



Attachment 1

Table A6-1. Vertical distances between critical points on aircraft at maximum pitch attitude (VREF) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|------------------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B717-200 | 4.0 40 | 5.9 | 13.7 | 19.6 | 10.9 | 17.2 | 3.5 | 5.9 | 13.7 | 19.6 | 10.4 | 16.7 |
| B737-300 | 5.1 30 | 0.8 | 17.7 | 18.6 | 15.6 | 16.6 | 4.6 | 0.8 | 17.7 | 18.6 | 15.2 | 16.2 |
| B737-400 | 4.9 30 | 0.8 | 18.3 | 19.2 | 16.0 | 17.0 | 4.4 | 0.8 | 18.4 | 19.2 | 15.5 | 16.5 |
| B737-500 | 5.2 30 | 0.8 | 17.2 | 18.0 | 15.3 | 16.3 | 4.7 | 0.8 | 17.2 | 18.0 | 14.9 | 15.9 |
| B737-600 | 5.5 | 0.8 | 17.8 | 18.6 | 15.8 | 16.8 | 5.0 | 0.8 | 17.8 | 18.6 | 15.4 | 16.4 |
| B737-600IGW | 30 | | | | | | | | | | | |
| B737-600 w/Winglets | 5.2 30 | 0.8 | 17.6 | 18.4 | 15.6 | 16.6 | 4.7 | 0.8 | 17.6 | 18.4 | 15.2 | 16.2 |
| B737-700 | 5.5 30 | 0.8 | 18.4 | 19.2 | 16.3 | 17.2 | 5.0 | 0.8 | 18.4 | 19.2 | 15.8 | 16.8 |
| B737-700 w/Winglets | 5.2 30 | 0.8 | 18.2 | 19.0 | 16.0 | 17.0 | 4.7 | 0.8 | 18.2 | 19.0 | 15.6 | 16.5 |
| B737-800 | 3.9 30 | 0.9 | 18.2 | 19.1 | 15.5 | 16.6 | 3.4 | 0.9 | 18.2 | 19.1 | 15.0 | 16.2 |
| B737-800 w/Winglets | 3.7 30 | 0.9 | 17.9 | 18.9 | 15.3 | 16.4 | 3.2 | 0.9 | 18.0 | 18.9 | 14.8 | 16.0 |
| B737-900 | 3.0 30 | 1.0 | 17.7 | 18.7 | 14.9 | 16.0 | 2.5 | 1.0 | 17.7 | 18.7 | 14.3 | 15.5 |



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Table A6-1. Vertical distances between critical points on aircraft at maximum pitch attitude (VREF) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|---------------------------------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B737-900 w/Winglets | 2.7 30 | 1.0 | 17.4 | 18.4 | 14.5 | 15.7 | 2.2 | 1.0 | 17.4 | 18.4 | 14.0 | 15.2 |
| B747-400 B747-400ER B747-400ERF | 5 25 | 21.0 | 23.4 | 44.4 | 19.4 | 40.3 | 4.5 | 21.0 | 23.4 | 44.4 | 18.6 | 39.4 |
| 747-8I | 4.6 25.0 | 21.0 | 24.6 | 45.5 | 19.9 | 40.8 | 4.1 | 21.0 | 24.6 | 45.6 | 19.0 | 39.8 |
| 747-8F | 4.4 25.0 | 21.0 | 24.2 | 45.2 | 19.6 | 40.4 | 3.9 | 20.9 | 23.3 | 44.2 | 18.6 | 39.4 |
| B757-200 | 5.9 25 | 6.1 | 22.5 | 28.6 | 19.2 | 25.5 | 5.4 | 6.1 | 22.5 | 28.6 | 18.5 | 24.9 |
| B757-300 | 4.2 25 | 6.2 | 21.8 | 28.1 | 17.9 | 24.3 | 3.7 | 6.2 | 21.8 | 28.1 | 17.1 | 23.6 |
| B767-200 B767-200ER | 5.6 25 | 6.6 | 23.9 | 30.6 | 20.8 | 27.6 | 5.1 | 6.6 | 23.9 | 30.6 | 20.1 | 27 |
| B767-300 B767-300ER | 3.7 25 | 6.8 | 22.6 | 29.4 | 19.0 | 26.0 | 3.2 | 6.8 | 22.6 | 29.4 | 18.3 | 25.3 |
| B767-400 | 3.7 25 | 6.8 | 24.6 | 31.4 | 20.5 | 27.1 | 3.2 | 6.8 | 24.6 | 31.4 | 19.6 | 25.3 |
| B777-200 B777-200ER | 3.5 25 | 12.9 | 21.4 | 34.2 | 17.3 | 29.9 | 3.0 | 12.9 | 21.4 | 34.3 | 16.5 | 29.0 |
| B777-200LR | 3.7 25 | 12.9 | 21.7 | 34.6 | 17.6 | 30.2 | 3.2 | 12.9 | 21.7 | 34.6 | 16.8 | 29.4 |



