROVE_IMP NOT= PERSONID then DRVR_FLG=02;
If (TRPTRANS NOT equal to 1, 2, 3, 4, 6, or 7) then DRVR_FLG=-1;
	Description:
	Flag for driver on trip.
	
	Range:
	01= Driver on trip
	02= Not driver on trip
	-1= Valid skip
	-9= Not ascertained

DRVRCNT Creation: COUNT of persons in HH where DRIVER=01.	Description: Number of drivers in the household. Range: 0-7

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Variable and Creation Instructions	Short Description and Ranges
DWELTIME Creation: Difference between ENDTIME_local_24 from current trip record and STARTIME_local_24 from next trip record, in minutes. The final trip of the travel day is assigned a value of -9, as are any trips where start or end times are unreported	Description: Time at Destination in minutes. Range: Continuous variable
ENDTRIP Creation: Remove day of month information from LD6 (YYYYMMDD)	Description: Ending date of trip (YYYYMM)
EXITCDIV Creation: Assign FARST value to respective division. See CENSUS_D for Census division-state crosswalk.	Description: Census division at which respondent exited the US (international trips only)
FARCDIV Creation: Assign FARST value to respective division. See CENSUS_D for Census division-state crosswalk.	Description: Farthest domestic destination: Census Division
FARCREG Creation: Assign FARST value to respective region. See CENSUS_R for Census division-state crosswalk.	Description: Farthest domestic destination: Census region
FLAG100 Creation:	Description: Flag to indicate proportion of household members ages 5+ who completed the survey.

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Variable and Creation Instructions	Short Description and Ranges
If (Count of person records within the household where PFLAG=1/ELIGDIARIES)=1 then FLAG100=1; Else if 1> (Count of person records within the household where PFLAG=1/ELIGDIARIES)>=.75 then Flag100=2;	Range: 1= All eligible household members completed 2= 75% to 99% of eligible household members completed
GASPRICE Creation: Assign PADD Region based on HHSTATE (see GASPRICE tab). Match record to gas price for region found at https://www.eia.gov/petroleum/gasdiesel/xls/pswrgvwall.xls based upon PADD region and diary_date.	Description: Weekly regional gasoline price based upon "all grades conventional" during the week of the household's travel day, in cents. Range: 272.7-597.9
GCD_FLAG Creation: If GCDTOT=-1,-9 then GCD_FLAG=GCDTOT Else If GCDTOT > 49.5 then GCD_FLAG=01 Else GCD_FLAG=02	Description: Flag for long distance trips of 50 miles or more
GCDTOT Creation: Based on CONFIRMEDHOME_FormattedAddr and LD3_CITY Minimum geodesic (Great Circle) distance between home location and long distance destination in miles, using WGS84 coordinate system.	Description: Minimum geodesic (Great Circle) distance between home location and long distance destination location in miles. Range: 0-5005 -9= Not ascertained
GCDWORK Creation:	Description: Minimum geodesic (Great Circle) distance between home location and work location in miles.

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Variable and Creation Instructions	Short Description and Ranges
Based on WORKADDRESS_FormattedAddr and CONFIRMEDHOME_FormattedAddr where EMPLOYED = 1 and WORKLOC = 1 OR WORKLOC = 2 AND WKFHMHM20 = 1 OR WKFHMHM20 = 2 OR WKFHMHM20 = 3 Minimum geodesic (Great Circle) distance between home location and work location in miles, using WGS84 coordinate system. https://geographiclib.sourceforge.io/html/C/geodesic_8h.html#a19bc3d000428010ad9d8509174e672c9	Range: 0-2544 -9= Not ascertained
HH_HISP Creation: HH_HISP=R_HISP for primary household respondent (PERSONID=01);	Description: Hispanic status of primary (household) respondent. Range: 01= Hispanic or Latino 02= Not Hispanic or Latino
HH_RACE Creation: HH_RACE=R_RACE for primary household respondent (PERSONID=01);	Description: Race of household respondent. Range: 01=White 02=Black or African American 03=Asian 04=American Indian/Alaska Native 05=Native Hawaiian/Pacific Islander 06=Multiple races selected 97=Other race
HHFAMINC_IMP Creation:	Description: Household income (imputed). Range:

