



DESIGN GUIDELINES

Mounting Heights

Working Heights

	PRE-K, PSCD, K		GRADES 1-3		GRADES 4-6		MIDDLE SCHOOL		HIGH SCHOOL		BARRIER FREE	
Restrooms												
Drinking fountain (Spout)	610 mm	24 in	685 mm	27 in	810 mm	32 in	915 mm	36 in	1015 mm	40 in	915 mm	36 in
Drinking fountain (Underside)	---	---	---	---	---	---	---	---	---	---	680 mm	27 in
Grab Bar (Shower and Toilet)	---	---	---	---	---	---	---	---	---	---	915 mm	36 in
Hand Dryer (Recessed Bottom)	710 mm	28 in	810 mm	32 in	915 mm	36 in	1015 mm	40 in	1065 mm	42 in	1015 mm	40 in
Hand Dryer (Surface Bottom)	810 mm	32 in	915 mm	36 in	1015 mm	40 in	1145 mm	45 in	1145 mm	45 in	1115 mm	44 in
Lavatory and sink (top of rim)	580 mm	23 in	660 mm	26 in	735 mm	29 in	840 mm	33 in	890 mm	35 in	890 mm	35 in
Lavatory and sink (underside)	---	---	---	---	---	---	---	---	---	---	735 mm	29 in
Mirror, lower edge, MAX	890 mm	35 in	960 mm	38 in	1080 mm	65 in	1220 mm	48 in	1360 mm	54 in	1015 mm	40 in
Mirror, upper edge, MIN	1120 mm	44 in	1420 mm	56 in	1650 mm	65 in	1805 mm	71 in	1805 mm	71 in	---	---
Shower head (Hand Held)	---	---	---	---	---	---	---	---	---	---	1220 mm	48 in
Shower seat, MIN	---	---	---	---	---	---	---	---	---	---	430 mm	17 in
Shower seat, MAX	---	---	---	---	---	---	---	---	---	---	480 mm	19 in
Soap dispenser (centerline)	685 mm	27 in	790 mm	31 in	910 mm	36 in	1015 mm	40 in	1065 mm	42 in	1065 mm	42 in
Toilet Paper Holder(Center Line)	660 mm	26 in	685 mm	27 in	710 mm	28 in	735 mm	29 in	760 mm	30 in	480 mm	19 in
Toilet stall, top partition	1370 mm	54 in	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height
Toilet stall, bottom dimension (AFF)	150 mm	6 in	150 mm	6 in	150 mm	6 in	150 mm	6 in	150 mm	6 in	150 mm	6 in
Towel dispenser	685 mm	27 in	790 mm	31 in	910 mm	36 in	1015 mm	40 in	1065 mm	42 in	1000 mm	39 in
Urinal (rim), MIN	150 mm	6 in	200 mm	8 in	200 mm	8 in	380 mm	15 in	380 mm	15 in	---	---
Urinal (rim), MAX	300 mm	12 in	380 mm	15 in	380 mm	15 in	455 mm	18 in	485 mm	19 in	430 mm	17 in
Water closet (seat), MIN	250 mm	10 in	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	430 mm	17 in
Water closet (seat), MAX	300 mm	12 in	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	Standard Mfg Height	480 mm	19 in
Water closet (center line flush valve) MIN	---	---	---	---	---	---	---	---	---	---	735 mm	29 in

1. If listed heights conflict with ADA mandated heights, the ADA height governs.
2. Reception counters should have multiple heights to accommodate adults, students and ADA
3. Utilize barrier free for ADA accessible adult requirements



