



TRAFFIC RECORDS INTEGRATION PROGRAM

Traffic Records Integration Program: Utility of Integrating Washington State Crash Records with Washington State Ignition Interlock Device Data

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Abstract

Completed under a grant from the Washington Traffic Safety Commission (WTSC), this report will show the utility of integrating Washington State Courts records with Washington state crash records to evaluate the impact of crashes on the court system.

While this report's scope focuses solely on integrating Administrative Office of the Courts (AOC) and Washington State Department of Transportation (WSDOT) data, TRIP has successfully linked WSDOT, AOC, Washington State Patrol (WSP), and Department of Licensing (DOL) data. TRIP is currently integrating Department of Health (DOH) data as well.

Background

The Traffic Records Integration Program (TRIP)

In 2019, the Washington Traffic Safety Commission (WTSC) awarded the Office of Financial Management (OFM) a grant to manage the Washington state Traffic Records Integration Program (TRIP). This public health and safety effort is supported by funding from the National Highway Transportation Safety Administration's (NHTSA) continuing efforts to combine public health and traffic safety data resources.

The purpose of the TRIP is to develop and maintain a data repository for public health and safety research to further the goals of the Vision Zero 2030¹ to achieve zero fatalities or serious injuries on our highways. This data repository will also enhance capacity to assess crash² risk factors and the human, administrative and financial toll from crashes on Washington roadways. By integrating different data sources, issues with data collection or other systemic issues surrounding individual datasets might be overcome. This holistic approach will support a more comprehensive crash-outcome dataset to support public health and safety research.

TRIP will create an avenue of information for the public and policymakers to address long-standing issues as well as new risks for drivers in Washington. The linkage of this data will give Washington the means to support public health traffic information to save lives. Additionally, research efforts with the TRIP data will help inform policy on efficient ways to reduce and eliminate fatalities and serious injuries from traffic collisions; this data repository aims to also provide comprehensive and longitudinal data to evaluate the effectiveness of efforts and programs, best practices, and evidence-based strategies designed to help reach the Vision Zero 2030.

While the scope of this report focuses solely on the integration of Administrative Office of the Courts (AOC) and the Washington State Department of Transportation (WSDOT) data, TRIP has successfully been able to link WSDOT, AOC, Washington State Patrol (WSP), and Department of Licensing (DOL) data. TRIP is currently working to integrate Department of Health (DOH) data as well. TRIP is currently leveraging of the data to look in depth at how vehicle crashes impact the public health and public safety of Washington state residents. Through this linkage, TRIP can incorporate data for each stage of a crash, and the events occurring thereafter – to the roadway, to the crash, to police interaction, to court interaction.

¹ Vision Zero is a multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries involving road traffic. Washington's aims to complete this by 2030: [Target Zero – Washington's Strategic Highway Safety Plan](#)

² Defined in this report as a vehicle that collides with another vehicle, transportation tool, pedestrian, bystander, animal, or other stationary obstruction



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WSDOT's role

WSDOT in collaboration with the WSP collects and maintains the Collision Location Analysis System (CLAS) statewide crash database. Records are generated from Police Traffic Collision Reports (PTCR) and processed by WSDOT. Crash data may be supplemented from additional documentation submitted by the WSP. WSDOT develops the PTCR and subsequent documentation to meet reporting standards for the National Highway Traffic Safety Administration (NHTSA).

DOL's role

DOL maintains the active state database for court-mandated ignition interlock devices (IID). The overall intent of the IID program is to directly intervene in a driver's ability to drive drunk in cases where someone has done so before. For individuals convicted of DUI or driving-related charges the installation of an IID as a part of the sentencing and as a condition of driving again. The purpose of the IID program is to change driver behavior of those who have already engaged in one of the highest risk driving behaviors. IIDs require a breathalyzer test to start and drive a car. A driver is required to maintain "compliance" status with the IID for a predetermined amount of time set at sentencing to have the device removed. If a driver fails or misses a breathalyzer test at any point, they are considered non-compliant and an IID status change is triggered resetting compliance time required for removal. Fee waivers are available for those who qualify for the program's indigency status, as operation of the device is punitive.

IID data is recorded in real time from each device in use. The IIDs are provided by private companies and have fees associated with their use. DOL records consist of compliance status, non-compliance status, driver indigency, and IID duration requirements. Each one of these four record types generate a table tracking IID usage or device status. The four tables are the Compliance table, Non-compliance table, the Indigency table and the Requirement table. The Compliance table tracks drivers' status after passing the IID breathalyzer test and the status of the device, while the Non-compliance table records a failure of a breathalyzer test; and both tables records if a IID has been removed. Non-compliance can also occur if terms of IID use are violated, such as tampering with operation. The Indigency table records the status of a driver's fee waiver for IID operation and the status of the waiver. The IID duration requirement records active status and remaining activity days to meet the terms of IID use.

Utility of WSDOT and DOL Linkage

The impact of crashes on ignition interlock device usage

According to DOL, "an IID is an instrument you blow into before you can start your vehicle. This measures your breath alcohol content (BAC) level. You'll only be able to start your vehicle if your BAC level is under .025"³. IID installations are related to a specific set of legal infractions: DUIs, negligent driving, reckless driving, or any failure to use an IID.³ The general duration for active IID use for non-DUIs is six months, while a DUI conviction can range from 1 to 10 years of IID use depending on severity of the DUI and repeat offenses. From 2009 to 2020, 51.4% of all crashes involved dangerous driving behavior. Dangerous driving only makes up 16% of crash related charges. The pool of people ending up with an IID are more likely to be substance related rather than from dangerous

³ "Ignition Interlock Device (IID)", Washington State Department of Licensing, <https://www.dol.wa.gov/driverslicense/ignitioninterlock.html>



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driving charges.⁴ Substance-related crashes are the least common circumstance in a crash but are the most frequent reason a crash leads an IID installation.

