

Table A: List of Selected Scenarios for Safety Testing of ADS using $ODD1$ and $D1 - O_{11}$

Sr. #	Groups	Scenario Name	Identifier	Score	Priority
G3	Following Lead Vehicle	Ego vehicle approaching slower lead vehicle	S_{17}	28	1
		Turning lead vehicle	S_{18}	26	2
		Inattentive, Rear	S_{19}	23	3
		Stutter Stop	S_{20}	23	3
G5	Crossing Path	Oncoming vehicle turns right at signalized junction	S_{25}	28	4
		Sirens	S_{29}	28	4
		Entering a roundabout with another vehicle	S_{28}	27	5
		Left Turn Clip	S_{30}	26	6
		Wrong Driveway	S_{31}	26	6
		Run Red Into Left Turner	S_{33}	26	6
		Misjudgment, Left Turn	S_{34}	26	6
		Wave to Go	S_{32}	23	7
		Navigating on an empty roundabout	S_{27}	22	8
		Ego vehicle turns right with oncoming vehicle at signalized junction	S_{26}	21	9
G2	Lane Change	Cut-in in front of the ego vehicle	S_4	28	10
		Cut-out in front of the ego vehicle	S_7	28	10
		Vehicle swerving towards ego vehicle	S_8	28	10
		Vehicle backing up into the ego vehicle	S_9	28	10
		Impassable object on intended path	S_{10}	28	10
		Object road with incoming traffic	S_{12}	28	10
		Driving straight	S_{13}	28	10
		U-Turn	S_{16}	28	10
		Ego performing lane change with the vehicle behind	S_5	24	11
		Ego merging into an occupied lane	S_6	24	11
		Passable object on intended path	S_{11}	24	11
		Avoidance, Rear	S_{14}	24	11
		Lane Change, Rear.	S_{15}	24	11
G3	Opposite Direction	Oncoming vehicle swerving into ego vehicle's lane	S_{64}	28	12
		Oncoming vehicle	S_{65}	28	12
G7	Pedestrian Interaction	Jaywalking	S_{36}	27	13
		Pedestrian crossing at zebra crossing	S_{37}	27	13
		Pedestrian running a red light	S_{41}	27	13
		Struck Human	S_{45}	27	13
		Pedestrian stationary at road side	S_{39}	26	14
		Pedestrian walking along the road	S_{40}	26	14
		Pedestrian at left turn at signalized junction	S_{42}	25	15
		Pedestrian in same direction obstructed at ego left turn	S_{43}	25	15
		Zebra crossing	S_{38}	23	16
		Pedestrian at right turn at signalized junction	S_{44}	20	17
G8	Cyclist Interaction	Cyclist crossing from left side at signalized junction	S_{46}	25	18
		Cyclist crossing from right side at signalized junction	S_{47}	25	18
		Ego vehicle approaching cyclist riding in same direction	S_{48}	25	18
		Ego vehicle driving alongside a cyclist	S_{49}	25	18
		Cyclist and ego vehicle driving in opposite direction	S_{50}	25	18
		Cyclist turning left and ends up in lane of ego vehicle	S_{56}	25	18
		Cyclist turning right and ends up in lane of ego vehicle	S_{57}	25	18
		Entering a roundabout with a cyclist Interaction	S_{54}	24	19
		Leaving a roundabout with a cyclist	S_{55}	24	19
		Cyclist at left turn at signalized junction	S_{51}	23	20
		Cyclist driving in same direction obstructed at ego left turn	S_{52}	23	20
		Cyclist at right turn at signalized junction	S_{53}	18	21

Table B: List of Selected Scenarios for Safety Testing of ADS using $ODD2$ and $D1 - O_{21}$