Mounting Heights

Working Heights

	PRE-K, PSCD, K		GRADES 1-3		GRADES 4-6		MIDDLE SCHOOL		HIGH SCHOOL		BARRIER FREE	
General Building Items												
Bench	330 mm	13 in	330 mm	13 in	330 mm	13 in	405 mm	16 in	405 mm	16 in	405 mm	16 in
Cabinet, pupil use (top) MAX	1270 mm	50 in	1420 mm	56 in	1650 mm	65 in	1880 mm	74 in	2005 mm	79 in	1370 mm	54 in
Counter, cafeteria	685 mm	27 in	790 mm	31 in	790 mm	31 in	865 mm	34 in	915 mm	36 in	860 mm	34 in
Counter, classroom (standing)	610 mm	24 in	660 mm	26 in	760 mm	30 in	865 mm	34 in	915 mm	36 in	860 mm	34 in
Counter, general office	685 mm	27 in	710 mm	28 in	910 mm	36 in	1015 mm	40 in	1065 mm	42 in	860 mm	34 in
Desk and table, classroom	460 mm	18 in	510 mm	20 in	580 mm	23 in	660 mm	26 in	685 mm	27 in	860 mm	34 in
Door knob, MIN	960 mm	38 in	960 mm	38 in	960 mm	38 in	960 mm	38 in	960 mm	38 in	960 mm	38 in
Door knob, MAX	1065 mm	42 in	1065 mm	42 in	1065 mm	42 in	1065 mm	42 in	1065 mm	42 in	1065 mm	42 in
Hook, coat	910 mm	36 in	1040 mm	41 in	1220 mm	48 in	1370 mm	54 in	1395 mm	55 in	1370 mm	54 in
Light switch	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in
Marker Board (top)	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in
Marker Board (bottom & marker tray)	560 mm	22 in	735 mm	29 in	790 mm	31 in	815 mm	32 in	915 mm	36 in	---	---
Panic bar exit device center line, MIN	960 mm	38 in	960 mm	38 in	960 mm	38 in	980 mm	39 in	980 mm	39 in	980 mm	39 in
Panic bar exit device center line, MAX	960 mm	38 in	960 mm	38 in	960 mm	38 in	1050 mm	41 in	1050 mm	41 in	1050 mm	41 in
Rail, hand and directional	530 mm	21 in	610 mm	24 in	735 mm	29 in	815 mm	32 in	840 mm	33 in	920 mm	36 in
Shelf, hat and books	1040 mm	41 in	1170 mm	46 in	1370 mm	54 in	1525 mm	60 in	1575 mm	62 in	1575 mm	62 in
Stool drawing	480 mm	19 in	530 mm	21 in	660 mm	26 in	710 mm	28 in	735 mm	29 in	735 mm	29 in
Table, drawing	660 mm	26 in	735 mm	29 in	860 mm	34 in	965 mm	38 in	990 mm	39 in	990 mm	39 in
Table & bench, work (standing)	660 mm	26 in	735 mm	29 in	860 mm	34 in	965 mm	38 in	990 mm	39 in	990 mm	39 in
Tackboard (top)	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in	2100 mm	83 in
Tackboard (bottom)	560 mm	22 in	635 mm	25 in	735 mm	29 in	815 mm	32 in	865 mm	34 in	865 mm	34 in
Telephone, wall mounted	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in	1220 mm	48 in

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3. Utilize barrier free for ADA accessible adult requirements



Hard Metric Measurements

Feet	Inches	soft metric	hard metric	difference	pattern
	97	2464	2465	25	3
	98	2489	2490	25	4
	99	2515	2515	25	5
	100	2540	2540	25	6
	101	2565	2565	25	7
	102	2591	2590	25	8
	103	2616	2615	25	9
	104	2642	2640	25	10
	105	2667	2665	25	11
	106	2692	2690	25	12
	107	2718	2720	30	
9	108	2743	2745	25	1
	109	2769	2770	25	2
	110	2794	2795	25	3
	111	2819	2820	25	4
	112	2845	2845	25	5
	113	2870	2870	25	6
	114	2896	2895	25	7
	115	2921	2920	25	8
	116	2946	2945	25	9
	117	2972	2970	25	10
	118	2997	2995	25	11
	119	3023	3025	30	
10	120	3048	3050	25	1