In 2009, IIDs became mandatory in all DUI convictions in Washington.⁵ Though the 2009 implementation may not have seen widespread adoption within the first five years, IID use more than doubled in the state by 2019 in the crash-related incidences. Substances related from crashes from 2009 to 2020 accounted for 2.9% of crashes. DUIs account for over 30% of crash-related charges.⁶ DUI-related crashes from 2009 to 2020 declined annually by 1.4%.⁷ The total number of people who can end up with an IID declined slightly, while the IID usage has increased. IID installations come from a small subsample of drivers in Washington state. IID usage does show the ongoing impact that alcohol has on drivers as compliance failures are common.

Integrating WSDOT and DOL Data

IID usage in crash-related incidences increased from 2009-2021, extending the scope of TRIP data to cover drivers back on the road after a crash. The tools to evaluate the outcomes of monitoring, deterring, and restricting drivers' opportunity to drive while intoxicated are enhanced by expanding the scope of IID data. The DOL IID data gains context in terms of who is involved in the IID program through the TRIP linkage. The WSDOT and DOL IID records provide opportunity for new analysis using TRIP data through the ability to evaluate IID interventions on traffic safety in Washington state. A person who has an IID-enabled vehicle and is in TRIP means they have had a crash-related court record. Through the integration of WSDOT IID in TRIP, researchers can gain the ability to segment off a set of data which is typically of high-risk drivers, based on their history. Crashes with IIDs can now be evaluated based on whether the severity of injuries are mitigated due to the intervention. Single crash drivers with an IID can be identified and researchers can evaluate the circumstances around these incidents. Multi-crash drivers can then also be evaluated if there is a change in behavior or if the behavior persists without alcohol. Multi-crash drivers before and after testing can happen for both injury severity and general impact of IID interventions. Crash data is given new context if a driver has shown the highest risk behavior and how the IID intervention has impacted a driver's behavior once they are behind the wheel again.

IID devices are intended to be used as a common intervention option to deal with possible recidivistic alcohol-related driving issues. Once a driver is back behind the wheel, TRIP data can evaluate the IID program impact on roadway behavior. A driver with an IID involved in a crash and the circumstances around these crashes can provide insight into driver behavior once alcohol is restricted from vehicle operation. Evaluation of changes in driving behavior can now be made as TRIP can identify the drivers with an IDD involved in crashes and their impact on serious injuries and fatalities before and after the IID installation. Context for the IID intervention benefits from evaluation of high-risk drivers. High-risk drivers with IIDs who then end up in a crash with no contributing circumstances and is simply the product of bad luck can be identified, which may improve analysis of the IID intervention. Being able to evaluate demographics, injury severity, or which groups are using the indigency

⁴ Lee, Joe. Georgoulas-Sherry, Vasiliki. "Traffic Records Integration Program: Utility of Integrating Washington State Records with Washington State Crash Records" Washington State Office of Financial Management: Research and Forecasting, February 2023, https://sac.ofm.wa.gov/sites/default/files/public/TRIP/TRIP_utility_of_intregrating.pdf

⁵ "RCW 46.61.5055: Alcohol and drug violators—Penalty schedule." Washington State Legislature, <https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.5055>

⁶ ibid

⁷ Linkage between WSDOT and AOC records is a subsample and crash related DUIs will be subject to undercounting.



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program is now an option. The DOL IID data now gains context for driver actions and the effects of limiting a high-risk behavior on public health and safety efforts.

Methods and data

Since crashes are the basis of the TRIP data repository, this report also uses data from the WSDOT’s CLAS to evaluate the utility of integrating DOL IID records.⁸ The data sets from both agencies span 11 years, from 2009 to 2020. As such, the linkage of the data can extend the scope of a crash to include the results of post-court programs. All data from TRIP used in this report is a subsample created from drivers with both a crash and an IID record.

Table 1 shows the crashes associated with the four DOL IID data tables from 2009-2020. The DOL IID data populates four separate tables: compliance (column 1), non-compliance (column 2), indigency (column 3), and IID requirements (column 4). Each column shows total annual crashes involving IID drivers. All four columns in Table 1 show the decade long increase in IID usage starting in 2009 and subsequent impact of COVID-19. The compliance and non-compliance IID-generated tables track driver usage of IIDs. The compliance (column 1) and non-compliance (column 2) crashes show the pattern of use and how the driver is impacted from the intervention of the IID. Columns 3 and 4 show the same increase in use and impact of COVID-19 on drivers, which are shown in Columns 1 and 2. The indigency (column 3) and IID requirement (column 4) tables track device status. The indigency table tracks which devices have fees waived because of financial status of the driver and the status of the indigency waiver. The IID requirement table tracks the remaining time of IID activity.

Table 1: Count of crashes by IID tables

Year	Compliance IID Crashes	Non-Compliance IID Crashes	Indigency IID Crashes	Requirements for IID Crashes
2009	5,824	4,091	301	2,914
2010	6,860	4,954	432	3,586
2011	7,992	7,376	334	3,270
2012	9,982	7,855	569	3,930
2013	12,250	9,390	1,268	4,952
2014	13,512	10,622	817	5,234
2015	13,953	11,075	929	5,683
2016	15,134	12,205	1,109	7,482
2017	16,022	12,513	1,503	11,776
2018	18,402	13,282	2,245	13,790
2019	18,954	13,897	2,056	14,629
2020	14,603	11,904	1,973	10,993

All data represented in this table is linked between DOT and DOL data creating a subsample of crashes and will not represent macro trends in traffic safety.

Table 2 shows the available driver demographics in the WSDOT-DOL IID linkage. The non-compliance section of Table 2 shows slightly lower counts in all columns with the expectation of average age. Non-compliance average age being slightly higher is in line with expectations because for someone to be in the non-compliant table they

⁸ Dataset that maintains statewide crash data and is managed by DOT.

