**Section 200.APPENDIX A American Table of Distances for Storage of Explosive Materials**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | DISTANCES IN FEET | | | | | | | |
| QUANTITY OF EXPLOSIVE MATERIALS | | Inhabited Buildings | | Public Highways  Class A to D | | Passenger Railways − Public Highways with Traffic Volume of more than 3,000 Vehicles/Day | | Separation of Magazines | |
| Pounds  Over | Pounds  Not Over | Barricaded | Unbarricaded | Barricaded | Unbarricaded | Barricaded | Unbarricaded | Barricaded | Unbarricaded |
| .001  5  10  20  30 | 5  10  20  30  40 | 70  90  110  125  140 | 140  180  220  250  280 | 30  35  45  50  55 | 60  70  90  100  110 | 51  64  81  93  103 | 102  128  162  186  206 | 6  8  10  11  12 | 12  16  20  22  24 |
| 40  50  75  100  125 | 50  75  100  125  150 | 150  170  190  200  215 | 300  340  380  400  430 | 60  70  75  80  85 | 120  140  150  160  170 | 110  127  139  150  159 | 220  254  278  300  318 | 14  15  16  18  19 | 28  30  32  36  38 |
| 150  200  250  300  400 | 200  250  300  400  500 | 235  255  270  295  320 | 470  510  540  590  640 | 95  105  110  120  130 | 190  210  220  240  260 | 175  189  201  221  238 | 350  378  402  442  476 | 21  23  24  27  29 | 42  46  48  54  58 |
| 500  600  700  800  900 | 600  700  800  900  1,000 | 340  355  375  390  400 | 680  710  750  780  800 | 135  145  150  155  160 | 270  290  300  310  320 | 253  266  278  289  300 | 506  532  556  578  600 | 31  32  33  35  36 | 62  64  66  70  72 |
| 1,000  1,200  1,400  1,600  1,800 | 1,200  1,400  1,600  1,800  2,000 | 425  450  470  490  505 | 850  900  940  980  1,010 | 165  170  175  180  185 | 330  340  350  360  370 | 318  336  351  366  378 | 636  672  702  732  756 | 39  41  43  44  45 | 78  82  86  88  90 |
| 2,000  2,500  3,000  4,000  5,000 | 2,500  3,000  4,000  5,000  6,000 | 545  580  635  685  730 | 1,090  1,160  1,270  1,370  1,460 | 190  195  210  225  235 | 380  390  420  450  470 | 408  432  474  513  546 | 816  864  948  1,026  1,092 | 49  52  58  61  65 | 98  104  116  122  130 |
| 6,000  7,000  8,000  9,000  10,000 | 7,000  8,000  9,000  10,000  12,000 | 770  800  835  865  875 | 1,540  1,600  1,670  1,730  1,750 | 245  250  255  260  270 | 490  500  510  520  540 | 573  600  624  645  687 | 1,146  1,200  1,248  1,290  1,374 | 68  72  75  78  82 | 136  144  150  156  164 |
| 12,000  14,000  16,000  18,000  20,000 | 14,000  16,000  18,000  20,000  25,000 | 885  900  940  975  1,055 | 1,770  1,800  1,880  1,950  2,000 | 275  280  285  290  315 | 550  560  570  580  630 | 723  756  786  813  876 | 1,446  1,512  1,572  1,626  1,752 | 87  90  94  98  105 | 174  180  188  196  210 |
| 25,000  30,000  35,000  40,000  45,000 | 30,000  35,000  40,000  45,000  50,000 | 1,130  1,205  1,275  1,340  1,400 | 2,000  2,000  2,000  2,000  2,000 | 340  360  380  400  420 | 680  720  760  800  840 | 933  981  1,026  1,068  1,104 | 1,866  1,962  2,000  2,000  2,000 | 112  119  124  129  135 | 224  238  248  258  270 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 50,000  55,000  60,000  65,000  70,000 | 55,000  60,000  65,000  70,000  75,000 | 1,460  1,515  1,565  1,610  1,655 | 2,000  2,000  2,000  2,000  2,000 | 440  455  470  485  500 | 880  910  940  970  1,000 | 1,140  1,173  1,206  1,236  1,263 | 2,000  2,000  2,000  2,000  2,000 | 140  145  150  155  160 | 280  290  300  310  320 |
| 75,000  80,000  85,000  90,000  95,000 | 80,000  85,000  90,000  95,000  100,000 | 1,695  1,730  1,760  1,790  1,815 | 2,000  2,000  2,000  2,000  2,000 | 510  520  530  540  545 | 1,020  1,040  1,060  1,080  1,090 | 1,293  1,317  1,344  1,368  1,392 | 2,000  2,000  2,000  2,000  2,000 | 165  170  175  180  185 | 330  340  350  360  370 |
| 100,000  110,000  120,000  130,000  140,000 | 110,000  120,000  130,000  140,000  150,000 | 1,835  1,855  1,875  1,890  1,900 | 2,000  2,000  2,000  2,000  2,000 | 550  555  560  565  570 | 1,100  1,110  1,120  1,130  1,140 | 1,437  1,479  1,521  1,557  1,593 | 2,000  2,000  2,000  2,000  2,000 | 195  205  215  225  235 | 390  410  430  450  470 |
| 150,000  160,000  170,000  180,000  190,000 | 160,000  170,000  180,000  190,000  200,000 | 1,935  1,965  1,990  2,010  2,030 | 2,000  2,000  2,000  2,010  2,030 | 580  590  600  605  610 | 1,160  1,180  1,200  1,210  1,220 | 1,629  1,662  1,695  1,725  1,755 | 2,000  2,000  2,000  2,000  2,000 | 245  255  265  275  285 | 490  510  530  550  570 |
| 200,000  210,000  230,000  250,000  275,000 | 210,000  230,000  250,000  275,000  300,000 | 2,055  2,100  2,155  2,215  2,275 | 2,055  2,100  2,155  2,215  2,275 | 620  635  650  670  690 | 1,240  1,270  1,300  1,340  1,380 | 1,782  1,836  1,890  1,950  2,000 | 2,000  2,000  2,000  2,000  2,000 | 295  315  335  360  385 | 590  630  670  720  770 |