Sr. #	Groups	Scenario Name	Identifier	Score	Priority
G3	Following Lead Vehicle	Ego vehicle approaching slower lead vehicle	S_{17}	28	1
		Turning lead vehicle	S_{18}	26	2
		Stutter Stop	S_{20}	23	3
G5	Crossing Path	Oncoming vehicle turns right at signalized junction	S_{25}	28	4
		Sirens	S_{29}	28	4
		Left Turn Clip	S_{30}	26	5
		Wrong Driveway	S_{31}	26	5
		Run Red Into Left Turner	S_{33}	26	5
		Misjudgment, Left Turn	S_{34}	26	5
		Wave to Go	S_{32}	23	6
		Ego vehicle turns right with oncoming vehicle at signalized junction	S_{26}	21	7
		Oncoming vehicle swerving into ego vehicle's lane	S_{64}	28	8
G3	Opposite Direction	Oncoming vehicle	S_{65}	28	8
		Jaywalking	S_{36}	27	9
G7	Pedestrian Interaction	Pedestrian crossing at zebra crossing	S_{37}	27	9
		Pedestrian running a red light	S_{41}	27	9
		Struck Human	S_{45}	27	9
		Pedestrian stationary at road side	S_{39}	26	10
		Pedestrian walking along the road	S_{40}	26	10
		Pedestrian at left turn at signalized junction	S_{42}	25	11
		Pedestrian in same direction obstructed at ego left turn	S_{43}	25	11
		Zebra crossing	S_{38}	23	12
		Pedestrian at right turn at signalized junction	S_{44}	20	13
G8	Cyclist Interaction	Cyclist crossing from left side at signalized junction	S_{46}	25	14
		Cyclist crossing from right side at signalized junction	S_{47}	25	14
		Ego vehicle approaching cyclist riding in same direction	S_{48}	25	14
		Ego vehicle driving alongside a cyclist	S_{49}	25	14
		Cyclist and ego vehicle driving in opposite direction	S_{50}	25	14
		Cyclist turning left and ends up in lane of ego vehicle	S_{56}	25	14
		Cyclist turning right and ends up in lane of ego vehicle	S_{57}	25	14
		Cyclist at left turn at signalized junction	S_{51}	23	15
		Cyclist driving in same direction obstructed at ego left turn	S_{52}	23	15
		Cyclist at right turn at signalized junction	S_{53}	18	16

Table C: List of Selected Scenarios for Safety Testing of ADS using $ODD1$ and $D2 - O_{12}$

Sr. #	Groups	Scenario Name	Identifier	Score	Priority
G8	Cyclist Interaction	Ego vehicle approaching cyclist riding in same direction	S_{48}	19	1
		Ego vehicle driving alongside a cyclist	S_{49}	19	1
		Cyclist and ego vehicle driving in opposite direction	S_{50}	19	1
		Cyclist crossing from left side at signalized junction	S_{46}	18	2
		Cyclist crossing from right side at signalized junction	S_{47}	18	2
		Cyclist turning left and ends up in lane of ego vehicle	S_{56}	18	2
		Cyclist turning right and ends up in lane of ego vehicle	S_{57}	18	2
		Cyclist at left turn at signalized junction	S_{51}	17	3
		Cyclist driving in same direction obstructed at ego left turn	S_{52}	17	3
		Entering a roundabout with a cyclist Interaction	S_{54}	16	4
		Leaving a roundabout with a cyclist	S_{55}	16	4
G5	Crossing Path	Cyclist at right turn at signalized junction	S_{53}	14	5
		Oncoming vehicle turns right at signalized junction	S_{25}	21	6
		Sirens	S_{29}	21	6
		Left Turn Clip	S_{30}	20	7
		Wrong Driveway	S_{31}	20	7
		Run Red Into Left Turner	S_{33}	20	7
		Misjudgment, Left Turn	S_{34}	20	7
		Entering a roundabout with another vehicle	S_{28}	19	8
		Ego vehicle turns right with oncoming vehicle at signalized junction	S_{26}	17	9
		Navigating on an empty roundabout	S_{27}	14	10
G7	Pedestrian Interaction	Wave to Go	S_{32}	14	10
		Jaywalking	S_{36}	21	11
		Pedestrian crossing at zebra crossing	S_{37}	21	11
		Pedestrian running a red light	S_{41}	20	12
		Struck Human	S_{45}	20	12
		Pedestrian stationary at road side	S_{39}	19	13
		Pedestrian walking along the road	S_{40}	19	13
		Pedestrian at left turn at signalized junction	S_{42}	19	13
		Pedestrian in same direction obstructed at ego left turn	S_{43}	19	13
G3	Opposite Direction	Zebra crossing	S_{38}	18	14
		Pedestrian at right turn at signalized junction	S_{44}	16	15
G3	Following Lead Vehicle	Oncoming vehicle swerving into ego vehicle's lane	S_{64}	22	16
		Oncoming vehicle	S_{65}	22	16
G3	Following Lead Vehicle	Ego vehicle approaching slower lead vehicle	S_{17}	21	17
		Turning lead vehicle	S_{18}	20	18
		Inattentive, Rear	S_{19}	14	19
		Stutter Stop	S_{20}	14	19
G2	Lane Change	Cut-in in front of the ego vehicle	S_4	22	20
		Cut-out in front of the ego vehicle	S_7	22	20
		Vehicle swerving towards ego vehicle	S_8	22	20
		Vehicle backing up into the ego vehicle	S_9	22	20
		Impassable object on intended path	S_{10}	22	20
		Object road with incoming traffic	S_{12}	22	20
		Driving straight	S_{13}	22	20
		U-Turn	S_{16}	22	20
		Ego performing lane change with the vehicle behind	S_5	19	21
		Ego merging into an occupied lane	S_6	19	21
		Passable object on intended path	S_{11}	19	21
		Avoidance, Rear	S_{14}	19	21
		Lane Change, Rear.	S_{15}	19	21
G10	Reversing	Back Into Object	S_{61}	17	22
		Back into Roadway	S_{62}	17	22
		Back Track	S_{63}	17	22