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must first be in the compliance table. The systematic nature of IID functionality makes both outcomes expected. Due to IIDs dependence on legal outcomes, there are some expected outcomes such as gender being heavily skewed toward males in IID installations, reflecting the gender disproportionately in crash-related court records. IID driver demographics can track who is going from compliant to non-compliant as well as what groups are using the indigency waivers of the IID program.

Table 2: Demographics of compliance and non-compliance IID drivers with crashes

	Compliance				Non-Compliance			
	Male	Female	Gender Not Recorded	Average Age	Male	Female	Gender Not Recorded	Average Age
2009	5,272	2,154	45	32.6	5,098	2,072	43	32.7
2010	5,221	2,278	29	33	5,022	2,199	29	33
2011	5,390	2,295	39	33.4	5,202	2,201	39	33.4
2012	5,510	2,380	61	34.1	5,315	2,290	57	34.3
2013	5,345	2,293	75	34.4	5,132	2,203	72	34.5
2014	5,668	2,456	88	35.1	5,420	2,379	85	35.3
2015	6,131	2,484	109	35.9	5,888	2,377	108	36.1
2016	6,307	2,496	147	36.2	6,012	2,379	138	36.5
2017	5,989	2,455	144	37.4	5,626	2,322	133	37.7
2018	5,695	2,274	185	38.3	5,397	2,132	174	38.6
2019	4,863	1,888	213	39.1	4,497	1,738	182	39.5
2020	3,339	1,167	167	40	3,024	1,012	147	40.4

All data represented in this table is linked between DOT and DOL data creating a subsample of crashes and will not represent macro trends in traffic safety. The top section of this table is the linkage between DOT and DOL compliance data. The bottom section is the linkage between DOT and DOL non-compliance.

Table 3 shows when an IID was installed in relation to a crash. The 2009 policy of mandating use of IIDs in Washington is reflected in the second column, with steady growth in usage after a crash has occurred. Over the 11 years, driver crashes resulting in the installation of an IID have been far more common for drivers than a crash occurring after an IID installation. In 2019, crashes after the IID removal became more common. In 2020, crashes with an active IID declined 14.2%, while crashes leading to IID installations was still higher even with the dramatic declines in 2019 and 2020.

Table 3: Count of crashes by IID installation

Year	IID Start Before Crash	IID Start After Crash	Crash While IID Active	Crash After IID End
2009	15,403	1,354	538	814
2010	15,917	1,750	645	1,103
2011	16,338	2,271	654	1,613
2012	16,337	2,858	707	2,148
2013	14,972	3,790	937	2,846
2014	15,161	4,887	1,259	3,626
2015	15,044	6,425	1,697	4,723
2016	14,244	7,782	1,948	5,824
2017	12,261	8,549	2,088	6,458
2018	10,119	9,822	2,496	7,324



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2019	6,393	10,330	2,740	7,582
2020	2,785	8,445	2,154	6,287

All data represented in this table is linked between DOT and DOL data creating a subsample of crashes and will not represent macro trends in traffic safety. Crashes with an active IID (column 3) and after the IID ends (column 4) are subsets of IID Start After Crash (column 2).

Table 4 shows non-compliance activity since the 2009 change in IID policy. Over 11 years, drivers who fell into non-compliance, on average, did so more than once per year. From 2016 to 2020, the average compliance failure per driver was over twice per year. Daily and annual vehicle miles traveled declined 14.4% between 2019-2020, which is expected due to COVID-19.⁹ Drivers and crashes with active IIDs declined 15.2% and 14.3% during COVID. Compliance failures declined only 10.2%. Up until 2020, there were steady increases in drivers, crashes, and compliance failures. The decline in drivers, crashes, and compliance failures coincided with a 1.9% increase in gallons of ethanol consumed per capita in Washington state.¹⁰

Table 4: Average non-compliance per person overtime with a crash

Year	Compliance Failures per Driver	Drivers	Crashes	Compliance Failures
2009	1.53	2,865	4,091	4,377
2010	1.59	3,413	4,954	5,434
2011	1.69	4,902	7,376	8,282
2012	1.76	5,163	7,855	9,096
2013	1.78	6,221	9,390	11,067
2014	1.83	6,892	10,622	12,618
2015	1.94	6,966	11,075	13,536
2016	1.98	7,764	12,205	15,351
2017	1.99	7,824	12,513	15,565
2018	2.06	8,280	13,282	17,024
2019	1.98	8,776	13,897	17,386
2020	2.10	7,440	11,904	15,607

All data represented in this table is linked between DOT and DOL data creating a subsample of crashes and will not represent macro trends in traffic safety. The data in this table linkage between is the DOT and DOL non-compliance.

⁹ "Public roadway VMT", Washington State Department of Transportation, <https://wsdot.wa.gov/about/transportation-data/travel-data/annual-mileage-and-travel-information>

¹⁰ Slater, Megan. Alpert, Hillel. "Surveillance Report #117: Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977–2019" *National Institute on Alcohol Abuse and Alcoholism Division of Epidemiology and Prevention Research: Alcohol Epidemiologic Data System*, <https://pubs.niaaa.nih.gov/publications/surveillance117/SR-117-Per-Capita-Consumption.pdf>

Slater, Megan. Alpert, Hillel. "Surveillance Report #119: Apparent Per Capita Alcohol Consumption: National, State, and Regional Trends, 1977–2020" *National Institute on Alcohol Abuse and Alcoholism Division of Epidemiology and Prevention Research: Alcohol Epidemiologic Data System*, <https://pubs.niaaa.nih.gov/publications/surveillance119/surveillance-report119.pdf>



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Limitations

With any data, there are limitations. This report identifies a few major limitations, and there are likely more that could impact work that utilized this data. Some limitations of WSDOT- DOL linkages are from a restricted sample, which is systematically chosen because of court contact and programmatic mandatory usage of IIDs for DUIs.

