

## Appendix 16-8

# **Highway Capacity Software (HCS) Level of Service Output**

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Existing
Project Description	Cemetery Rd	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	13	Opposing Demand Flow Rate, veh/h	13
Peak Hour Factor	0.90	Total Trucks, %	1.10
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	45.1
Speed Slope Coefficient	2.64170	Speed Power Coefficient	0.63589
PF Slope Coefficient	-1.15462	PF Power Coefficient	0.78832
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.1

### Vehicle Results

Average Speed, mi/h	45.1	Percent Followers, %	3.8
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	0.0
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Existing
Project Description	Chasm Rd	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	8	Opposing Demand Flow Rate, veh/h	10
Peak Hour Factor	0.90	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.00

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.1
Speed Slope Coefficient	2.74160	Speed Power Coefficient	0.64105
PF Slope Coefficient	-1.15014	PF Power Coefficient	0.79708
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

### Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	2.4
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	0.0
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Existing
Project Description	East Rd	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	18	Opposing Demand Flow Rate, veh/h	16
Peak Hour Factor	0.90	Total Trucks, %	7.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.9
Speed Slope Coefficient	2.63408	Speed Power Coefficient	0.63284
PF Slope Coefficient	-1.15659	PF Power Coefficient	0.78774
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	44.9

### Vehicle Results

Average Speed, mi/h	44.9	Percent Followers, %	4.7
Segment Travel Time, minutes	1.34	Followers Density, followers/mi/ln	0.0
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Existing
Project Description	CR-23	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	51	Opposing Demand Flow Rate, veh/h	31
Peak Hour Factor	0.90	Total Trucks, %	7.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	2.87865	Speed Power Coefficient	0.61616
PF Slope Coefficient	-1.17166	PF Power Coefficient	0.79782
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	49.1

### Vehicle Results

Average Speed, mi/h	49.1	Percent Followers, %	10.3
Segment Travel Time, minutes	1.22	Followers Density, followers/mi/ln	0.1
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Existing
Project Description	US 11	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	319	Opposing Demand Flow Rate, veh/h	319
Peak Hour Factor	0.90	Total Trucks, %	23.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.19

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	3.65999	Speed Power Coefficient	0.51138
PF Slope Coefficient	-1.22634	PF Power Coefficient	0.80868
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	59.5

### Vehicle Results

Average Speed, mi/h	59.5	Percent Followers, %	38.5
Segment Travel Time, minutes	1.01	Followers Density, followers/mi/ln	2.1
Vehicle LOS	B		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Proposed
Project Description	Cemetery Rd	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	13	Opposing Demand Flow Rate, veh/h	13
Peak Hour Factor	0.90	Total Trucks, %	1.10
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	45.1
Speed Slope Coefficient	2.64170	Speed Power Coefficient	0.63589
PF Slope Coefficient	-1.15462	PF Power Coefficient	0.78832
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	45.1

### Vehicle Results

Average Speed, mi/h	45.1	Percent Followers, %	3.8
Segment Travel Time, minutes	1.33	Followers Density, followers/mi/ln	0.0
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Proposed
Project Description	Chasm Rd	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	3
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	8	Opposing Demand Flow Rate, veh/h	10
Peak Hour Factor	0.90	Total Trucks, %	6.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.00

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	47.1
Speed Slope Coefficient	2.74160	Speed Power Coefficient	0.64105
PF Slope Coefficient	-1.15014	PF Power Coefficient	0.79708
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	47.1

### Vehicle Results

Average Speed, mi/h	47.1	Percent Followers, %	2.4
Segment Travel Time, minutes	1.28	Followers Density, followers/mi/ln	0.0
Vehicle LOS	A		



# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Proposed
Project Description	East Rd	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	239	Opposing Demand Flow Rate, veh/h	237
Peak Hour Factor	0.90	Total Trucks, %	16.62
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	44.6
Speed Slope Coefficient	2.73530	Speed Power Coefficient	0.52956
PF Slope Coefficient	-1.25455	PF Power Coefficient	0.76102
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.9
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	43.6

### Vehicle Results

Average Speed, mi/h	43.6	Percent Followers, %	34.4
Segment Travel Time, minutes	1.38	Followers Density, followers/mi/ln	1.9
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Proposed
Project Description	CR-23	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	10	Shoulder Width, ft	6
Speed Limit, mi/h	45	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	51	Opposing Demand Flow Rate, veh/h	31
Peak Hour Factor	0.90	Total Trucks, %	7.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.1
Speed Slope Coefficient	2.87865	Speed Power Coefficient	0.61616
PF Slope Coefficient	-1.17166	PF Power Coefficient	0.79782
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	49.1

### Vehicle Results

Average Speed, mi/h	49.1	Percent Followers, %	10.3
Segment Travel Time, minutes	1.22	Followers Density, followers/mi/ln	0.1
Vehicle LOS	A		

# HCS7 Two-Lane Highway Report

## Project Information

Analyst	BH	Date	06/02/2021
Agency	PDE	Analysis Year	2021
Jurisdiction	NYS DOT	Time Period Analyzed	Proposed
Project Description	US 11	Unit	United States Customary

## Segment 1

### Vehicle Inputs

Segment Type	Passing Zone	Length, ft	5280
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	3.0

### Demand and Capacity

Directional Demand Flow Rate, veh/h	430	Opposing Demand Flow Rate, veh/h	430
Peak Hour Factor	0.90	Total Trucks, %	21.54
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.25

### Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	61.2
Speed Slope Coefficient	3.69247	Speed Power Coefficient	0.49208
PF Slope Coefficient	-1.24178	PF Power Coefficient	0.80254
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improved % Followers	0.0	% Improved Avg Speed	0.0

### Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5280	-	-	59.1

### Vehicle Results

Average Speed, mi/h	59.1	Percent Followers, %	46.8
Segment Travel Time, minutes	1.02	Followers Density, followers/mi/ln	3.4
Vehicle LOS	B		