Table D: List of Selected Scenarios for Safety Testing of ADS using *ODD2* and *D2 - O₂₂*

Sr. #	Groups	Scenario Name	Identifier	Score	Priority
G8	Cyclist Interaction	Cyclist crossing from left side at signalized junction	S_{46}	16	1
		Cyclist crossing from right side at signalized junction	S_{47}	16	1
		Ego vehicle approaching cyclist riding in same direction	S_{48}	16	1
		Ego vehicle driving alongside a cyclist	S_{49}	16	1
		Cyclist and ego vehicle driving in opposite direction	S_{50}	16	1
		Cyclist turning left and ends up in lane of ego vehicle	S_{56}	16	1
		Cyclist turning right and ends up in lane of ego vehicle	S_{57}	16	1
		Cyclist at left turn at signalized junction	S_{51}	15	2
		Cyclist driving in same direction obstructed at ego left turn	S_{52}	15	2
		Cyclist at right turn at signalized junction	S_{53}	12	3
G5	Crossing Path	Oncoming vehicle turns right at signalized junction	S_{25}	19	4
		Sirens	S_{29}	19	4
		Left Turn Clip	S_{30}	18	5
		Wrong Driveway	S_{31}	18	5
		Run Red Into Left Turner	S_{33}	18	5
		Misjudgment, Left Turn	S_{34}	18	5
		Ego vehicle turns right with oncoming vehicle at signalized junction	S_{26}	15	6
		Wave to Go	S_{32}	12	7
G7	Pedestrian Interaction	Jaywalking	S_{36}	18	8
		Pedestrian crossing at zebra crossing	S_{37}	18	8
		Pedestrian running a red light	S_{41}	18	8
		Struck Human	S_{45}	18	8
		Pedestrian at left turn at signalized junction	S_{42}	17	9
		Pedestrian in same direction obstructed at ego left turn	S_{43}	17	9
		Pedestrian stationary at road side	S_{39}	16	10
		Pedestrian walking along the road	S_{40}	16	10
		Zebra crossing	S_{38}	15	11
G3	Opposite Direction	Pedestrian at right turn at signalized junction	S_{44}	14	12
		Oncoming vehicle swerving into ego vehicle's lane	S_{64}	19	13
G3	Following LeadVehicle	Oncoming vehicle	S_{65}	19	13
		Ego vehicle approaching slower lead vehicle	S_{17}	19	14
		Turning lead vehicle	S_{18}	18	15
		Stutter Stop	S_{20}	12	16