Attachment 1

Table A6-1. Vertical distances between critical points on aircraft at maximum pitch attitude (VREF) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|----------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B777-300 | 3.2 25 | 12.8 | 22.1 | 35.0 | 17.3 | 29.8 | 2.8 | 12.8 | 22.3 | 35.2 | 16.5 | 29.0 |
| B777-300ER | 3.4 25 | 12.9 | 22.5 | 35.4 | 17.6 | 30.2 | 2.9 | 12.9 | 22.5 | 35.4 | 16.7 | 29.2 |
| B777 Freighter | 3.2 25 | 12.8 | 22.1 | 35.0 | 17.3 | 29.8 | 2.8 | 12.8 | 22.3 | 35.2 | 16.5 | 29.0 |
| B787-8 | 4.7 25 | 8.5 | 23.6 | 32.1 | 19.7 | 28.4 | 4.2 | 8.5 | 23.6 | 32.1 | 18.9 | 27.7 |
| DC-8-62 | 2.4 35 | 6.6 | 16.4 | 23.0 | 13.1 | 20.0 | 1.9 | 6.6 | 16.4 | 23.0 | 12.4 | 19.4 |
| DC-8-63 | 1.4 35 | 6.7 | 16.2 | 22.9 | 12.2 | 19.2 | 0.9 | 6.7 | 16.2 | 22.9 | 11.4 | 18.5 |
| DC-8-61/71 | 2.6 25 | 6.6 | 18.1 | 24.7 | 14.1 | 21.0 | 2.1 | 6.6 | 18.1 | 24.7 | 13.3 | 20.3 |
| DC-8-72 | 2.5 35 | 6.6 | 16.5 | 23.1 | 13.2 | 20.1 | 2.0 | 6.6 | 16.5 | 23.1 | 12.6 | 19.5 |
| DC-8-73 | 1.6 35 | 6.7 | 16.5 | 23.2 | 12.5 | 19.5 | 1.1 | 6.7 | 16.5 | 23.2 | 11.7 | 18.8 |
| DC-9-10 | 3.6 20 | 6.0 | 11.5 | 17.4 | 9.3 | 15.6 | 3.1 | 6.0 | 11.5 | 17.4 | 15.3 | 38.5 |
| DC-9-20 | 7.5 25 | 5.4 | 14.7 | 20.1 | 12.6 | 18.4 | 7.0 | 5.4 | 14.7 | 20.1 | 12.2 | 18.1 |



Attachment 1

Table A6-1. Vertical distances between critical points on aircraft at maximum pitch attitude (VREF) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-----------------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| DC-9-30 | 7.4 25 | 5.5 | 16.3 | 21.7 | 13.8 | 19.6 | 6.9 | 5.5 | 16.3 | 21.7 | 13.3 | 19.1 |
| DC-9-33 | 6.2 25 | 5.6 | 15.3 | 20.9 | 12.8 | 18.7 | 5.7 | 5.6 | 15.3 | 20.9 | 12.3 | 18.3 |
| DC-9-40 | 6.4 25 | 5.6 | 16.0 | 21.6 | 13.4 | 19.3 | 5.9 | 5.6 | 16.0 | 21.6 | 12.9 | 18.9 |
| DC-9-50 | 7.2 25 | 5.5 | 17.6 | 23.1 | 14.8 | 20.6 | 6.7 | 5.5 | 17.7 | 23.1 | 14.3 | 20.2 |
| DC-10-30 | 6.7 35 | 20.3 | 17.2 | 37.5 | 14.0 | 33.5 | 6.2 | 20.3 | 17.2 | 37.5 | 13.3 | 32.6 |
| DC-10-40 | 7.5 35 | 20.5 | 18.3 | 38.8 | 15.0 | 34.7 | 7.0 | 20.5 | 18.3 | 38.8 | 14.4 | 33.9 |
| MD-11 | 6.1 35 | 20.1 | 17.9 | 38.0 | 14.3 | 33.5 | 5.6 | 20.1 | 17.9 | 38.0 | 13.5 | 32.6 |
| MD-80/81/ 82/83/88 | 6.9 28 | 5.5 | 20.1 | 25.6 | 16.8 | 22.7 | 6.4 | 5.5 | 20.1 | 25.6 | 16.1 | 22.1 |
| MD-87 | 7.0 28 | 5.5 | 18.7 | 24.2 | 15.8 | 21.6 | 6.5 | 5.5 | 18.7 | 24.2 | 15.2 | 21.1 |
| MD-90 | 6.1 28 | 5.6 | 19.8 | 25.4 | 16.2 | 22.2 | 5.6 | 5.6 | 19.8 | 25.4 | 15.5 | 21.6 |



