NEVADA STATE JOURNAL
PROOF OF PUBLICATION

STATE OF NEVADA } ss.
COUNTY OF WASHOE }

being first duly sworn, deposes and says: That [illegible] of THE NEVADA STATE JOURNAL, a daily newspaper published at Reno, in Washoe County, in the State of Nevada.

That the notice BILL No. 148

of which a copy is hereto attached, was first published in said newspaper in its issue dated the 26th day of May, 1966

and was published in each issue of said newspaper thereafter for

the full period of 1 days, the last publication thereof being in the issue dated the 1 day of MAY, 1966.

Signed Dorothy Green

Subscribed and sworn to before me this 26th day of May, 1966

Richard J. Taylor
Notary Public.

NOTICE

NOTICE IS HEREBY GIVEN that Bill No. 148 was introduced before the Board of County Commissioners of Washoe County at a meeting held on the 25th day of May, 1966 and by the said Bill No. 148 it is proposed an ordinance be enacted entitled: "AN ORDINANCE TO AMEND, BY ADOPTING THE 1964 EDITION OF THE UNIFORM BUILDING CODE, COUNTY ORDINANCE 83 ENTITLED: 'AN ORDINANCE OF THE COUNTY OF WASHOE REGULATING THE ERECTION, CONSTRUCTION, ENLARGEMENT, ALTERATION, REPAIRS, MOVING, REMOVING, CONVERSION, DEMOLITION, OCCUPANCY, EQUIPMENT, USE, HEIGHT, AREA, LOCATION AND MAINTENANCE OF ALL BUILDINGS AND/OR STRUCTURES IN THE COUNTY OF WASHOE AND ADOPTING CONSTRUCTION SAFETY RULES AND REGULATIONS, PROVIDING FOR THE ISSUANCE OF PERMITS AND THE COLLECTION OF FEES THEREFOR, PROVIDING PENALTIES FOR THE VIOLATION THEREOF BY ADOPTING THE 1958 EDITION OF THE UNIFORM BUILDING CODE AND APPENDICES, AMENDMENTS, CHANGES AND ADDITIONS AS ARE NECESSARY TO MAKE THE SAME APPLICABLE TO THE CONDITIONS IN WASHOE COUNTY'."

NOTICE IS HEREBY GIVEN that typewritten copies of the said proposed ordinance have been filed with the County Clerk of the County of Washoe, State of Nevada, for use and examination by the public.

NOTICE IS HEREBY GIVEN that copies of the "1964 Edition of the Uniform Building Code" and appendices, and amendments, changes and additions thereto, designated as exhibit "A", have been filed with the County Clerk of Washoe County for use and examination by the public.

NOTICE IS HEREBY FURTHER GIVEN that Bill No. 148 will be presented for adoption for the last and final time at the regular meeting of the Washoe County Commissioners, Washoe County Courthouse on the 6th day of June, 1966 at 11:00 a.m.

H. K. BROWN
County Clerk and Clerk of the Board of County Commissioners, Washoe County, Nevada
May 26 only

805-99

ORD. 83

SUMMARY: An ordinance amending Ordinance 83 to adopt the 1964 Edition of the Uniform Building Code.

BILL NO. 148

ORDINANCE NO. 83

AN ORDINANCE TO AMEND, BY ADOPTING THE 1964 EDITION OF THE UNIFORM BUILDING CODE, COUNTY ORDINANCE 83 ENTITLED: "AN ORDINANCE OF THE COUNTY OF WASHOE REGULATING THE ERECTION, CONSTRUCTION, ENLARGEMENT, ALTERATION, REPAIRS, MOVING, REMOVING, CONVERSION, DEMOLITION, OCCUPANCY, EQUIPMENT, USE, HEIGHT, AREA, LOCATION AND MAINTENANCE OF ALL BUILDINGS AND/OR STRUCTURES IN THE COUNTY OF WASHOE AND ADOPTING CONSTRUCTION SAFETY RULES AND REGULATIONS, PROVIDING FOR THE ISSUANCE OF PERMITS AND THE COLLECTION OF FEES THEREFOR, PROVIDING PENALTIES FOR THE VIOLATION THEREOF BY ADOPTING THE 1958 EDITION OF THE UNIFORM BUILDING CODE AND APPENDICES, AMENDMENTS, CHANGES AND ADDITIONS AS ARE NECESSARY TO MAKE THE SAME APPLICABLE TO THE CONDITIONS IN WASHOE COUNTY."