TRIP

The current major limitation of TRIP is in the linkage process where records have incomplete identification information. Reasons behind this can include but not be limited to incidences such as hit-and-runs, where a crash occurs and the person who caused the crash cannot be identified at the time a report is filed. A lack of full identification information means a record can't be linked.

WSDOT

The limitations of the WSDOT data relate to a few sources in the collection process. PTCRs are completed by law enforcement, which an officer can supplement after they submit the initial report. This process limits the information's reliability and completeness. An example of limited reliability is the WSDOT injury categories, where definitions of "fatalities" and "serious injuries" are well defined, but "lower-level injuries" or "no apparent injuries" are recorded by a non-medical professional (which limits the reliability of some records). For example, injuries such as internal bleeding or concussion, which are not visible may be miscategorized as "minor" or "no apparent injury," when in fact these injuries might be considered more serious. Furthermore, the Blood Alcohol Content (BAC) field in the WSDOT data comes from roadside breathalyzer tests or through toxicology testing. With the latter, supplemental documentation from an officer is needed to update WSDOT crash data. The process underreports the BAC records in the crash data because officers might not consistently submit the supplemental documentation to update WSDOT crash data. PTCR point-of-contact and supplemental documentation within the WSDOT data collection processes presents an ongoing concern for TRIP data limitations. For the full list of WSDOT variables, see Appendix B.

DOL

The IID data from DOL has some dependencies which can impact the use of the data. IID drivers are a small subsample of people who are connected to the courts, and, as of January 2009, IIDs are mandatory for all DUI convictions in Washington. The IID DOL data does not contain court records, so the reason for installation does not exist in the data. Data is generated through IID use and does not track the administration of the devices. Trends in the IID data will not be representative of larger trends in traffic safety because of the dependencies on court activity. Combined with the mandatory use of IIDs, the increased use is reflected in the data due to systematic changes. Due to the fuzzy nature of driver's license number being used for matching linking within the DOL data use the account key information in the data. For the full list of DOL variables, see Appendix C.

Conclusion

TRIP linking WSDOT and DOL data creates avenues for public health and safety research. Linking this data means people can better evaluate how the IID intervention program in Washington impacts public health and safety.

The addition of legal outcomes to crashes and the context of those outcomes can be leveraged through the links TRIP created. TRIP encourages those interested in crash data and related court records to [request data](#) from TRIP.



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You can also dive into the data using the [TRIP dashboards](#) to find out what can be accomplished with linked data. Please reach out for any further information, please contact [TRIP staff](#).



Appendix A

The TRIP Linkage Process

The TRIP linkage process has two key parts. The first is the creation of a Primary Key (PKey) and the second is a Linkage ID (ID). A PKey is the minimum necessary combination of variables needed to uniquely identify a person in a specific dataset. The minimum necessary parts of a PKey will depend on what is available in any given dataset. A complete PKey will have all the minimum variables required attached to one record. An example of a complete PKey would be someone's first name, middle name, last name, and date of birth having at least a first name, last name, and date of birth. One way to increase the possibility of improving the matching results is to have a tiered PKey system which requires more information in the dataset to attempt. To follow on the example previously used, if a data set were to also have the last four digits of a social security number (SSN) it may be possible to have the first set of PKeys using a person's full name, date of birth, and the last four of the SSN. If the first set of PKeys is incomplete the second set of PKeys could be a person's full name and date of birth. Identifying and creating a complete PKey is the first step in the linkage process.

Once a complete PKey has been identified and created, an ID is bound to all records with those associated PKeys. The relationship between the PKey and the ID is a many-to-one relationship. The linkage process uses both a probabilistic and a deterministic matching algorithm. The two matching methods leverage all available datasets in the OFM data warehouse. As the data warehouse expands the linkage outcomes will change. A series of quality control checks to improve the linkage results are conducted once the matching is done. The linkage checks start with a set of automated rules leading to an as-needed manual review of remaining issues with matching. The quality control checks are tailored to each dataset.



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Appendix B

Variable	Description	Frequency	Variable	Description	Frequency
ID	TRIP Unique ID	224,484	Gender_Typ_Cd	Driver Gender-DOT	221,157
Colli_Rpt_Num	Collision Report Number-DOT	224,484	On_duty_Police_Ofcr_Ind	On Duty Indicator-DOT	224,484
Record_Type	Collision Report Type-DOT	224,484	Drvr_Misc_Actn_Typ_Cd_1	Driver Miscellaneous Actions 1-DOT	75,454
Unit_Num	Unit Number-DOT	224,484	Drvr_Misc_Actn_Typ_Cd_2	Driver Miscellaneous Actions 2-DOT	8,542
Sobr_typ_Cd	Driver's Sobriety-Dot	211,522	Drvr_Misc_Actn_Typ_Cd_3	Driver Miscellaneous Actions 3-DOT	776
Alch_Test_Result	Alcohol Test Results-DOT	33,321	Liaby_Ins_Ind	Driver Liability Insurance Indicator-DOT	224,484
Drug_Recogn_Cls_Cd_1	DRE Assessment 1-DOT	6,775	Cited_Typ_Cd	Cited-DOT	131,106
Drug_Recogn_Cls_Cd_2	DRE Assessment 2-DOT	2,092	Ctrb_Circums_Typ_Cd_1	Driver Contributing Circumstances 1-DOT	223,994
State_Typ_Cd	State Code-DOT	224,462	Ctrb_Circums_Typ_Cd_2	Driver Contributing Circumstances 2-DOT	54,127
Air_Bag_Typ_Cd	Driver Airbag Status-DOT	222,002	Ctrb_Circums_Typ_Cd_3	Driver Contributing Circumstances 3-DOT	9,612
Restr_Sys_Typ_Cd	Driver Restraint Use-Dot	222,338	Year	Year-DOT	224,484
Ejctn_Typ_Cd	Driver Ejection-DOT	222,473	AccountKey	DOL IID Account Key for linking between tables-DOL	224,484
Helmet_Use_Cd	Driver Helmet Use-DOT	39,098	VendorID	Id for IID vendor	224,484
Injur_Typ_Cd	Driver Injury Class-DOT	224,462	VIN	Vehicle Identification Number-DOL	194,028
Age	Driver Age-DOT	224,484	Plate	Plate Number	188,101
FirstName	Frist Name-DOT	224,484	CommenceDate	Date of which the IID compliance was effective from. -DOL	224,478
MiddleName	Middle Initial-DOT	209,707	CeaseDate	Date of which the IID compliance ceases. -DOL	224,482
LastName	Last Name-DOT	224,484	ComplianceType	Type of compliance. Install, Transfer, Exemption, etc. -DOL	224,484
Suffix	Suffix-DOT	83	CeaseType	Type of ceasing action. Transfer, Removal, etc. -DOL	56,486
Nickname	Nickname-DOT	0	CeaseFormKey	Form key of the entity that ceased IID compliance. -DOL	224,484