Attachment 2

Table A6-2. Vertical distances between critical points on aircraft at minimum pitch attitude (VREF+5) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-------------------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B717-200 | 1.8 40 | 6.2 | 11.3 | 17.5 | 8.5 | 15.1 | 1.3 | 6.2 | 11.3 | 17.5 | 8.0 | 14.6 |
| B737-300 | 2.1 40 | 1.0 | 15.2 | 16.2 | 13.0 | 14.3 | 1.6 | 1.0 | 15.2 | 16.2 | 12.6 | 13.9 |
| B737-400 | 2.0 40 | 1.0 | 15.6 | 16.6 | 13.1 | 14.4 | 1.5 | 1.0 | 15.6 | 16.6 | 12.6 | 13.9 |
| B737-500 | 2.3 40 | 1.0 | 15.0 | 16.0 | 13.0 | 14.2 | 1.8 | 1.0 | 15.0 | 16.0 | 12.6 | 13.9 |
| B737-600 B737-600IGW | 2.5 40 | 1.0 | 15.5 | 16.5 | 13.5 | 14.7 | 2.0 | 1.0 | 15.5 | 16.5 | 13.1 | 14.3 |
| B737-600 w/Winglets | 2.2 40 | 1.0 | 15.2 | 16.3 | 13.2 | 14.4 | 1.7 | 1.0 | 15.2 | 16.3 | 12.8 | 14.1 |
| B737-700 | 2.5 40 | 1.0 | 15.8 | 16.9 | 13.7 | 14.9 | 2.0 | 1.0 | 15.9 | 16.9 | 13.2 | 14.4 |
| B737-700 w/Winglets | 2.1 40 | 1.0 | 15.5 | 16.5 | 13.3 | 14.5 | 1.6 | 1.0 | 15.5 | 16.5 | 12.9 | 14.1 |
| B737-800 | 1.8 40 | 1.1 | 16.0 | 17.1 | 13.4 | 14.6 | 1.3 | 1.1 | 16.0 | 17.1 | 12.8 | 14.1 |
| B737-800 w/Winglets | 1.4 40 | 1.1 | 15.6 | 16.7 | 12.9 | 14.2 | 0.9 | 1.1 | 15.6 | 16.7 | 12.4 | 13.7 |
| B737-900 | 1.3 40 | 1.1 | 15.8 | 16.9 | 12.9 | 14.2 | 0.8 | 1.1 | 15.8 | 16.9 | 12.4 | 13.7 |