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Variable and Creation Instructions	Short Description and Ranges
Income of subject used in weighting. Replace values in HHFAMINC_IMP that are -7 or -8 with the imputed income values.	01= Less than $10,000 02= $10,000 to $14,999 03= $15,000 to $24,999 04= $25,000 to $34,999 05=$35,000 to $49,999 06= $50,000 to $74,999 07= $75,000 to $99,999 08= $100,000 to $124,999 09= $125,000 to $149,999 10= $150,000 to $199,999 11= $200,000 or more
HHMEMDRV Creation: IF TRPTRANS is not in (1,2,3,4,5,6,7) THEN -1 IF WHODROVE_IMP is not = 97 AND TRPTRANS = (1,2,3,4,5,6,7) THEN 1 IF WHODROVE_IMP = 97 AND TRPTRANS = (1,2,3,4,5,6,7) THEN 2	Description: Household member drove on trip. Range: 1= Household member drove 2= Non-household member drove
HHRELATD Creation: If HHSIZE=1, then HHRELATD=2; Else if the COUNT of records on the PERSON file for the household where R_RELAT is in (1, 2, 3, 4, 5) >0 then HHRELATD=1; Else HHRELATD=2	Description: Flag indicating at least 2 persons in HH are related. Range: 01= At least two persons in HH are related 02= No related persons in HH
HHSIZE Creation:	Description: Total number of people in household.

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Variable and Creation Instructions	Short Description and Ranges
HHSIZE = Sum (of NUMADULT, PPT517, YOUNGCHILD)	Range: 01 - 10
HHVEHCNT Creation: Sum of records with same HOUSEID in vehicle file	Description: Total number of vehicles in household. Range: Range is zero to X, X being the highest number of vehicles per household 0 - 17
HYBRID Creation: If VEHFUEL in ("04","05", "06") then HYBRID=01 Else HYBRID=02	Description: Hybrid vehicle. Range: 01= Yes 02= No
LDT_FLAG Creation: If data taken from trip file then LDT_FLAG=01 Else if PFLAG=02 then LD_FLAG=-1 Else if LD questions not asked LDT_FLAG=-9 Else if LD4_5YAGO=97 then LDT_FLAG=03 Else if LD4_5YAGO=98 then LDT_FLAG=04 Else if LD4 not -1,-9 or LD6 not -1,-9 then LDT_FLAG=02 Else if MRT_DATE not -1,-9 then LDT_FLAG=02 Else if LD3_CITY not -1,-9 then LDT_FLAG=02 Else if LONGDIST > 0 then LDT_FLAG=02 Else if LD7 > 0 then LDT_FLAG=02 Else LDT_FLAG=-9	Description: Source of long distance data

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Variable and Creation Instructions	Short Description and Ranges
LIF_CYC Creation: IF R_AGE < 18 THEN "CHILD" IF R_AGE > 21 THEN "ADULT" IF R_AGE BETWEEN 18 AND 21 THEN IF R_RELAT = 2 THEN "CHILD" IF R_RELAT = (-7,-8,-9,4,5,7) AND [ANY OTHER HH MEMBER] R_RELAT = 3 THEN "CHILD" IF R_RELAT = ((-7,-8,-9,4,5,7) AND NOT = [ANY OTHER HH MEMBER] R_RELAT = 3 THEN "ADULT" IF R_RELAT = 6 AND [ANY OTHER HH MEMBER] (R_RELAT = 1 AND R_AGE > 21) THEN "CHILD" IF R_RELAT = 6 AND NOT = [ANY OTHER HH MEMBER] (R_RELAT = 1 AND R_AGE > 21) THEN "ADULT" IF R_RELAT = (1,3) THEN "ADULT" IF HHSIZE=1 THEN “ADULT” HOUSEHOLD_ADULT_COUNT = COUNT (WHERE ADULT_CHILD_STATUS = "ADULT") HOUSEHOLD_CHILD_COUNT = COUNT (WHERE ADULT_CHILD_STATUS = "CHILD") HOUSEHOLD_RETIRED_COUNT = COUNT (WHERE PRMACT = 5 OR ((PRMACT IS MISSING OR PRMACT = (-7,-8)) AND AGE >= 65)) MIN_AGE = MINIMUM (R_AGE) for HOUSEHOLD LIF_CYC = IF HOUSEHOLD_ADULT_COUNT = 1 AND HOUSEHOLD_CHILD_COUNT = 0 AND HOUSEHOLD_RETIRED_COUNT = 0 THEN 01 IF HOUSEHOLD_ADULT_COUNT >= 2 AND HOUSEHOLD_CHILD_COUNT = 0 AND HOUSEHOLD_RETIRED_COUNT = 0 THEN 02	Description: Life Cycle classification for the household. Range: 01=one adult, no children 02=2+ adults, no children 03=one adult, youngest child 0-5 04=2+ adults, youngest child 0-5 05=one adult, youngest child 6-15 06=2+ adults, youngest child 6-15 07=one adult, youngest child 16-21 08=2+ adults, youngest child 16-21 09=one adult, retired, no children 10=2+ adults, retired, no children

