

Paperwork Reduction Act Statement: A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2127-XXXX. The information collected on this form is necessary to complete a study to examine the effectiveness of lateral control advanced driver assistance systems. We estimate that it will take approximately 15 minutes to complete this form. The information collected is voluntary. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, National Highway Traffic Safety Administration, 1200 New Jersey Ave, S.E., Room W45-205, Washington, DC, 20590.

**(IRB #22-864) <Effectiveness of Lateral Control Warnings> Screening Questionnaire**

**Note:**

Initial contact between participants and researchers may take place over the phone. If this is the case, read the following Introductory Statement, followed by the questionnaire. Regardless of how contact is made, this questionnaire must be administered verbally before a decision is made regarding suitability for this study.

**Introductory Statement:**

After prospective participant calls or you call them, use the following script as a guideline in the screening interview.

*Hello. My name is \_\_\_\_\_ and I'm with the Virginia Tech Transportation Institute, here at the Virginia Smart Rds, in Blacksburg, VA. We are currently recruiting individuals to participate in a research study that requires two visits. The results of the study will contribute to our understanding of new automotive technologies in a test vehicle. While driving as they normally would, participants will experience different notification types related to Lane Departure Warning and Lane Keep Assist features. This research is sponsored by the National Highway Traffic Safety Administration.*

*Are you interested in hearing more about this study? [If yes, continue with PRA statement]*

*First, I need to read the following Paperwork Reduction Act Statement: "A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2127-XXXX. The information collected on this form is necessary to determine your eligibility for participation. We estimate that it will take approximately 15 minutes to complete the form. The information collected is voluntary under 49 CFR 591.5. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, National Highway Traffic Safety Administration, 1200 New Jersey Ave, S.E., Room W45-205, Washington, DC, 20590."*

*The two required sessions will ask participants to drive a research vehicle during the daytime, scheduled on different days. The vehicle is equipped with data collection equipment which records video and audio data. Prior to the driving portions, participants will need to complete paperwork, a vision test, and a simple hearing test.*

*The first session will be approximately 3.5 hours and entails driving on our closed-to-the public test track, the Smart Road Highway. An experimenter will be present in the vehicle at all time, while on VTTI Smart Roads.*

Screening Date \_\_\_\_\_ Screener \_\_\_\_\_ Screening #: \_\_\_\_\_

The second session will be approximately 5.5 hours long and requires driving the research vehicle on a pre-determined route on public roadways, such as Route 460 and I-81, for 4 hours with a break halfway. An experimenter will not accompany you during these public road drives. VTTI will try to schedule the two visits about one week apart.

The 3.5 hour session includes paperwork, a 15-minute familiarization with the vehicle, 2 hours driving on a Smart Road test track, and 30-minutes for a questionnaire and debriefing at the end. The second session of 5.5 hours will include 45-minutes of preparation and familiarization with the vehicle, a 4-hour drive with a 15-minute break at the halfway point, and 30-minutes for questionnaires and debriefing at the end.

Participants will receive \$300 based on full participation. \$120 after the first session and the remaining \$180 after the second session. The entirety of participation in the study is estimated at 9 hours.

Any questions yet?

If you are interested in possibly participating, I need to go over some screening questions to see if you meet all the eligibility requirements of this study. Any information given to us will be kept secure and confidential.

Do I have your consent to ask the screening questions? [If yes, continue with the questions. If no, then thank him/her for their time and end the phone call.]

### Participant Eligibility Questions:

1. Do you currently hold, a valid U.S. driver's license, which you can present at the time of the study?  
YES \_\_\_\_\_ NO \_\_\_\_\_ If yes, how long have you held a U.S. license? \_\_\_\_\_

a. Does your license have restricted driving privileges? YES \_\_\_\_\_ NO \_\_\_\_\_

*Criterion: they are ineligible to participate if unable to present a VALID U.S. driver's license at their appointment and they must be an experienced U.S. driver (at least 2 years).*

*Cannot have a license with restricted driving privileges, for example, only allowed to drive to work and home. Receiving compensation to be a participant doesn't qualify as 'work'. A "Restriction" such as requires corrected lenses is something different and may be considered eligible for this study.*

*NOTE: They will be reminded they must present a driver's license at their appointment if scheduled.*

2. On average how many days a week do you drive? \_\_\_\_\_

*Criterion: Must drive, on average, at least 2 days per week.*

3. What is your current age? \_\_\_\_\_ YOB \_\_\_\_\_

*Criterion: Must be 25-65 years old to participate.*

4. Are you a U.S. Citizen? YES \_\_\_\_\_ NO \_\_\_\_\_

If No, are you a permanent resident with a valid green card to work anywhere in the U.S.?