Attachment 2

Table A6-2. Vertical distances between critical points on aircraft at minimum pitch attitude (VREF+5) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|---------------------------------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B737-900 w/Winglets | 1.0 40 | 1.1 | 15.5 | 16.6 | 12.6 | 13.9 | 0.5 | 1.1 | 15.5 | 16.6 | 12.0 | 13.4 |
| B747-400 B747-400ER B747-400ERF | 2.5 30 | 20.9 | 19.4 | 40.3 | 15.3 | 36.1 | 2.0 | 20.9 | 19.4 | 40.3 | 14.5 | 35.2 |
| 747-8I | 2.6 30 | 20.9 | 20.9 | 41.8 | 16.2 | 36.9 | 2.1 | 20.9 | 20.9 | 41.8 | 15.3 | 36.0 |
| 747-8F | 2.8 30 | 20.9 | 21.3 | 42.2 | 16.6 | 37.3 | 2.3 | 20.9 | 21.3 | 42.2 | 15.6 | 36.4 |
| B757-200 | 2.5 30 | 6.4 | 18.0 | 24.4 | 14.6 | 21.2 | 2.0 | 6.4 | 18.0 | 24.4 | 14.0 | 20.6 |
| B757-300 | 2.2 30 | 6.4 | 18.7 | 25.1 | 14.7 | 21.3 | 1.7 | 6.4 | 18.7 | 25.1 | 14.0 | 20.6 |
| B767-200 B767-200ER | 2.8 30 | 6.9 | 20.4 | 27.3 | 17.2 | 24.3 | 2.3 | 6.9 | 20.4 | 27.3 | 16.6 | 23.7 |
| B767-300 B767-300ER | 2.7 30 | 6.9 | 21.2 | 28.1 | 17.5 | 24.6 | 2.2 | 6.9 | 21.2 | 28.1 | 16.8 | 23.9 |
| B767-400 | 2.5 30 | 6.9 | 23.2 | 30.1 | 19.1 | 26.2 | 2.0 | 6.9 | 23.3 | 30.2 | 18.3 | 25.4 |
| B777-200 B777-200ER | 2 30 | 12.7 | 20.1 | 32.9 | 16.0 | 28.5 | 1.6 | 12.8 | 20.3 | 33.1 | 15.4 | 27.8 |
| B777-200LR | 1.3 30 | 12.6 | 17.8 | 30.4 | 13.7 | 26.0 | 0.9 | 12.7 | 18.0 | 30.6 | 13.0 | 25.3 |



Attachment 2

Table A6-2. Vertical distances between critical points on aircraft at minimum pitch attitude (VREF+5) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|----------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B777-300 | 1.5 30 | 12.7 | 20.8 | 33.5 | 15.9 | 28.4 | 1.0 | 12.7 | 20.8 | 33.5 | 15.0 | 27.3 |
| B777-300ER | 2.1 30 | 12.7 | 20.0 | 32.7 | 15.1 | 27.6 | 1.6 | 12.7 | 20.0 | 32.7 | 14.1 | 26.5 |
| B777 Freighter | 1.5 30 | 12.7 | 20.8 | 33.5 | 15.9 | 28.4 | 1.0 | 12.7 | 20.8 | 33.5 | 15.0 | 27.3 |
| B787-8 | 1.4 30 | 8.8 | 18.5 | 27.3 | 14.5 | 23.6 | 0.9 | 8.8 | 18.5 | 27.3 | 13.7 | 22.8 |
| DC-8-62 | 0.4 50 | 6.9 | 13.8 | 20.6 | 10.4 | 17.6 | -0.1 | 6.9 | 13.8 | 20.6 | 9.8 | 17 |
| DC-8-63 | -0.5 50 | 7.0 | 13.2 | 20.1 | 9.1 | 16.4 | -1.0 | 7.0 | 13.2 | 20.1 | 8.3 | 15.6 |
| DC-8-61/71 | -2.5 50 | 7.2 | 9.9 | 17.1 | 5.9 | 13.4 | -3.0 | 7.2 | 9.9 | 17.1 | 5.0 | 12.6 |
| DC-8-72 | 0.5 50 | 6.8 | 13.9 | 20.7 | 10.6 | 17.7 | 0.0 | 6.8 | 13.9 | 20.7 | 9.9 | 17.1 |
| DC-8-73 | -0.3 50 | 6.9 | 13.5 | 20.4 | 9.4 | 16.7 | -0.8 | 7.0 | 13.5 | 20.4 | 8.6 | 15.9 |
| DC-9-10 | -2.7 50 | 6.8 | 6.1 | 12.9 | 4.0 | 11.1 | -3.2 | 6.8 | 6.1 | 12.9 | 3.5 | 10.7 |
| DC-9-20 | 2.8 50 | 6.1 | 10.8 | 16.9 | 8.7 | 15.1 | 2.3 | 6.1 | 10.8 | 16.9 | 8.2 | 14.7 |