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Variable and Creation Instructions	Short Description and Ranges
IF HOUSEHOLD_ADULT_COUNT = 1 AND HOUSEHOLD_CHILD_COUNT >= 1 AND MIN_AGE BETWEEN 0 AND 5 THEN 03 IF HOUSEHOLD_ADULT_COUNT >= 2 AND HOUSEHOLD_CHILD_COUNT >= 1 AND MIN_AGE BETWEEN 0 AND 5 THEN 04 IF HOUSEHOLD_ADULT_COUNT = 1 AND HOUSEHOLD_CHILD_COUNT >= 1 AND MIN_AGE BETWEEN 6 AND 15 THEN 05 IF HOUSEHOLD_ADULT_COUNT >= 2 AND HOUSEHOLD_CHILD_COUNT >= 1 AND MIN_AGE BETWEEN 6 AND 15 THEN 06 IF HOUSEHOLD_ADULT_COUNT = 1 AND HOUSEHOLD_CHILD_COUNT >= 1 AND MIN_AGE BETWEEN 16 AND 21 THEN 07 IF HOUSEHOLD_ADULT_COUNT >= 2 AND HOUSEHOLD_CHILD_COUNT >= 1 AND MIN_AGE BETWEEN 16 AND 21 THEN 08 IF HOUSEHOLD_ADULT_COUNT = 1 AND HOUSEHOLD_CHILD_COUNT = 0 AND HOUSEHOLD_RETIRED_COUNT = 1 THEN 09 IF HOUSEHOLD_ADULT_COUNT >= 2 AND HOUSEHOLD_CHILD_COUNT = 0 AND HOUSEHOLD_RETIRED_COUNT >= 1 THEN 10	
LOOP_TRIP Creation: IF DESTINATION_LOCCODE=997 then LOOP_TRIP = 01; ELSE LOOP_TRIP = 02	Description: Trip origin and destination at same location. Range: 01=Not a loop trip 02= Loop trip
MRT_DATE Creation:	Description: Date of most recent long distance trip (YYYYMM)

