Student’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date and Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TMAD Checklist

1. Name of Crossing Situation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*e.g.. Name of street, where the assessed crossing is, and which way you are facing (NSEW), or facing a certain landmark, etc.*

2. Using vision or hearing to detect vehicles? (Choose only one\*)

\_\_\_\_ Using vision

\_\_\_\_ Using hearing

*\* It’s difficult to use hearing and vision at the same time, so situations cannot be analyzed using both together, but the situation can be analyzed using vision and hearing one at a time. Each of these (using vision and using hearing) would be a different situation, so use separate checklist for each analysis.*

3. Steady conditions present temporarily that could affect detectability of vehicles

*e.g. parked vehicles, barriers; precipitation; wet pavement; wind or steady noise if using hearing; sunny/overcast if using vision, etc*

4. When observing the situation informally (before analyzing it), what did the student think it was?

\_\_\_\_ Situation of Uncertainty \_\_\_\_ Situation of Confidence \_\_\_\_\_ Too close to call (i.e. Uncertain)

5. Crossing Time *(Longest crossing time,* *in seconds):*

*Start timer when student is committed to crossing, stop when student steps out of danger from traffic on that side.*

\_\_\_\_\_\_ “LEFT” -- Time for crossing lanes for traffic from the left

\_\_\_\_\_\_ “RIGHT” -- Time for crossing entire street / all lanes

6. Detection-to-Arrival / Warning Time of Vehicles *(chart is on next page)*

* In the chart on the next page, list the detection-to-arrival (warning) times for approaching vehicles

only until you have enough warning times to make a conclusion.

*The first time you get a warning time that is less than the crossing time, STOP! You can conclude this is a Situation of Uncertainty and do not need to collect any more data.*

* If the student is using hearing, record the warning times for vehicles coming from either direction, filling both columns (right and left) simultaneously.
* If the student is using vision, record the warning times for vehicles coming from only one direction at a time, filling that column and making a conclusion for that approach before analyzing the other direction.
* Remember that your detection-to-arrival times are accurate only if:
	+ the timer was started as soon as the student thought there might be a vehicle coming AND
	+ conditions for that situation were ideal. For example,

*for students using hearing:* when the vehicle was heard, it was as quiet as it gets in that situation, with no temporary masking sounds;

*for students using vision:* the view was not temporarily blocked by passing cars, and there was no temporary glare or bad lighting.

*Note that permanent masking sounds / glare etc. would constitute conditions for that situation.*

Warning times should be disregarded if the timer was not started as soon as the student thought something *might* be coming, or when the conditions were not ideal for that situation.

6. Detection-to-Arrival / Warning Time of Vehicles

 *Recorded from when student thought there might be a vehicle AND conditions were ideal for that situation:*

 From left: From right:

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

 \_\_\_\_ seconds \_\_\_\_ seconds

Making a conclusion:

*From the left:*

 \_\_\_\_ Was the warning time of any vehicle shorter than the crossing time?

* + If YES, then this is a Situation of Uncertainty.
	+ If NO, then consider the range of warning times:

 \_\_\_\_ Was the range of warning times close to the crossing time?

* + If YES, then this is a Situation of Uncertainty.
	+ If NO, then consider the spread of the range:

 \_\_\_\_ Was the spread of the range of warning times broad?

* + If YES, then this is a Situation of Uncertainty.
	+ If NO, then this is a Situation of Confidence.

*From the right:*

 \_\_\_\_ Was the warning time of any vehicle shorter than the crossing time?

* + If YES, then this is a Situation of Uncertainty.
	+ If NO, then consider the range of warning times:

 \_\_\_\_ Was the range of warning times close to the crossing time?

* + If YES, then this is a Situation of Uncertainty.
	+ If NO, then consider the spread of the range:

 \_\_\_\_ Was the spread of the range of warning times broad?

* + If YES, then this is probably a Situation of Uncertainty.
	+ If NO, then this is a Situation of Confidence.

Conclusion for these conditions:

*From the left: From the right:*

\_\_\_\_ Situation of Confidence \_\_\_\_ Situation of Confidence

\_\_\_\_ Situation of Uncertainty \_\_\_\_ Situation of Uncertainty

Was either side a Situation of Uncertainty?

* If YES, then this is a Situation of Uncertainty.
* If NO, then this is a Situation of Confidence.

NEXT STEPS

Students should have correctly identified at least one Situation of Uncertainty and at least one Situation of Confidence. To make sure they have this experience, complete separate TMAD checklists for every crossing situation analyzed, consolidate the results of these analyses and keep track of student responses on the “Instruction Summary Checklist: Teaching Students to Recognize Situations of Uncertainty.”