Attachment 2

Table A6-2. Vertical distances between critical points on aircraft at minimum pitch attitude (VREF+5) (ILS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-----------------------|--------------------------------|--------------------------------------|---------------------------------------|--|--|--|------------------------|--------------------------------------|---------------------------------------|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to ILS beam (feet) H2 | ILS beam to wheel path (feet) H | Eye path to wheel path (feet) H1 | ILS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| DC-9-30 | 2.4 50 | 6.1 | 11.3 | 17.4 | 8.7 | 15.2 | 1.9 | 6.1 | 11.3 | 17.4 | 8.2 | 14.7 |
| DC-9-33 | 1.4 50 | 6.3 | 10.5 | 16.8 | 8.0 | 14.5 | 0.9 | 6.3 | 10.5 | 16.8 | 7.4 | 14.1 |
| DC-9-40 | 1.1 50 | 6.3 | 10.4 | 16.8 | 7.8 | 14.4 | 0.6 | 6.3 | 10.4 | 16.8 | 7.2 | 13.9 |
| DC-9-50 | 2.7 50 | 6.1 | 12.6 | 18.7 | 9.7 | 16.1 | 2.2 | 6.1 | 12.6 | 18.7 | 9.1 | 15.6 |
| DC-10-30 | 3.6 50 | 19.3 | 13.2 | 32.5 | 9.9 | 28.4 | 3.1 | 19.3 | 13.2 | 32.5 | 9.3 | 27.6 |
| DC-10-40 | 4.0 50 | 19.4 | 13.7 | 33.2 | 10.5 | 29.0 | 3.5 | 19.4 | 13.7 | 33.2 | 9.8 | 28.2 |
| MD-11 | 2.2 50 | 18.8 | 12.2 | 31.1 | 8.6 | 26.6 | 1.7 | 18.8 | 12.3 | 31.1 | 7.9 | 25.7 |
| MD-80/81/ 82/83/88 | 2.6 40 | 6.1 | 14.4 | 20.5 | 11.0 | 17.5 | 2.1 | 6.1 | 14.4 | 20.5 | 10.4 | 16.9 |
| MD-87 | 2.9 40 | 6.1 | 13.9 | 20.0 | 11.0 | 17.4 | 2.4 | 6.1 | 13.9 | 20.0 | 10.4 | 16.8 |
| MD-90 | 2.2 40 | 6.2 | 14.3 | 20.4 | 10.7 | 17.2 | 1.7 | 6.2 | 14.3 | 20.4 | 10.0 | 16.5 |



Attachment 3

Table A6-3. Vertical distances between critical points on aircraft at maximum pitch attitude (approach at VREF) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-------------------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B717-200 | Not Applicable | | | | | | | | | | | |
| B737-300 | 5.1 30 | 6.2 | 12.4 | 18.6 | 10.3 | 16.6 | 4.6 | 6.2 | 12.4 | 18.6 | 9.9 | 16.2 |
| B737-400 | 4.9 30 | 6.2 | 13.0 | 19.2 | 10.6 | 17.0 | 4.4 | 6.2 | 13.0 | 19.2 | 10.1 | 16.5 |
| B737-500 | 5.2 30 | 6.2 | 11.9 | 18.0 | 10.0 | 16.3 | 4.7 | 6.2 | 11.9 | 18.0 | 9.6 | 15.9 |
| B737-600 B737-600IGW | 5.5 30 | 6.1 | 12.4 | 18.6 | 10.5 | 16.8 | 5.0 | 6.2 | 12.4 | 18.6 | 10.1 | 16.4 |
| B737-600 w/Winglets | 5.2 30 | 6.2 | 12.2 | 18.4 | 10.3 | 16.6 | 4.7 | 6.2 | 12.2 | 18.4 | 9.9 | 16.2 |
| B737-700 | 5.5 30 | 6.1 | 13.1 | 19.2 | 10.9 | 17.2 | 5.0 | 6.2 | 13.1 | 19.2 | 10.5 | 16.8 |
| B737-700 w/Winglets | 5.2 30 | 6.2 | 12.8 | 19.0 | 10.7 | 17.0 | 4.7 | 6.2 | 12.8 | 19.0 | 10.2 | 16.6 |
| B737-800 | 3.9 30 | 6.3 | 12.8 | 19.1 | 10.2 | 16.6 | 3.4 | 6.3 | 12.8 | 19.1 | 9.7 | 16.2 |
| B737-800 w/Winglets | 3.7 30 | 6.3 | 12.6 | 18.9 | 10.0 | 16.4 | 3.2 | 6.3 | 12.6 | 18.9 | 9.5 | 16.0 |
| B737-900 | 3.0 30 | 6.3 | 12.4 | 18.7 | 9.6 | 16.0 | 2.5 | 6.3 | 12.4 | 18.7 | 9.0 | 15.5 |