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Variable and Creation Instructions	Short Description and Ranges
Derive from LD4_YEAR,LD4_MONTH Then If LD4_5YAGO in 97,98 then MRT_DATE=-1 Else if LD4_MONTH in -1,-9 then MRT_DATE=LD4_MONTH If ENDTRIP not -1,-9 then MRT_DATE=ENDTRIP Else if BEGTRIP not -1,-9 then MRT_DATE=BEGTRIP Else if ENDTRIP=-9 and BEGTRIP=-9 then MRT_DATE=-9	
MSACAT Creation: IF MSASIZE = (04,05) THEN IF RAIL = 1 THEN 01 IF RAIL = 2 THEN 02 IF MSASIZE = (01,02,03) THEN 03 IF CBSA IS MISSING THEN 04	Description: Metropolitan Statistical Area (MSA) category for the household's home address, based on household's confirmed home geocode and 2020 TIGER/Line Shapefiles. Range: 01=MSA of 1 million or more, with rail 02=MSA of 1 million or more, no rail 03=MSA less than 1 million 04=Not in MSA
MSASIZE Creation: IF [POPULATION OF MSA] < 250,000 THEN "01" IF [POPULATION OF MSA] >= 250,000 AND <= 499,999 THEN "02" IF [POPULATION OF MSA] >= 500,000 AND <= 999,999 THEN "03" IF [POPULATION OF MSA] >= 1,000,000 AND <= 2,999,999 THEN "04" IF [POPULATION OF MSA] >= 3,000,000 THEN "05" IF MSA IS MISSING THEN "06"	Description: Population size category of the MSA for the confirmed home address, from the five-year ACS API. Range: 01=In an MSA of Less than 250,000 02=In an MSA of 250,000 - 499,999 03=In an MSA of 500,000 - 999,999 04=In an MSA or CMSA of 1,000,000 - 2,999,999 05=In an MSA or CMSA of 3 million or more

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Variable and Creation Instructions	Short Description and Ranges
	06=Not in MSA or CMSA
NTSAWAY Creation: LD6-LD5	Description: Nights away on long distance trip
OUTOFTOWN Creation: If B1A=02 or FRSTHM=01 or COUNT(TRIPID where LOCTYPE=01) > 0 or GCD between TRIP END and HOME < 50 then OUTOFTWN=02; Else OUTOFTWN=01;	Description: Away from home entire travel day. Range: 01=Yes 02=No

PSGR_FLG
 	
Creation:
If (TRPTRANS equal to 1, 2, 3, 4, 6, or 7) and WHODROVE_IMP NOT= PERSONID then PSGR_FLG=01;
If (TRPTRANS equal to 1, 2, 3, 4, 6, or 7) and WHODROVE_IMP = PERSONID then PSGR _FLG=02;
If (TRPTRANS NOT equal to 1, 2, 3, 4, 6, or 7) then PSGR _FLG=-1;
	Description:
	Flag for passenger on trip
	
	Range:
	01= Passenger on trip
	02= Not passenger on trip
	-1= Valid skip

PUBTRANS Creation: If TRPTRANS in (8, 10, 11, 12) then PUBTRANS=01; Else PUBTRANS=02;	Description: Used public transit on trip. Ranges: 01= Used public transit 02= Did not use public transit
R_RACE Creation:	Description: Collapsed race.

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Variable and Creation Instructions	Short Description and Ranges
If SUM(RACE_1-RACE_6, RACE_SE) >1 then R_RACE='06'; Else if SUM (RACE_1-RACE_6, RACE_SE)=1 then do; If RACE_1>0 then R_RACE='01'; if RACE_2>0 then R_RACE='02'; if RACE_3>0 t then R_RACE='03'; if RACE_4>0 then R_RACE='04'; if RACE_5>0 then R_RACE='05'; if RACE_SE>0 then R_RACE='97'; If R_RACE is still blank, set R_RACE to -9;	Range: 01=White 02=Black or African American 03=Asian 04=American Indian/Alaska Native 05=Native Hawaiian/Pacific Islander 06=Multiple races selected 97=Other race -9 = Not ascertained
R_RACE_IMP Creation: If R_RACE ne -9, set R_RACE_IMP to R_RACE; If R_RACE=-9 then impute R_RACE_IMP	Description: Imputed race. Range: 01=White 02=Black or African American 03=Asian 04=American Indian/Alaska Native 05=Native Hawaiian/Pacific Islander 06=Multiple races selected 97=Other race
R_SEX_IMP Creation: Sex of subject used in weighting. Replace values in R_SEX that are -7, -8 or -9 with the imputed sex values.	Description: Sex (imputed).
RESP_CNT Creation:	Description: Count of responding persons in household.