YES \_\_\_\_\_ NO \_\_\_\_\_

To clarify, Are you a Visa holder or do you have a Valid Green Card with permanent resident status?

Visa \_\_\_\_\_ Green Card \_\_\_\_\_

If you have a Visa you will not be eligible to participate. Those with a Permanent Resident Green Card are eligible.

Notes: \_\_\_\_\_

*Criterion: Must be a U.S. citizen or permanent resident (green card holder able to work anywhere in the U.S.)*

*with NO restrictions such as limit on number of hours he or she can work each week or place he or she is allowed to work, for example, he or she can't be limited to only working at 1 company or VT only). Visa holders are not eligible.*

5. If selected to participate in this study, you will be asked to provide your Social Security number. Will you complete a W-9 for payment purposes as required by Virginia Tech at the time of participation?  
YES \_\_\_\_\_ NO \_\_\_\_\_

*(for payment documentation and tax recording purposes VA Tech will require them to complete a W-9)*

*Please note: VA Tech would never require your SS # or any personal banking information during a phone call. If scheduled to participate in any type of study, VT would send instructions whether you need to bring personal information for an appointment, in order to complete required paperwork at a study location.*

*Criterion: Must be willing to provide SSN number and complete a W-9 for payment purposes.*

6. Are you available and willing to participate in two daytime sessions scheduled about one week apart?  
(Likely Mon-Fri) YES \_\_\_\_\_ NO \_\_\_\_\_

Comments & Note Availability, if any: \_\_\_\_\_

*Criterion: Must be available for two daytime sessions and preference for those available Mon – Fri.*

*Note: Some Saturday appointments may become available.*

7. Are you comfortable with driving our research vehicle on public highways, such as Rt. 460 and I-81, during the daytime? YES \_\_\_\_\_ NO \_\_\_\_\_

Notes: \_\_\_\_\_

*Criterion: Must be comfortable with driving the research vehicle on highway roadways.*

8. Have you participated in a VTTI research study before? YES \_\_\_\_\_ NO \_\_\_\_\_  
If yes, did it involve use of Lane Keeping Assist, Lane Departure Warning, or any other technology that warns participants of lane departure and/or assists the driver in keeping the vehicle in the lane? YES \_\_\_\_\_ NO \_\_\_\_\_

If answered YES – ask which study and determine eligibility based on whether it was a Naturalistic study.

*Criterion: Must not have participated in a previous project where they used some type of lane keeping or lane assist technology, outside of a Naturalistic study. For Example, driving a Horizon vehicle with ADAS features is ok.*

*We need to ask a few questions about your medical history...*

Do you have a history of any of the following medical conditions? If yes, please explain.

9. Do you have any mobility limitations which may cause you to require assistance getting in and out of the motor vehicle or walking to and from the building and out to the test vehicle? YES \_\_\_\_\_ NO \_\_\_\_\_

a. Are you able to drive an automatic transmission without assistive devices or special equipment?  
YES \_\_\_\_\_ NO \_\_\_\_\_

NOTES: \_\_\_\_\_

*Criterion: Must not require assistance to walk out to the vehicle or getting in and out of a motor vehicle – no mobility limitations, no leg or ankle braces, etc. Must be able to drive an automatic transmission without assistive devices or special equipment.*

10. Any Head Injury, Stroke, or illness or disease affecting the Brain? YES \_\_\_\_ NO \_\_\_\_  
If yes, please explain: \_\_\_\_\_

*Cannot have a history of brain damage from stroke, tumor, head injury, recent concussion, or disease or infection of the brain. Must not have suffered a stroke, head injury, concussion, etc in the past 6 months.*