Attachment 3

Table A6-3. Vertical distances between critical points on aircraft at maximum pitch attitude (approach at VREF) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|---------------------------------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B737-900 w/Winglets | 2.7 30 | 6.3 | 12.0 | 18.4 | 9.2 | 15.7 | 2.2 | 6.3 | 12.0 | 18.4 | 8.7 | 15.2 |
| B747-400 B747-400ER B747-400ERF | 5 25 | 20.6 | 23.8 | 44.4 | 19.8 | 40.3 | 4.5 | 20.6 | 23.8 | 44.4 | 19.0 | 39.4 |
| 747-8I | Not Applicable | | | | | | | | | | | |
| 747-8F | Not Applicable | | | | | | | | | | | |
| B757-200 | 5.9 25 | 7.0 | 21.6 | 28.6 | 18.4 | 25.5 | 5.4 | 7.0 | 21.6 | 28.6 | 17.7 | 24.9 |
| B757-300 | 4.2 25 | 7.1 | 21.0 | 28.1 | 17.1 | 24.3 | 3.7 | 7.1 | 21.0 | 28.1 | 16.4 | 23.6 |
| B767-200 B767-200ER | 5.6 25 | 7.3 | 23.3 | 30.6 | 20.2 | 27.6 | 5.1 | 7.3 | 23.3 | 30.6 | 19.5 | 27 |
| B767-300 B767-300ER | 3.7 25 | 7.4 | 22.0 | 29.4 | 18.4 | 26.0 | 3.2 | 7.4 | 22.0 | 29.4 | 17.7 | 25.3 |
| B767-400 | 3.7 25 | 7.4 | 24.0 | 31.4 | 19.9 | 27.1 | 3.2 | 7.4 | 24.0 | 31.4 | 19.0 | 26.3 |
| B777-200 B777-200ER | 3.5 25 | 9.9 | 24.4 | 34.2 | 20.0 | 29.9 | 3.0 | 9.9 | 24.4 | 34.3 | 19.1 | 29.0 |
| B777-200LR | 3.7 25 | 9.8 | 24.7 | 34.6 | 20.3 | 30.2 | 3.2 | 9.9 | 24.8 | 34.6 | 19.4 | 29.4 |



Attachment 3

Table A6-3. Vertical distances between critical points on aircraft at maximum pitch attitude (approach at VREF) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|----------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B777-300 | 3.2 25 | 9.9 | 25.1 | 35.0 | 19.9 | 29.8 | 2.8 | 9.9 | 25.3 | 35.2 | 19.1 | 29.0 |
| B777-300ER | 3.4 25 | 9.9 | 25.5 | 35.4 | 20.3 | 30.2 | 2.9 | 9.9 | 25.5 | 35.4 | 19.3 | 29.2 |
| B777 Freighter | 3.2 25 | 9.9 | 25.1 | 35.0 | 19.9 | 29.8 | 2.8 | 9.9 | 25.3 | 35.2 | 19.1 | 29.0 |
| B787-8 | Not Applicable | | | | | | | | | | | |
| DC-8-62 | Not Applicable | | | | | | | | | | | |
| DC-8-63 | Not Applicable | | | | | | | | | | | |
| DC-8-61/71 | Not Applicable | | | | | | | | | | | |
| DC-8-72 | Not Applicable | | | | | | | | | | | |
| DC-8-73 | Not Applicable | | | | | | | | | | | |
| DC-9-10 | Not Applicable | | | | | | | | | | | |
| DC-9-20 | Not Applicable | | | | | | | | | | | |