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Variable and Creation Instructions	Short Description and Ranges
Count of Persons in HH where PFLAG = 01; Count (PERSONID where PFLAG = 01) in HH	Range: 0-10
TDCASEID Creation: TDCASEID equals a concatenation of HOUSEID||PERSONID||TRIPID	Description: Unique ID for every trip record in trip file. Range: 90000130020101-90002180400103
TDAYDATE Creation: Extract of YYYYMM from Diary_Date	Description: Date of travel day (YYYYMM). Range: 202201-202301
TDWKND Creation: IF [TRAVDAY] = (1,7) OR ([TRAVDAY] = (6) AND STRTTIME_LOCAL_24 >= 1800) THEN TRAVDAY=01; ELSE TRAVDAY=02	Description: Weekend trip. Range: 01= Weekend 02= Weekday

TRAVDAY
 	
Creation:
if day_of_week=00 then TRAVDAY=01;
if day_of_week=01 then TRAVDAY=02;
if day_of_week=02 then TRAVDAY=03;
if day_of_week=03 then TRAVDAY=04;
if day_of_week=04 then TRAVDAY=05;
if day_of_week=05 then TRAVDAY=06;
if day_of_week=06 then TRAVDAY=07;
	Description:
	Travel day – day of week.
	
	Range:
	01= Sunday
	02= Monday
	03= Tuesday
	04= Wednesday
	05= Thursday
	06= Friday

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Variable and Creation Instructions	Short Description and Ranges
	07= Saturday
TRIPPURP Creation: IF WHYFROM = -9 OR WHYTO = -9 THEN TRIPPURP= -9 Else IF WHYFROM = (1,2) AND WHYTO = (3,4,5) THEN TRIPPURP= 01 Else IF WHYFROM = (3,4,5) AND WHYTO = (1,2) THEN 01 Else IF WHYFROM = (1,2) AND WHYTO = (12,13) THEN 02 Else IF WHYFROM = (12,13) AND WHYTO = (1,2) THEN 02 Else IF WHYFROM = (1,2) AND WHYTO = (15,16,17,18) THEN 03 Else IF WHYFROM = (15,16,17,18) AND WHYTO = (1,2) THEN 03 Else IF WHYFROM = (1,2) AND WHYTO = (6,7,8,9,10,11,14,19,97) THEN 04 Else IF WHYFROM = (6,7,8,9,10,11,14,19,97) AND WHYTO = (1,2) THEN 04 Else IF WHYFROM in (1,2) or WHYTO in (1,2) then 04 ELSE = 05 IF TRIPPURP=-9 and WHYFROM in (1,2) or WHYTO in (1,2) then 04	Description: General purpose of trip. Range: -9=Not ascertained 01= Home-based work (HBW) 02= Home-based shopping (HBSHP) 03= Home-based social/recreational (HBSOC) 04= Home-based other (HBO) 05= Not a home-based trip (NHB)
TRPMILES Creation: If LOOPTRIP1 in (1,2,3,97) then TRPMILES=LOOPDISTANCE_MILES; Else TRPMILES=destination_Distance;	Description: Trip distance in miles, derived from route geometry returned by Google Maps API, or from reported loop-trip distance. Range: 0-4859.4769818
URBAN Creation:	Description: Household's urban area classification, based on home address and 2020 TIGER/Line Shapefile.

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Variable and Creation Instructions	Short Description and Ranges
IF [URBAN AREA TYPE] = "URBANIZED AREA" THEN "01" IF [URBAN AREA TYPE] = "URBAN CLUSTER" THEN "02" IF [GEOMETRY] SURROUNDED BY ([GEOMETRY] WHERE [URBAN AREA TYPE] = "URBANIZED AREA") THEN "03" ELSE "04"	Range: 01=In an urban area 02=In an urban cluster 03=In an area surrounded by urban areas 04=Not in urban area
URBANSIZE Creation: IF [POPULATION OF URBAN AREA] BETWEEN 50,000 AND 199,999 THEN 01 IF [POPULATION OF URBAN AREA] BETWEEN 200,000 AND 499,999 THEN 02 IF [POPULATION OF URBAN AREA] BETWEEN 500,000 AND 999,999 THEN 03 IF [POPULATION OF URBAN AREA] >= 1,000,000 THEN IF RAIL = "01" THEN 04 IF RAIL = "02" THEN 05 ELSE 06	Description: Urban area size where home address is located. Range: 01=50,000-199,999 02= 200,000-499,999 03= 500,000-999,999 04= 1,000,000 or more with heavy rail 05= 1,000,000 or more without heavy rail 06= Not in an urbanized area
URBRUR Creation: IF URBAN = (01,02) THEN URBRUR=01 ELSE URBRUR=02	Description: Household in urban/rural area. Range: 01=Urban 02= Rural
USEPUBTR Creation: If COUNT(TRPTRANS) where TRPTRANS = (8, 10, 11, 12) then 01; Else 02;	Description: Public Transit Usage on Travel Date. Range: 01= Yes 02= No