Feet	Inches	soft metric	hard metric	difference	pattern
	121	3073	3075	25	2
	122	3099	3100	25	3
	123	3124	3125	25	4
	124	3150	3150	25	5
	125	3175	3175	25	6
	126	3200	3200	25	7
	127	3226	3225	25	8
	128	3251	3250	25	9
	129	3277	3275	25	10
	130	3302	3300	25	11
	131	3327	3325	25	12
11	132	3353	3355	30	
	133	3378	3380	25	1
	134	3404	3405	25	2
	135	3429	3430	25	3
	136	3454	3455	25	4
	137	3480	3480	25	5
	138	3505	3505	25	6
	139	3531	3530	25	7
	140	3556	3555	25	8
	141	3581	3580	25	9
	142	3607	3605	25	10
	143	3632	3630	25	11
12	144	3658	3660	30	



Hard Metric Measurements

Feet	Inches	soft metric	hard metric	difference
13	156	3962	3960	300
14	168	4267	4265	305
15	180	4572	4570	305
16	192	4877	4875	305
17	204	5182	5180	305
18	216	5486	5485	305
19	228	5791	5790	305
20	240	6096	6095	305
21	252	6401	6400	305
22	264	6706	6705	305
23	276	7010	7010	305
24	288	7315	7315	305
25	300	7620	7620	305
26	312	7925	7925	305
27	324	8230	8230	305
28	336	8534	8535	305
29	348	8839	8840	305
30	360	9144	9145	305
31	372	9449	9450	305
32	384	9754	9755	305
33	396	10058	10060	305
34	408	10363	10365	305
35	420	10668	10670	305
36	432	10973	10975	305

Feet	Inches	soft metric	hard metric	difference
37	444	11278	11280	305
38	456	11582	11580	300
39	468	11887	11885	305
40	480	12192	12190	305
41	492	12497	12495	305
42	504	12802	12800	305
43	516	13106	13105	305
44	528	13411	13410	305
45	540	13716	13715	305
46	552	14021	14020	305
47	564	14326	14325	305
48	576	14630	14630	305
49	588	14935	14935	305
50	600	15240	15240	305
51	612	15545	15545	305
52	624	15850	15850	305
53	636	16154	16155	305
54	648	16459	16460	305
55	660	16764	16765	305
56	672	17069	17070	305
57	684	17374	17375	305
58	696	17678	17680	305
59	708	17983	17985	305
60	720	18288	18290	305



Average Heights : Males

Age in years	Age (in months)	50th Percentile Stature (in)	Inches	Feet
3	35.5	94.65	37.26	3.11
4	47.5	101.94	40.13	3.34
5	59.5	108.63	42.77	3.56
6	71.5	115.12	45.32	3.78
7	83.5	121.51	47.84	3.99
8	95.5	127.63	50.25	4.19
9	107.5	133.29	52.48	4.37
10	119.5	138.41	54.49	4.54
11	131.5	143.31	56.42	4.70
12	143.5	148.79	58.58	4.88
13	155.5	155.76	61.32	5.11
14	168.5	164.14	64.62	5.39
15	179.5	169.74	66.83	5.57
16	191.5	173.40	68.27	5.69
17	203.5	175.24	68.99	5.75
18	215.5	176.13	69.34	5.78

Average Heights : Females

Age (in months)	50th Percentile Stature (in centimeters)	inches	feet
35.50	93.63	36.86	3.07
47.50	100.47	39.55	3.30
59.50	107.37	42.27	3.52
71.50	114.42	45.05	3.75
83.50	121.22	47.72	3.98
95.50	127.35	50.14	4.18
107.50	132.71	52.25	4.35
119.50	137.77	54.24	4.52
131.50	143.70	56.57	4.71
143.50	150.89	59.41	4.95
155.50	156.96	61.80	5.15
168.50	160.48	63.18	5.27
179.50	161.82	63.71	5.31
191.50	162.53	63.99	5.33
203.50	162.90	64.13	5.34
215.50	163.12	64.22	5.35