11. Current heart condition which limits your ability to participate in certain activities? YES \_\_\_\_ NO \_\_\_\_  
If yes, please explain: \_\_\_\_\_

*Cannot have a current heart condition which limits their ability to participate in certain activities. Must not have suffered a heart attack or hospitalized for heart issues within the past 6 months.*

12. Current respiratory disorder/disease or any condition which requires oxygen? YES \_\_\_\_ NO \_\_\_\_  
Notes: \_\_\_\_\_

*Cannot have current respiratory disorder/disease or disorder/disease requiring oxygen.*

13. Any epileptic seizures or lapses of consciousness within the past twelve months? YES \_\_\_\_ NO \_\_\_\_  
Notes: \_\_\_\_\_

*Cannot have had an epileptic seizure or lapse of consciousness within the past 12 months.*

14. Chronic migraines or tension headaches? YES \_\_\_\_ NO \_\_\_\_  
If yes, do they occur more than once a month on average? YES \_\_\_\_ NO \_\_\_\_  
Notes: \_\_\_\_\_

*Cannot have, on average, more than one migraine or severe headache per month during the past yr.*

15. Do you currently have uncontrolled Diabetes? YES \_\_\_\_ NO \_\_\_\_  
Notes: \_\_\_\_\_

*Cannot have uncontrolled diabetes (frequent low/high blood sugar levels that they are struggling to keep regulated). Cannot have been recently diagnosed or have been hospitalized for this condition or incurred any changes in their insulin prescription during the past 3 months.*

16. Have you had any major surgery within the past six months, including any eye procedures? YES \_\_\_\_ NO \_\_\_\_  
If yes, explain: \_\_\_\_\_

*Must not have had any major surgery within the past 6 months (including eye procedures).*

17. Are you currently taking any medicines or substances that may cause drowsiness or impair your driving ability? YES \_\_\_\_ NO \_\_\_\_

*Cannot currently be taking any substances that may interfere with driving ability (cause drowsiness or impair motor abilities)*

18. Current problems with inner ear problems, dizziness, vertigo, or balance problems? YES \_\_\_\_ NO \_\_\_\_

*Cannot have current problems with inner ear problems, dizziness, vertigo, or balance problems.*

19. (Females only) Are you currently pregnant? YES \_\_\_\_ NO \_\_\_\_  
(if “yes,” politely inform the participant: while being pregnant does not disqualify you from participating in this study, you are encouraged to talk to your physician about your participation to make sure that you both feel it is safe. If you like, **we can send you a copy of the Informed Consent to discuss with your**

**physician.** Answer any questions)

*Can still participate, but encourage them to speak with their doctor first*

20. Do you have normal, or corrected to normal, vision in **both** eyes? YES \_\_\_\_\_ NO \_\_\_\_\_  
Do you wear eyeglasses when driving? YES \_\_\_\_\_ NO \_\_\_\_\_ Tinted eyewear? YES \_\_\_\_\_ NO \_\_\_\_\_

*Criterion: Must have normal or corrected to normal vision in both eyes. Must not wear eyeglasses that tint in the sun while driving. (need to be able to capture eye movements)*

21. Do you have normal, or corrected to normal, hearing? YES \_\_\_\_\_ NO \_\_\_\_\_

*Criterion: Must be able to hear and follow researcher's verbal directions while driving.  
Must have normal or corrected to normal hearing.*

22. Are you comfortable reading, writing, and speaking English? YES \_\_\_\_\_ NO \_\_\_\_\_

*Criterion: Must be able to read, write, and speak English comfortably. If the screener finds during the phone interview, the caller is struggling with their ability to communicate fluently in English, then the screener should avoid scheduling this person.*

23. Do you work for an automotive company or supplier that is involved in the design, engineering, or development of automotive-related technologies? YES \_\_\_\_\_ NO \_\_\_\_\_  
If yes, who: \_\_\_\_\_

*Criterion: Must not be employed by an automotive company or supplier, in the design, engineering, or development of automotive-related technology (A person who works for a dealership or auto repair is eligible).*