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Variable and Creation Instructions	Short Description and Ranges
VEHAGE Creation: IF VEHYEAR = (-8,-7) THEN VEHYEAR IF VEHYEAR = (2021, 2022, 2023) THEN 1 ELSE 2022-VEHYEAR IF VYEAR < 0 THEN VEHAGE = VEHYEAR	Description: Age of vehicle, based on model year. Range: 1-40
VEHCASEID Creation: ON THE VEHICLE FILE: VEHCASEID equals a concatenation of HOUSEID||VEHID. ON THE TRIP FILE: If TRIP_VEHID > 0 then VEHCASEID equals a concatenation of HOUSEID||VEHID; Otherwise VEHCASEID=-1.	Description: Unique vehicle identifier. Range: 900001300201-900021804001 -1= Valid skip (TRIP file only)
VMT_MILE Creation: Trip distance in miles for personally driven vehicle trips" if DRVR_FLG='01'; If DRVR_FLG=01 and TRPTRANS in (01,02,03,04,06,07) then VMT_Mile=TRPMILES; Else VMT_MILE=-1;	Description: Trip distance in miles for driver trips, derived from route geometry returned by Google Maps API. Range: 0- 1682.699192 -1 = Valid skip
WEEKEND Creation: If NTSAWAY < 0 then WEEKEND=NTSAWAY	Description: Trip includes weekend

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Variable and Creation Instructions	Short Description and Ranges
Else if NTSAWAY=1 and Day Of Week(LD5) in (6,7) then WEEKEND='01'; Else if NTSAWAY=2 and DOW(LD5) in (5,6,7) then WEEKEND='01'; Else if NTSAWAY=3 and DOW(LD5) in (4,5,6,7) then WEEKEND='02'; Else if NTSAWAY=4 and DOW(LD5) in (3,4,5,6,7) then WEEKEND='02'; Else if NTSAWAY=5 and DOW(LD5) in (2,3,4,5,6,7) then WEEKEND='02'; Else WEEKEND='03';	
WHYFROM Creation: If TRIPID ne 1, set WHYFROM equal to WHYTO from the preceding trip (e.g., WHYFROM for TRIPID=3 gets set to WHYTO from TRIPID=2); If TRIPID=1 then do; If FRSTHM=02 then WHYFROM=B1B; else WHYFROM=1; If WHYFROM in (-1,-9) then do; If origin_locname='HOME' then WHYFROM=1; Else if origin_locname='WORK' then WHYFROM=2; Else if origin_locname='SCHOOL' then WHYFROM=6; Else If origin type could be determined (hotel, friend's house, etc.) assign WHYFROM as appropriate; End; If WHYFROM=-1 then WHYFROM=-9;	Description: Reason for previous trip. Range: 01= Regular activities at home 02= Work from home (paid) 03= Work at a non-home location 04= Work activity to drop-off/pickup someone/something 05= Other work-related activities 06= Attend school as a student 07= Attend childcare or adult care 08= Volunteer activities (not paid) 09= Change type of transportation 10= Drop off/pick up someone (personal) 11= Health care visit 12= Buy meals 13= Shop/buy/pick-up or return goods 14= Other family/personal errands 15= Recreational activities