THE BOARD OF COUNTY COMMISSIONERS OF WASHOE COUNTY DO ORDAIN:

Section 1. County Ordinance 83 is hereby amended by changing the Title of said Ordinance to read as follows:

> AN ORDINANCE REGULATING THE ERECTION, CONSTRUCTION, ENLARGEMENT, ALTERATION, REPAIR, MOVING, REMOVAL, CONVERSION, DEMOLITION, OCCUPANCY, EQUIPMENT, USE, HEIGHT, AREA, AND MAINTENANCE OF BUILDINGS OR STRUCTURES IN THE UNINCORPORATED AREA OF WASHOE COUNTY; PROVIDING FOR THE ISSUANCE OF PERMITS AND COLLECTION OF FEES THEREFOR; PROVIDING PENALTIES FOR THE VIOLATION THEREOF, AND REPEALING ALL ORDINANCES AND PARTS OF ORDINANCES IN CONFLICT THEREWITH; AND OTHER MATTERS PROPERLY RELATING THERETO.

64 - 508

Section 2. County Ordinance 83, Section 1 is hereby amended to read as follows:

> "Section 1. The 1964 Edition of the Uniform Building Code and appendices approved at the Forty-First Annual Business Meeting of the International Conference of Building Officials, September 30 - October 4, 1963, with such changes as are necessary to make the same applicable to conditions in the County of Washoe, and with such other changes as are desirable, all of which changes are marked "Exhibit A" and placed on file in the office of the County Clerk of Washoe County, Nevada, shall be and hereby is adopted by reference, incorporated herein and made a part hereof as if set forth in full."

Section 3. This Ordinance shall be in full force and effect from and after its passage and approval as prescribed by NRS §244.105.

Proposed on the 25th day of MAY, 1966.
Proposed by Commissioner Sauer
Passed on the 6th day of June, 1966.

VOTE:
Ayes: Commissioners: Streeter, Sauer, McKenzie McKissick and Cunningham
Nayes: Commissioners: None
Absent: Commissioners: None

J C McKenzie
Chairman of the Board

ATTEST:
County Clerk

This Ordinance shall be in force and effect from and after the 6th day of June, 1966.

"EXHIBIT A" THE 1964 EDITION OF THE UNIFORM BUILDING CODE AND APPENDICES APPROVED AT THE 41st ANNUAL BUSINESS MEETING OF THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, SEPTEMBER 30 - OCTOBER 4, 1963, WITH SUCH CHANGES AS ARE NECESSARY TO MAKE THE SAME APPLICABLE TO CONDITIONS IN THE COUNTY OF WASHOE

Revisions and additions as per
County Ordinance No. 83
Passed and adopted June 6, 1966

General All references of the basic code document to "city" "municipality" and the like shall be construed to mean the County of Washoe. Where the word "mayor" appears, include County Commissioners.

Chapter 2 - Organization and Enforcement

Section 205 delete the sum "$300" and substitute "$500"; delete the words "90 days" and substitute the words "6 months".

Chapter 3 - Permits and Inspections

To section 301 amend:

(c) Amend to read - Plans and Specifications
With each application for a building permit, and when required by the building official for enforcement of any provisions of the Code, two sets of plans and specifications shall be submitted. The building official may require plans and specifications to be prepared and designed by an engineer or architect licensed by the state to practice as such. Plot plans shall be drawn and verified by a registered architect, civil engineer, licensed contractor or land surveyor.

To section 301 add:

(d) A person not in conformance with the State Contractor's Law will not be issued a permit.

1. The Building Official may issue a comprehensive permit (including permits required for specialty contractors) be taken out by general contractors on all buildings.
2. Before such permit is issued, the NAMES, ADDRESSES AND STATE LICENSE NUMBERS of all sub-contractors to be used under the General Contract shall be furnished to the Building Official.

(e) The address of Building shall be posted by the Contractor in the location designated by the Building Department.

(f) House Moving. The owner of a building which is proposed to be moved to a new location within the jurisdiction of this code must post with the Building Inspector a bond in an amount estimated by the Building Inspector to bring the structure into conformance with all applicable codes, but not to exceed $3,500. in cash, by certified check or with a surety company and in a form approved by

the Building Inspector. The bond is to guarantee performance by the owner to do all work necessary to complete the building to make it conform with the applicable building codes and State and County laws, ordinances and regulations. A permit will not be issued until the bond is posted. The work to make the structure conform to the building codes must be completed within one year. The work must be completed and the bond released before a certificate of occupancy will be granted. The house moving contractor is required to ascertain that a proper permit has been secured and a bond posted before the building is moved from its existing location. Failure by the house moving contractor to ascertain that a permit has been issued is a violation of this code.