Attachment 3

Table A6-3. Vertical distances between critical points on aircraft at maximum pitch attitude (approach at VREF) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-----------------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| DC-9-30 | Not Applicable | | | | | | | | | | | |
| DC-9-33 | Not Applicable | | | | | | | | | | | |
| DC-9-40 | Not Applicable | | | | | | | | | | | |
| DC-9-50 | Not Applicable | | | | | | | | | | | |
| DC-10-30 | 6.7 35 | 20.3 | 17.3 | 37.6 | 14.0 | 33.5 | 6.2 | 20.3 | 17.3 | 37.6 | 13.4 | 32.7 |
| DC-10-40 | 7.5 35 | 20.5 | 18.3 | 38.8 | 15.1 | 34.8 | 7.0 | 20.5 | 18.3 | 38.8 | 14.4 | 34.0 |
| MD-11 | 6.1 35 | 20.1 | 17.9 | 38.0 | 14.3 | 33.6 | 5.6 | 20.1 | 17.9 | 38.0 | 13.6 | 32.7 |
| MD-80/81/ 82/83/88 | Not Applicable | | | | | | | | | | | |
| MD-87 | Not Applicable | | | | | | | | | | | |
| MD-90 | Not Applicable | | | | | | | | | | | |



Attachment 4

Table A6-4. Vertical distances between critical points on aircraft at minimum pitch attitude (approach at VREF +5) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-------------------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B717-200 | Not Applicable | | | | | | | | | | | |
| B737-300 | 2.1 40 | 6.4 | 9.9 | 16.2 | 7.7 | 14.3 | 1.6 | 6.4 | 9.9 | 16.2 | 7.3 | 13.9 |
| B737-400 | 2.0 40 | 6.4 | 10.3 | 16.6 | 7.9 | 14.4 | 1.5 | 6.4 | 10.3 | 16.6 | 7.4 | 13.9 |
| B737-500 | 2.3 40 | 6.4 | 9.7 | 16.0 | 7.7 | 14.2 | 1.8 | 6.4 | 9.7 | 16.0 | 7.3 | 13.9 |
| B737-600 B737-600IGW | 2.5 40 | 6.3 | 10.1 | 16.5 | 8.2 | 14.7 | 2.0 | 6.3 | 10.1 | 16.5 | 7.8 | 14.3 |
| B737-600 w/Winglets | 2.2 40 | 6.4 | 9.9 | 16.3 | 7.9 | 14.4 | 1.7 | 6.4 | 9.9 | 16.3 | 7.5 | 14.1 |
| B737-700 | 2.5 40 | 6.3 | 10.5 | 16.9 | 8.4 | 14.9 | 2.0 | 6.3 | 10.5 | 16.9 | 7.9 | 14.4 |
| B737-700 w/Winglets | 2.1 40 | 6.4 | 10.2 | 16.5 | 8.0 | 14.5 | 1.7 | 6.4 | 10.3 | 16.6 | 7.7 | 14.2 |
| B737-800 | 1.8 40 | 6.4 | 10.7 | 17.0 | 8.1 | 14.6 | 1.3 | 6.4 | 10.7 | 17.0 | 7.6 | 14.1 |
| B737-800 w/Winglets | 1.4 40 | 6.4 | 10.2 | 16.7 | 7.7 | 14.2 | 0.9 | 6.4 | 10.2 | 16.7 | 7.1 | 13.7 |
| B737-900 | 1.3 40 | 6.4 | 10.5 | 16.9 | 7.7 | 14.2 | 0.8 | 6.4 | 10.5 | 16.9 | 7.1 | 13.7 |