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Variable and Creation Instructions	Short Description and Ranges
	16= Exercise 17= Visit friends or relatives 18= Rest or relaxation/vacation 19= Religious or other community activities 97= Something else (specify) -9= Not ascertained
WHYTRP1S Creation: IF WHYTO = (1,2) THEN WHYTRP1S= 01 IF WHYTO = (3,4,5) THEN WHYTRP1S=10 IF WHYTO = (6,7,19) THEN WHYTRP1S= 20 IF WHYTO = 11 THEN WHYTRP1S= 30 IF WHYTO = (13,14) THEN WHYTRP1S= 40 IF WHYTO = (15,16,17,18) THEN WHYTRP1S= 50 IF WHYTO = 10 THEN WHYTRP1S=70 IF WHYTO = 12 THEN WHYTRP1S=80 ELSE WHYTRP1S= 97	Description: Trip purpose summary. Range: 01=Home 10=Work 20=School/Daycare/Religious 30=Medical/Dental services 40=Shopping/Errands 50=Social/Recreational 70=Transport someone 80=Meals 97=Something else
WHYTRP90 Creation: [HOME TOUR WINDOW] = MINIMUM(TDTRPNUM) WHERE WHYTO IN (1, 2) BETWEEN MAXIMUM(TDTRPNUM) WHERE WHYTO IN (1, 2) [WORK TOUR WINDOW] = MINIMUM(TDTRPNUM) WHERE WHYTO IN (3) BETWEEN MAXIMUM(TDTRPNUM) WHERE WHYTO IN (3)	Description: Travel day trip purpose consistent with 1990 NPTS design. Range: 01=To/From Work 02=Work-Related Business 03=Shopping 04=Other Family/Personal Business

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Variable and Creation Instructions	Short Description and Ranges
[WHYTRP90 STEP ONE] = IF WHYTO IN (1,2) AND [HOME TOUR WINDOW] = 0 THEN WHYFROM IF WHYTO IN (1,2) AND [HOME TOUR WINDOW] >= 1 THEN WHYTO WHERE DWELLTIME = MAXIMUM(DWELLTIME) OF [HOME TOUR WINDOW] IF WHYTO IN (3) AND [WORK TOUR WINDOW] = 0 THEN WHYFROM IF WHYTO IN (3) AND [WORK TOUR WINDOW] >= 1 THEN WHYTO WHERE DWELLTIME = MAXIMUM(DWELLTIME) OF [WORK TOUR WINDOW] WHYTRP90 = IF [WHYTRP90 STEP ONE] = (3) THEN 01 IF [WHYTRP90 STEP ONE] = (4,5) THEN 02 IF [WHYTRP90 STEP ONE] = (13) THEN 03 IF [WHYTRP90 STEP ONE] = (8,10,14) THEN 04 IF [WHYTRP90 STEP ONE] = (7) AND R_AGE >= 18 THEN 4 IF [WHYTRP90 STEP ONE] = (12) AND [WORK TOUR WINDOW] = (0,1) THEN 04 IF [WHYTRP90 STEP ONE] = (13) AND IN [WORK TOUR WINDOW] THEN 04 IF [WHYTRP90 STEP ONE] = (6,19) THEN 05 IF [WHYTRP90 STEP ONE] = (7) AND R_AGE < 18 THEN 05 IF [WHYTRP90 STEP ONE] = (11) THEN 06 IF [WHYTRP90 STEP ONE] = (17) THEN 08 IF [WHYTRP90 STEP ONE] = (15,16,18) THEN 10 IF [WHYTRP90 STEP ONE] = (12) AND IN [HOME TOUR WINDOW OR NOT WORK TOUR WINDOW] THEN 10 IF [WHYTRP90 STEP ONE] = (97) THEN 11 IF [WHYTRP90 STEP ONE] = (-8,-7) THEN 99 ELSE 11	05=School/Church 06=Medical/Dental 08=Visit Friends/Relatives 10=Other Social/Recreational 11=Other 99=Refused / Don't Know

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Variable and Creation Instructions	Short Description and Ranges
WORKER Creation: If 0 =< R_AGE<16 then WORKER=-1; Else do; If PAYPROF=1 or PRMACT=1 then WORKER=01; Else WORKER=02; end;	Description: Employment status of respondent. Range: 01= Worker 02= Not worker -1= Valid skip
WRKCOUNT Creation: Count of records on person file where WORKER= 01, within each household.	Description: Count of workers in household. Range: 0-6

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