24. Have you been involved in any automobile accidents in the past 5 years? YES \_\_\_\_\_ NO \_\_\_\_\_  
If so, please explain: \_\_\_\_\_

*Criterion: Must not have been convicted of an injurious accident (driving violation) in the past 5 years.*

25. Have you had any moving violations in the past 3 years? If so, please explain. YES \_\_\_\_\_ NO \_\_\_\_\_

*Criterion: Must not have been convicted of more than two driving violations in the past 3 years.*

26. Are you a current or previous employee of VTTI? YES \_\_\_\_\_ NO \_\_\_\_\_

Notes: \_\_\_\_\_

*Criterion: Must not have a history of employment with VTTI.*

The next two questions will not affect your eligibility. VTTI strives for inclusiveness.

27. First, for research purposes, I'll ask you to identify your sex and your race and/or ethnicity for me.

Screener - Please select all that apply:

28. Second, for research purposes, what is your race and/or ethnicity? (Select all that apply)

- American Indian or Alaska Native
  - for example, Navajo Nation, Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, Aztec, Maya, etc.
- Asian
  - for example, Chinese, Asian Indian, Filipino, Vietnamese, Korean, Japanese, etc.
- Black or African American

- for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.
- Hispanic or Latino
  - for example, Mexican, Puerto Rican, Salvadoran, Cuban, Dominican, Guatemalan, etc.
- Middle Eastern or North African
  - for example, Lebanese, Iranian, Egyptian, Syrian, Iraqi, Israeli, etc.
- Native Hawaiian or Other Pacific Islander
  - for example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese, etc.
- White
  - for example, English, German, Irish, Italian, Polish, Scottish, etc.
- A race, ethnicity, or origin not listed here \_\_\_\_\_
- Prefer not to answer

*An effort will be made to recruit a variety of different ethnicities and participants of all genders to create a diverse sample of participants. This will be balanced across groups if possible.*

**How did you hear about this project?** \_\_\_\_\_

Screening Date \_\_\_\_\_ Screener \_\_\_\_\_ Screening #: \_\_\_\_\_

**Recruiting Others:**

Do you know anyone else that may be interested in hearing about this study?

If yes, may we send you the information so you can forward it to them? (Or they can provide our phone #, email, website address to others; we will be happy to speak to anyone interested in hearing more)

Do you prefer we send you the info by Email: \_\_\_\_\_ or USPS mail (address): \_\_\_\_\_

**If Eligible:**

Availability: \_\_\_\_\_

1<sup>st</sup> session Scheduled on (date & time): \_\_\_\_\_

2nd session Scheduled on (date & time): \_\_\_\_\_

Name: \_\_\_\_\_ Preferred Name: \_\_\_\_\_

Home Phone #: \_\_\_\_\_ Cell# \_\_\_\_\_ Work # \_\_\_\_\_

*We encourage you to read a copy of the Informed Consent prior to coming in for your scheduled appointment. Please review it ahead of time and contact us with any questions or concerns. You will be asked to read & sign a copy of this document upon arrival at VTTI prior to participating. Do not bring this document with you to the appointment; we simply ask for you to review the document ahead of time and to let us know you received it. Do you prefer we send as an email attachment or by USPS?*

E-mail or mailing address: \_\_\_\_\_

Town or city you live & approximate travel time to VTTI: \_\_\_\_\_

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**Would you like to be contacted for future studies? Yes: \_\_\_\_\_ No: \_\_\_\_\_**

If yes, collect the following:

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ Suffix: \_\_\_\_\_

Preferred Name: \_\_\_\_\_ Y.O.B. \_\_\_\_\_

Home Phone #: \_\_\_\_\_ Cell# \_\_\_\_\_ Work # \_\_\_\_\_

Town or city: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Specialty Driver's License \_\_\_\_\_

if CDL, endorsements \_\_\_\_\_

restrictions \_\_\_\_\_

Make, Type and Year of Primary Vehicle (light) \_\_\_\_\_

(2dr, 4dr, SUV, Truck, Van, Other)

Would you like to hear about upcoming Teen driving study opportunities? YES \_\_\_\_\_ NO \_\_\_\_\_