Section 303 - add new par:

(c) An inspection fee of $1.00 plus .10¢ a mile will be charged for all re-inspections, change of license and houses to be moved.

(d) Inspection cards lost, a charge of one dollar ($1.00) will be made for a duplicated card.

Chapter 5 - Classification of all Buildings by Use or Occupancy and General Requirements for all Occupancies

Section 504 - Delete all of Section 504 (a) and substitute:

(a) Location on Property, delete and substitute: Until such time as zoning ordinances specifically altering these requirements and adopted, the following minimum yards shall be required for all construction within the unincorporated area of the county, yards being defined as the distance between the property boundary or access easement line and the building or any portion thereof, including porches and attached structures.

Front Yards: not less than 55' from center line or 30' from the property line whichever is least.

Side Yards: 10% average width - need not be more than 10 feet and not less than 5 feet.

Back Yards: 15 feet.

Exception: Minor detached accessory buildings may be located not less than 5 feet from side and back property lines.

(b) Openings in exterior walls in table 5-A shall be changed so as to read "not permitted less than five (5) feet for all occupancies".

Section 510 - add: Access

(a) Access ways for the purposes of this section shall be defined as ways dedicated to public use or secured by easement to the owner of the parcel proposed to be built upon for the full length extending to a suitable

dedicated public way. Required width of access ways shall refer to the full dedicated or easement width, without reference to the width of developed roadway within such width.

(b) In non-subdivided areas where no official approved map is on file in the County Recorder's Office, an applicant for a building permit must demonstrate by title company report or other means acceptable to the Building Official the existance of a required access way before a building permit will be issued.

(c) No commercial use will be permitted on any parcel of land not served by an access way at least 50 feet in width.

(d) No dwelling construction will be permitted on any parcel of land not served by an access way as the same is set by the County Subdivision ordinances and regulations.

(e) Five or more dwelling sites, each of at least a minimum required area, must be served by an access easement of 50 feet, or more, in width, approved by the Building Inspector or be served by a dedicated public way. Not more than four dwelling sites, each of at least a minimum required area, must be served by an access easement of not less than 20 feet in width, subject to the following conditions:

(1) That two copies of a map showing the proposed layout to scale, together with such supplementary information as may be deemed necessary by the Regional Planning Commission, have been submitted to be approved by the Regional Planning Commission prior to issuance of any building permit for such proposed construction.

(2) That the gift, sale, trade or barter of any portion of the land on which a dwelling unit or units has been erected under the provisions of this Section resulting in a condition which does not meet the terms of this Section shall be considered a violation of this Ordinance. (Amended by Bill 174 3-15-67)

(f) All zoned areas must comply with County Ordinance 57 before a building permit will be issued.

Section 1105 - Light, Ventilation, and Sanitation
Add paragraph at end of Section 1105 to read:
Special provisions: Commercial dining rooms and kitchens: Ceilings shall have a minimum height of nine feet.

Chapter 22 - Type V Buildings

Section 2202 - Sheathing
First line - delete the words, "THREE STORIES IN HEIGHT"
Second line - delete the words, "OF THE FIRST STORY"
Exception - For Exterior Walls A plywood sheet of normal 1/2" thickness of exterior grade with a ship lap joint and of a standard pattern, with grooves to maintain a minimum of 3/8" of undisturbed material and approved by the Building Official, may be considered as a combination of sub-sheathing and weather-board.

Chapter 23 - Live and Dead Loads

Section 2305 - Delete Section 2305 and Delete Table 23-B
Add the Following:

Roof shall sustai, within the stress limitations of this Code, all "dead loads" plus unit live loads" as set forth in Tables No. 23-B1 and 23-B2. The live loads shall be assumed to act vertically upon the area projected upon a horizontal plane.

Trusses and arches shall be designed to resist the stresses caused by unit live loads and one-half or the span if such loading results in reverse stresses, or stresses greater in any portion than the stresses produced by the required unit live load upon the entire span. For roofs whose structure is composed of a stressed shell, framed or solid wherein stresses caused by any point loading are distributed throughout the area of the shell, the requirements for unbalanced unit live loads design my be reduced 50 percent.