EXPLANATORY NOTES ESSENTIAL TO THE APPLICATION

OF THE AMERICAN TABLE OF DISTANCES FOR

STORAGE OF EXPLOSIVE MATERIALS

NOTE 1 – "Explosive materials" means explosives, blasting agents and detonators.

NOTE 2 – "Explosives" means any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. A list of explosives determined to be within the coverage of 18 U.S.C. Chapter 40, Importation, Manufacturer, Distribution and Storage of Explosive Materials is issued at least annually by the Director of the Bureau of Alcohol, Tobacco, Firearms and Explosives of the U.S. Department of Justice. For quantity and distance purposes, detonating cord of 50 grains per foot should be calculated as equivalent to 8 lbs. of high explosives per 1,000 feet. Heavier or lighter core loads should be rated proportionately.

NOTE 3 – "Blasting agents" means any material or mixture consisting of fuel and oxidizer, intended for blasting, not otherwise defined as an explosive. However, the finished product, as mixed for use or shipment, cannot be detonated by means of a No. 8 test blasting cap when unconfined.

NOTE 4 – "Detonator" means any device containing any initiating or primary explosive that is used for initiating detonation. A detonator may not contain more than 10 grams of total explosives by weight, excluding ignition or delay charges. The term includes, but is not limited to, electric blasting caps of instantaneous and delay types, blasting caps for use with safety fuses, detonating cord delay connectors, and nonelectric instantaneous and delay blasting caps that use detonating cord, shock tube, or any other replacement for electric leg wires. All types of detonators in strengths through No. 8 cap should be rated at 1⅔ lbs. of explosives per 1,000 caps. For strengths higher than No. 8 cap, consult the manufacturer.

NOTE 5 – "Magazine" means any building, structure or container, other than an explosives manufacturing building, approved for the storage of explosive materials.

NOTE 6 – "Natural Barricade" means natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures that require protection cannot be seen from the magazine when the trees are bare of leaves.

NOTE 7 – "Artificial Barricade" means an artificial mound or revetted wall of earth of a minimum thickness of 3 feet at the top of the mound or wall, or a mound or revetted wall of other material offering equivalent protection. Artificial barricades that are vegetated shall be of sufficient slope to enable mowing.

NOTE 8 – "Barricaded" means the effective screening of a building containing explosive materials from the magazine or other building, railway or highway by a natural or an artificial barrier. A straight line from the top of any sidewall of the building containing explosive materials to the eave line of any magazine or other building or to a point 12 feet above the center of a railway or highway shall pass through the barrier.

NOTE 9 – "Inhabited Building" means a building regularly occupied in whole or part as a habitation for human beings, or any church, schoolhouse, railroad station, store or other structure where people are accustomed to assemble, except any building or structure occupied in connection with the manufacture, transportation, storage or use of explosive materials.

NOTE 10 – "Railway" means any steam, electric or other railroad or railway that carries passengers for hire.

NOTE 11 – "Highway" means any public street, public alley or public road.

NOTE 12 – When two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, railways and highways and, in addition, they should be separated from each other by not less than the distances shown for "Separation of Magazines," except that the quantity of explosive materials contained in detonator magazines shall govern in regard to the spacing of those detonator magazines from magazines containing other explosive materials. If any two or more magazines are separated from each other by less than the specified "Separation of Magazines" distances, then those magazines, as a group, must be considered as one magazine, and the total quantity of explosive materials stored in such group must be treated as if stored in a single magazine located on the site of any magazine of the group, and must comply with the minimum of distances specified from other magazines, inhabited buildings, railways and highways.

NOTE 13 – Storage in excess of 300,000 lbs. of explosive materials in one magazine is generally not required for commercial enterprises.

NOTE 14 – This Table applies only to the manufacture and permanent storage of commercial explosive materials. It is not applicable to transportation of explosives or any handling or temporary storage necessary or incident to the transportation, handling or storage. It is not intended to apply to bombs, projectiles or other heavily encased explosives.

NOTE 15 – When a manufacturing building on an explosive materials plant site is designed to contain explosive materials, the building shall be located away from inhabited buildings, public highways and passenger railways in accordance with the American Table of Distances based on the maximum quantity of explosive materials permitted to be in the building at one time.

(NOTE: The American Table of Distances for Storage of Explosive Materials and accompanying Explanatory Notes are copyrighted materials reproduced with the permission of the Institute of Makers of Explosives. The notes contained in this Appendix are meant to supplement, and not supersede, the regulations contained in this Part. When wording differs between the regulations and these explanatory notes, the regulations shall govern for enforcement purposes.)

(Source: Amended at 48 Ill. Reg. 9600, effective June 24, 2024)