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Variable	Description	Frequency	Variable	Description	Frequency
ID	TRIP Unique ID	163,924	Nickname	Nickname-DOT	0
Colli_Rpt_Num	Collision Report Number-DOT	163,924	Gender_Typ_Cd	Driver Gender-DOT	161,564
Record_Type	Collision Report Type-DOT	163,924	On_duty_Police_Ofcr_Ind	On Duty Indicator-DOT	163,924
Unit_Num	Unit Number-DOT	163,924	Drvr_Misc_Actn_Typ_Cd_1	Driver Miscellaneous Actions 1-DOT	55,098
Sobr_typ_Cd	Driver's Sobriety-Dot	154,709	Drvr_Misc_Actn_Typ_Cd_2	Driver Miscellaneous Actions 2-DOT	6,146
Alch_Test_Result	Alcohol Test Results-DOT	23,143	Drvr_Misc_Actn_Typ_Cd_3	Driver Miscellaneous Actions 3-DOT	545
Drug_Recogn_Cls_Cd_1	DRE Assessment 1-DOT	4,856	Liaby_Ins_Ind	Driver Liability Insurance Indicator-DOT	163,924
Drug_Recogn_Cls_Cd_2	DRE Assessment 2-DOT	1,469	Cited_Typ_Cd	Cited-DOT	95,142
State_Typ_Cd	State Code-DOT	163,910	Ctrb_Circums_Typ_Cd_1	Driver Contributing Circumstances 1-DOT	163,571
Air_Bag_Typ_Cd	Driver Airbag Status-DOT	162,044	Ctrb_Circums_Typ_Cd_2	Driver Contributing Circumstances 2-DOT	38,912
Restr_Sys_Typ_Cd	Driver Restraint Use-Dot	162,284	Ctrb_Circums_Typ_Cd_3	Driver Contributing Circumstances 3-DOT	6,892
Ejctn_Typ_Cd	Driver Ejection-DOT	162,437	Year	Year-DOT	163,924
Helmet_Use_Cd	Driver Helmet Use-DOT	28,029	AccountKey	DOL IID Account Key for linking between tables-DOL	163,924
Injur_Typ_Cd	Driver Injury Class-DOT	163,909	VendorID	Id for IID vendor-DOL	163,924
Age	Driver Age-DOT	163,924	VIN	Vehicle Identification Number-DOL	163,924
FirstName	Frist Name-DOT	163,924	Plate	Plate Number-DOL	157,796
MiddleName	Middle Initial-DOT	153,291	CommenceDate	Date of which the IID compliance was effective from. -DOL	152,264
LastName	Last Name-DOT	163,924	ReceivedDate	Date information was received by DOL-DOL	163,921
Suffix	Suffix-DOT	55	CeaseFormKey	Form key of the form ceased by non-compliance. -DOL	163,922

Variable	Description	Frequency	Variable	Description	Frequency
P20ID	TRIP Unique ID	21,276	Gender_Typ_Cd	Driver Gender-DOT	20,925
Colli_Rpt_Num	Collision Report Number-DOT	21,276	On_duty_Police_Ofcr_Ind	On Duty Indicator-DOT	21,276



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Record_Type	Collision Report Type-DOT	21,276	Drvr_Misc_Actn_Typ_Cd_1	Driver Miscellaneous Actions 1-DOT	7,096
Unit_Num	Unit Number-DOT	21,276	Drvr_Misc_Actn_Typ_Cd_2	Driver Miscellaneous Actions 2-DOT	854
Sobr_typ_Cd	Driver's Sobriety-Dot	19,905	Drvr_Misc_Actn_Typ_Cd_3	Driver Miscellaneous Actions 3-DOT	71
Alch_Test_Result	Alcohol Test Results-DOT	2,805	Liaby_Ins_Ind	Driver Liability Insurance Indicator-DOT	21,276
Drug_Recogn_Cls_Cd_1	DRE Assessment 1-DOT	754	Cited_Typ_Cd	Cited-DOT	12,758
Drug_Recogn_Cls_Cd_2	DRE Assessment 2-DOT	211	Ctrb_Circums_Typ_Cd_1	Driver Contributing Circumstances 1-DOT	21,216
State_Typ_Cd	State Code-DOT	21,274	Ctrb_Circums_Typ_Cd_2	Driver Contributing Circumstances 2-DOT	5,186
Air_Bag_Typ_Cd	Driver Airbag Status-DOT	21,100	Ctrb_Circums_Typ_Cd_3	Driver Contributing Circumstances 3-DOT	948
Restr_Sys_Typ_Cd	Driver Restraint Use-Dot	21,125	Year	Year-DOT	21,276
Ejctn_Typ_Cd	Driver Ejection-DOT	21,118	AccountKey	IID Indigent Status-DOL	21,276
Helmet_Use_Cd	Driver Helmet Use-DOT	3,892	Stage	Date that approved IID indigent-DOL	21,276
Injur_Typ_Cd	Driver Injury Class-DOT	21,265	ApprovedDate	Date that approved IID indigent status ends. -DOL	21,276
Age	Driver Age-DOT	21,276	ApprovedEnd	IID indigent denial date-DOL	21,276
FirstName	Frist Name-DOT	21,276	DeniedDate	Reason for denial of IID Indigent status. -DOL	21,276
MiddleName	Middle Initial-DOT	19,846	DeniedReason	Pretrial Status - Start-DOL	21,276
LastName	Last Name-DOT	21,276	Approved	Pretrial Status - End-DOL	21,276
Suffix	Suffix-DOT	9	Denied	DOL IID Account Key for linking between tables-DOL	21,276
Nickname	Nickname-DOT	0			