Attachment 4

Table A6-4. Vertical distances between critical points on aircraft at minimum pitch attitude (approach at VREF +5) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|---------------------------------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B737-900 w/Winglets | 1.0 40 | 6.4 | 10.1 | 16.6 | 7.3 | 13.9 | 0.5 | 6.4 | 10.2 | 16.6 | 6.8 | 13.4 |
| B747-400 B747-400ER B747-400ERF | 2.5 30 | 20.5 | 19.8 | 40.3 | 15.7 | 36.1 | 2.0 | 20.5 | 19.8 | 40.3 | 14.9 | 35.2 |
| 747-8I | Not Applicable | | | | | | | | | | | |
| 747-8F | Not Applicable | | | | | | | | | | | |
| B757-200 | 2.5 30 | 7.2 | 17.2 | 24.4 | 13.9 | 21.2 | 2.0 | 7.2 | 17.2 | 24.4 | 13.3 | 20.6 |
| B757-300 | 2.2 30 | 7.2 | 17.9 | 25.1 | 14.0 | 21.3 | 1.7 | 7.2 | 17.9 | 25.1 | 13.3 | 20.6 |
| B767-200 B767-200ER | 2.8 30 | 7.5 | 19.8 | 27.3 | 16.6 | 24.3 | 2.3 | 7.5 | 19.8 | 27.3 | 16 | 23.7 |
| B767-300 B767-300ER | 2.5 30 | 7.5 | 20.3 | 27.8 | 16.7 | 24.3 | 2.0 | 7.5 | 20.3 | 27.8 | 15.9 | 23.6 |
| B767-400 | 2.5 30 | 7.5 | 22.0 | 29.5 | 17.9 | 25.2 | 2.0 | 7.5 | 22.0 | 29.5 | 17.1 | 24.4 |
| B777-200 B777-200ER | 2 30 | 9.8 | 23.1 | 32.9 | 19.0 | 28.5 | 1.6 | 9.9 | 21.9 | 31.8 | 16.6 | 26.5 |
| B777-200LR | 1.3 30 | 9.9 | 20.5 | 30.4 | 16.0 | 26.0 | 0.9 | 9.9 | 20.7 | 30.6 | 15.3 | 25.3 |



Attachment 4

Table A6-4. Vertical distances between critical points on aircraft at minimum pitch attitude (approach at VREF +5) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|----------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| B777-300 | 1.5 30 | 9.9 | 21.6 | 31.5 | 16.4 | 26.3 | 1.0 | 9.9 | 21.6 | 31.5 | 15.3 | 25.3 |
| B777-300ER | 2.1 30 | 9.9 | 23.9 | 33.8 | 17.6 | 27.6 | 1.6 | 9.9 | 22.8 | 32.7 | 16.6 | 26.5 |
| B777 Freighter | 1.5 30 | 9.9 | 21.6 | 31.5 | 16.4 | 26.3 | 1.0 | 9.9 | 21.6 | 31.5 | 15.3 | 25.3 |
| B787-8 | Not Applicable | | | | | | | | | | | |
| DC-8-62 | Not Applicable | | | | | | | | | | | |
| DC-8-63 | Not Applicable | | | | | | | | | | | |
| DC-8-61/71 | Not Applicable | | | | | | | | | | | |
| DC-8-72 | Not Applicable | | | | | | | | | | | |
| DC-8-73 | Not Applicable | | | | | | | | | | | |
| DC-9-10 | Not Applicable | | | | | | | | | | | |
| DC-9-20 | Not Applicable | | | | | | | | | | | |



Attachment 4

Table A6-4. Vertical distances between critical points on aircraft at minimum pitch attitude (approach at VREF +5) (MLS)

| Aircraft Model | 2.5 degree glide slope | | | | | | 3.0 degree glide slope | | | | | |
|-----------------------|--------------------------------|--|---|--|--|--|------------------------|--|---|--|--|--|
| | FD Pitch (deg) Flap Setting | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 | FD Pitch (degree) | Eye path to "ILS" path (feet) H2 | "ILS" path to wheel path (feet) H | Eye path to wheel path (feet) H1 | MLS antenna above wheels (feet) H3 | Pilots Eye above wheels (feet) H4 |
| DC-9-30 | Not Applicable | | | | | | | | | | | |
| DC-9-33 | Not Applicable | | | | | | | | | | | |
| DC-9-40 | Not Applicable | | | | | | | | | | | |
| DC-9-50 | Not Applicable | | | | | | | | | | | |
| DC-10-30 | 3.6 50 | 19.3 | 13.3 | 32.6 | 10.0 | 28.4 | 3.1 | 19.3 | 13.3 | 32.6 | 9.3 | 27.6 |
| DC-10-40 | 4.0 50 | 19.4 | 13.8 | 33.2 | 10.5 | 29.1 | 3.5 | 19.4 | 13.8 | 33.2 | 9.9 | 28.3 |
| MD-11 | 2.2 50 | 18.8 | 12.3 | 31.1 | 8.6 | 26.6 | 1.7 | 18.8 | 12.3 | 31.1 | 7.9 | 25.7 |
| MD-80/81/ 82/83/88 | Not Applicable | | | | | | | | | | | |
| MD-87 | Not Applicable | | | | | | | | | | | |
| MD-90 | Not Applicable | | | | | | | | | | | |