Variable	Description	Frequency	Variable	Description	Frequency
P20ID	TRIP Unique ID	130,774	Nickname	Nickname-DOT	0
Colli_Rpt_Num	Collision Report Number-DOT	130,774	Gender_Typ_Cd	Driver Gender-DOT	128,461
Record_Type	Collision Report Type-DOT	130,774	On_duty_Police_Ofc_Ind	On Duty Indicator-DOT	130,774
Unit_Num	Unit Number-DOT	130,774	Drvr_Misc_Actn_Typ_Cd_1	Driver Miscellaneous Actions 1-DOT	45,939
Sobr_typ_Cd	Driver's Sobriety-Dot	121,998	Drvr_Misc_Actn_Typ_Cd_2	Driver Miscellaneous Actions 2-DOT	6,392



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Alch_Test_Result	Alcohol Test Results-DOT	21,293	Drvr_Misc_Actn_Typ_Cd_3	Driver Miscellaneous Actions 3-DOT	659
Drug_Recogn_Cls_Cd_1	DRE Assessment 1-DOT	5,413	Liaby_Ins_Ind	Driver Liability Insurance Indicator-DOT	130,774
Drug_Recogn_Cls_Cd_2	DRE Assessment 2-DOT	1,419	Cited_Typ_Cd	Cited-DOT	83,901
State_Typ_Cd	State Code-DOT	130,748	Ctrb_Circums_Typ_Cd_1	Driver Contributing Circumstances 1-DOT	130,504
Air_Bag_Typ_Cd	Driver Airbag Status-DOT	129,515	Ctrb_Circums_Typ_Cd_2	Driver Contributing Circumstances 2-DOT	36,296
Restr_Sys_Typ_Cd	Driver Restraint Use-Dot	129,783	Ctrb_Circums_Typ_Cd_3	Driver Contributing Circumstances 3-DOT	7,023
Ejctn_Typ_Cd	Driver Ejection-DOT	129,742	Year	Year-DOT	130,774
Helmet_Use_Cd	Driver Helmet Use-DOT	27,495	AccountKey	DOL IID Account Key for linking between tables-DOL	130,774
Injur_Typ_Cd	Driver Injury Class-DOT	130,764	Requirement	Requirement Status-DOL	130,774
Age	Driver Age-DOT	130,774	CommenceDate	Commence date of the IID requirement-DOL	130,085
FirstName	Frist Name-DOT	130,774	CeaseDate	Cease date of the IID requirement-DOL	130,774
MiddleName	Middle Initial-DOT	121,119	ComplianceAmt	Total compliance amount required to comply requirement. -DOL	130,774
LastName	Last Name-DOT	130,774	RemainingAmt	Remaining compliance amount. -DOL	130,774
Suffix	Suffix-DOT	45	EffectiveDate	Effective Date of IID Requirement-DOL	130,774

Appendix C

Compliance Data Table

Variables	Descriptions
AccountKey	DOL IID Account Key for linking between tables
CustomerKey	DOL IID Account Key for linking people
CustomerID	Drivers License Number
FormKey	Form key of the entity that ceased IID compliance.
VendorID	Id for IID vendor
VINlast6	Vehicle Identification Number
Plate	Plate Number
CommenceDate	Date of which the IID compliance was effective from.



TRAFFIC RECORDS INTEGRATION PROGRAM

CeaseDate	Date of which the IID compliance ceases.
ComplianceType	Type of compliance. Install, Transfer, Exemption, etc.
CeaseType	Type of ceasing action. Transfer, Removal, etc.
CeaseFormKey	Form key of the entity that ceased IID compliance.

Non-Compliance Data Table

Name	Description
AccountKey	DOL IID Account Key for linking between tables
CustomerKey	DOL IID Account Key for linking people
CustomerID	Drivers License Number
FormKey	Form key of the entity that ceased IID compliance.
VendorID	Id for IID vendor
VINlast6	Vehicle Identification Number
Plate	Plate Number
CommenceDate	Date of which the IID compliance was effective from.
ReceivedDate	Date information was received by DOL
CeaseFormKey	Form key of the form ceased by non-compliance.

Indigency Data Table

Name	Description
AccountKey	DOL IID Account Key for linking between tables
CustomerKey	DOL IID Account Key for linking people
CustomerID	Drivers License Number
Stage	IID Indigent Status
ApprovedDate	Date that approved IID indigent
ApprovedEnd	Date that approved IID indigent status ends.
DeniedDate	IID indigent denial date
DeniedReason	Reason for denial of IID Indigent status.
Approved	Pretrial Status - Start
Denied	Pretrial Status - End

Requirement Data Table

Name	Description
AccountKey	DOL IID Account Key for linking between tables
CustomerKey	DOL IID Account Key for linking people
RecordKey	Drivers License Number
ID	Drivers License Number
Requirement	IID Requirement Type



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CommenceDate	Commence date of the IID requirement
CeaseDate	Cease date of the IID requirement
ComplianceAmt	Total compliance amount required to comply requirement.
RemainingAmt	Remaining compliance amount.
EffectiveDate	Date of which the update was effective.



TRAFFIC RECORDS INTEGRATION PROGRAM

Appendix D

Collision Data Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Transaction_Type	Transaction Type
Case_Num	Case Number
Local_Agy_Code	Local Agency Code
Colli_Date	Collision Date
Colli_Time	Collision Time
RuralUrbanInd	Rural/Urban Code
State_Functional_Class	State Functional Class
Federal_Functional_Class	Federal Functional Class
Fire_Ind	Fire Resulted Indicator
Stol_Vehcl_Ind	Stolen Vehicle Indicator
Hit_Run_Ind	Hit & Run Indicator
Most_Sev_Inj_Typ_Cd	Injury Severity Type
First_Colli_Typ_Cd	First Collision Type
Sec_Colli_Typ_Cd	Second Collision Type
First_Obj_Struck_Typ_Cd	1 st Object Struck
Sec_Obj_Struck_Typ_Cd	2 nd Object Struck
Jct_Relat_Typ_Cd	Junction Relationship
Invstg_Agy_Cd	Investigating Agency
Rdwy_Surfc_Cond_Typ_Cd	Roadway Surface Conditions
Wea_Typ_Cd	Weather Conditions
Litng_Cond_Typ_Cd	Light Conditions
Wrkzn_Typ_Cd	Work Zone Status
Loc_Char_Typ_Cd	Location Character
Rdwy_Char_Typ_Cd	Roadway Character
Intnl_Ind	Intentional Action Indicator
Med_Caused_Ind	Medically Caused Indicator
Non_Trfc_Ind	Non Traffic Indicator
Legal_Intrvtn_Ind	Legal Intervention Indicator
Police_Dispatch_Time	Police Dispatched Date and Time
Police_Arrive_Time	Police Arrival Date and Time
Year	Year



TRAFFIC RECORDS INTEGRATION PROGRAM

Vehicle Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Trfc_Ctrl_Typ_Cd	Traffic Control
Postd_Speed	Posted Speed
Rdwy_Surfc_Typ_Cd	Roadway Surface Type
Veh_Cls_Cd	Vehicle Classification
Veh_Typ_Cd	Vehicle Type
Veh_Use_Typ_Cd	Vehicle Usage
VIN	Vehicle Identification Number (VIN)
Regist_St	Vehicle Registration State or Province
Veh_Actn_Typ_Cd_1	Vehicle Actions 1
Veh_Actn_Typ_Cd_2	Vehicle Actions 2
Veh_Actn_Typ_Cd_3	Vehicle Actions 3
Veh_Cond_Typ_Cd_1	Vehicle Conditions 1
Veh_Cond_Typ_Cd_2	Vehicle Conditions 2
Veh_Cond_Typ_Cd_3	Vehicle Conditions 3
Seq_Event_Typ_Cd_1	Sequence of Events 1
Seq_Event_Typ_Cd_2	Sequence of Events 2
Seq_Event_Typ_Cd_3	Sequence of Events 3
Seq_Event_Typ_Cd_4	Sequence of Events 4
Hazar_Matl_Typ_Cd	Hazardous Materials Indicator
Dirn_Mvmt_From	Direction Movement From
Dirn_Mvmt_To	Direction Movement To
Rdwy_Typ_Cd	Rural/Urban Code
Year	

Driver Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Sobr_typ_Cd	Driver's Sobriety
Alch_Test_Result	Alcohol Test Results
Drug_Recogn_Cls_Cd_1	DRE Assessment 1
Drug_Recogn_Cls_Cd_2	DRE Assessment 2
State_Typ_Cd	State Code



TRAFFIC RECORDS INTEGRATION PROGRAM

Name	Description
Air_Bag_Typ_Cd	Driver Airbag Status
Restr_Sys_Typ_Cd	Driver Restraint Use
Ejctn_Typ_Cd	Driver Ejection
Helmet_Use_Cd	Driver Helmet Use
Injur_Typ_Cd	Driver Injury Class
Age	Driver Age
Gender_Typ_Cd	Driver Gender
On_duty_Police_Ofcr_Ind	On Duty Indicator
Drvr_Misc_Actn_Typ_Cd_1	Driver Miscellaneous Actions 1
Drvr_Misc_Actn_Typ_Cd_2	Driver Miscellaneous Actions 2
Drvr_Misc_Actn_Typ_Cd_3	Driver Miscellaneous Actions 3
Liaby_Ins_Ind	Driver Liability Insurance Indicator
Cited_Typ_Cd	Cited
Ctrb_Circums_Typ_Cd_1	Driver Contributing Circumstances 1
Ctrb_Circums_Typ_Cd_2	Driver Contributing Circumstances 2
Ctrb_Circums_Typ_Cd_3	Driver Contributing Circumstances 3
Year	Year
Record_Type	Collision Report Type
Unit_Num	Unit Number
Sobr_typ_Cd	Driver's Sobriety
Year	

Passenger Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Air_Bag_Typ_Cd	Passenger Airbag Status
Restr_Sys_Typ_Cd	Passenger Restraint Use
Ejctn_Typ_Cd	Passenger Ejection
Helmet_Use_Cd	Passenger Helmet Use
Injur_Typ_Cd	Passenger Injury Class
Age	Passenger Age
Gender_Typ_Cd	Passenger Gender
Seat_Pos_Typ_Cd	Passenger Seat Position
Year	



TRAFFIC RECORDS INTEGRATION PROGRAM

Pedestrian Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Ped_Pedcyc_Loc_Typ_Cd	
Ped_Pedcyc_Cloth_Vis_Typ_Cd	Clothing Visibility
Ped_Actn_Typ_Cd	Actions
Sobr_Typ_Cd	Driver's Sobriety
Alch_Test_Result	Alcohol Test Results
Drug_Recogn_Cls_Cd_1	DRE Assessment 1 or 2
Drug_Recogn_Cls_Cd_2	
Ped_Typ_Cd	Pedestrian Status
Helmet_Use_Cd	Pedestrian Helmet Use
Injur_Typ_Cd	Injury Class
Age	Age
Gender	Gender
Ctrb_Circums_Typ_Cd_1	
Ctrb_Circums_Typ_Cd_2	Contributing Circumstances 1, 2, or 3
Ctrb_Circums_Typ_Cd_3	
Dirn_Mvmt_From	Direction Of Movement From
Dirn_Mvmt_To	Direction Of Movement To
Hazar_Matl_Typ_Cd	Hazardous Materials Indicator
Cited_Typ_Cd	Cited
Year	

Cyclist Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Ped_Pedcyc_Loc_Typ_Cd	Cyclist location
Ped_Pedcyc_Cloth_Vis_Typ_Cd	Clothing Visibility
Pedcyc_Actn_Typ_Cd	Cyclist Action type
Sobr_Typ_Cd	Driver's Sobriety
Alch_Test_Result	Alcohol Test Results
Drug_Recogn_Cls_Cd_1	DRE Assessment 1
Drug_Recogn_Cls_Cd_2	DRE Assessment 2
Pedcyc_Typ_Cd	Pedalcyclist Was Using



TRAFFIC RECORDS INTEGRATION PROGRAM

Name	Description
Helmet_Use_Cd	Pedalcyclist Status
Injur_Typ_Cd	Injury Class
Age	Age
Gender	Gender
Ctrb_Circums_Typ_Cd_1	Contributing Circumstances 1, 2, or 3
Ctrb_Circums_Typ_Cd_2	
Ctrb_Circums_Typ_Cd_3	
Dirn_Mvmt_From	Direction Of Movement From
Dirn_Mvmt_To	Direction Of Movement To
Hazar_Matl_Typ_Cd	Hazardous Materials Indicator
Cited_Typ_Cd	Cited
Year	

Cyclist Passenger Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Helmet_Use_Cd	Passenger Helmet Use
Injur_Typ_Cd	Passenger Injury Class
Age	Passenger Age
Gender	Passenger Gender
Year	

Property Owner Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Unit_Num	Unit Number
Hazar_Matl_Typ_Cd	Hazardous Material Type
Cited_Typ_Cd	Cited Type
Year	

City Location Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type



TRAFFIC RECORDS INTEGRATION PROGRAM

Name	Description
cty_num	City Number
City_Str_Name	Street Name
City_Str_Name.1	Street Name
City_Str_Name.2	Street Name
City_Str_Name.3	Street Name
City_Str_Name.4	Street Name
Block_Num	Block Number
Distn_From_Ref_Pt	Distance From Reference Location
Ref_Pt_Miles_Feet_Ind	Miles/Feet Indicator
Cmps_Dirn_Typ_Cd	Compass Direction Type
Year	

County Location Variable Table

Name	Description
i..Colli_Rpt_Num	Collision Report Number
Record.Type	Report Type
CountyNumber	County Number
Cnty_Road_Num	Roadlog Number
Cnty_Road_MP	Roadlog Milepost
MP_AB_Ind	County Road Milepost Ahead/Back Indicator
Diagram_Data	Diagram Data
Intrsec_Cnty_Road_Num	Intersecting County Road Number
Intrsec_Cnty_Road_MP	Intersecting County Road Milepost
Intrsec_Cnty_Road_MP_AB_Ind	Intersecting County Road Milepost Ahead/Back Indicator
Year	Year

Other Route Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
Misc_Trfcway_Typ_Surr_Key	
Primary_Trafficway	Primary Trafficway
Intersecting_Trafficway	Intersecting Trafficway
Secondary_Trafficway_1	Secondary Trafficway 1
Secondary_Trafficway_2	Secondary Trafficway 2
Reference_Location	Reference Location
Misc_Trfcway_Num	
Misc_Trfcway_MP	



TRAFFIC RECORDS INTEGRATION PROGRAM

Name	Description
Block_Num	Block Number
Distn_From_Ref_Pt	Distance From Reference Location
Ref_Pt_Miles_Feet_Ind	Miles/Feet Indicator
Cmps_Dirn_Typ_Cd	
Year	

State Route Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Collision Report Type
SR_Num	State Route Number
RRT_Code	RRT Code
RRQ	RRQ Code
ARM	ARM
Milepost	Milepost
MP_AB_Ind	Milepost AB Indicator
SR_Addl_Info_Cd	Additional Information
Veh_1_Cmps_Dirn_Typ_Cd	Vehicle 1 Compass Direction
Veh_1_Mvmnt_Dirn_Typ_Cd	Vehicle 1 Movement Direction
Veh_1_MP_Dirn_Typ_Cd	Vehicle 1 Milepost Direction
Diag_Colli_Typ_Cd	Diagram Collision Type
Veh_2_Cmps_Dirn_Typ_Cd	Vehicle 2 Compass Direction
Veh_2_Mvmnt_Dirn_Typ_Cd	Vehicle 2 Movement Direction
Veh_2_MP_Dirn_Typ_Cd	Vehicle 2 Milepost Direction
Impct_Loc_Typ_Cd	Impact Location
CityNumber	City Number
CountyNumber	County Number
Crossroad_Cls_Typ_Cd	Type of Crossroad
Region_Num	Region Number
Ramp_Loc_Typ_Cd	Ramp Location Type
Pass_as_Ok	Passing lanes used
Year	

Commercial Carrier Variable Table

Name	Description
Colli_Rpt_Num	Collision Report Number
Record_Type	Record Type
Unit_Num	Unit Number



TRAFFIC RECORDS INTEGRATION PROGRAM

Name	Description
Inter_Intra_St_Ind	Commercial Carrier Interstate Indicator
USDOT_Num	Commercial Carrier USDOT Number
Comrcl_Veh_Cls_Typ_Cd	
Cargo_Body_Typ_Cd	Commercial Carrier Cargo Body
Num_Axle	Commercial Carrier Number of Axles
GVWR	Commercial Carrier GVWR
Placard_Num	Commercial Carrier Hazmat Placard Number
Placard_Suff_Typ_Cd	Commercial Carrier Placard Suffix
Year	