Snow load, full or unbalanced, or wind load shall be considered in place of loads as set forth in Table No. 23-B1 where such loading will result in larger member of connections.

TABLE 23-B1 Roof Live Loads - Pounds per Square Foot
Elevations below 5000 Ft. above sea level

Roof Slope	Live Loads
Flat or rise less than 4 inches per foot. Arch or Dome with rise less than 1/8 of span	20 lbs./sq. ft.
Rise 4 inches per foot to less than 12 inches per foot Arch or dome with rise 1/8 of span to less than 3/8 of span	16 lbs./sq ft.
Rise 12 inches per foot or greater	16 lbs./sq. ft.

TABLE 23-B2 Roof live Loads - Pounds per Square Foot
ELEVATIONS AT OR ABOVE 5000 ft. ABOVE SEA LEVEL[3]

ELEVATION[L] Above Sea Level in Feet	SNOW LOAD IN LBS./Sq. Ft.[2] LAKE TAHOE BASIN	ALL WASHOE COUNTY except LAKE TAHOE BASIN
5,000		40
5,500		80
6,000	155	100
6,500	165	120
7,000	175	140
7,500	185	150
8,000	200	160
8,500	225	170
9,000	250	190
9,500	275	210
10,000	300	250

1. Intermediate Values may be interpolated by proportion.

2. Deviations from the above set forth snow loadings above 5000 feet elevation may be permitted by the Building Official provided the snow load and conditions in each individual case are derived, and certified to, by a Registered Structural Engineer who can show experience in snow load evaluation.

3. In the design of buildings and structures above the 5000 ft. elevation, consideration shall be given to the following:

   A. Unbalanced loading on roofs.

   B. Drifting due to adjacent obstructions.

   C. Accumulation in valleys and adjacent to parapet walls and chimneys.

   D. Ice loadings on cornices.

   E. Possible impace loadings from snow falling on structure from higher roofs.

   F. Effect on structure from dynamic loading caused by snow sliding off roof.

   G. Snow sliding off roof and dynamically loading side embankment adjacent to the structure.

   H. Permanent automatic roof heating system

   I. Protection of entrances and exits from danger of falling icicles and snow sliding off pitched roofs.

4. 80% of the tabulated values in Table 23-B2 may be used with roofs having a pitch of between 6 in 12 and 12 in 12. 60% of the tabulated values in Table 23-B2 may be used with roofs having a pitch of excess of 12 in 12.

Section 2307 Wind Pressure Amend Subsection (b) to read as follows:

(b) In computing wind pressures of various height zones above ground under Table 23E Wind loads shall be as given in Column 2, headed by "25 pounds per square foot" "wind pressure map area".

Chapter 2 4 - Masonry

Section 2404 Test Add Subsection (d) Certified Test as follows:
(d) Manufacturers of brick, concrete masonry units structural clay tile, gypsum units, structural glass block and all other materials used in masonry construction including cement and aggregates shall burnish tne Building Official, upon demand with certified copies of test performed to show compliance with the requirements of this Section. The tests shall be performed by an acceptable laboratory.

Chapter 25

Table No. 25-A1 Allowable Unit Stresses for Machine Stress-Rated Lumber
Normal Loading

Extreme Fiber In Bending "f" (in p.s.i.)	Modulus of Elasticity "E" (in p.s.i.)	Tension and Compression Paralled to Grain "f" and "c" (in p.s.i.)	Compression Perpendicular to Grain (in p.s.i.)[2]			
			Douglas Fir and Larch	Western Hemlock and White Fir	Ponderosa Pine	Engelmann Spruce
900	1,000,000	725	390	365	310	215
1200	1,200,000	950	390	365	310	215
1500	1,400,000	1200	390	365	310	215
1800	1,600,000	1450	390	365	310	215
2100	1,800,000	1700	415	365	310	215
2400	2,000,000	1925	455	365	310	215
2700	2,200,000	2150	455	365	310	215
3000	2,400,000	2400	455	365	310	215
3300	2,600,000	2650	455	365	310	215

HORIZONTAL SHEAR "H"
(in p.s.i.)

Douglas Fir and Larch		Western Hemlock		White fir and Engelmann Spruce		Ponderosa Pine	
2"x4"	2"x6" and Wider	2"x4"	2"x6" and Wider	2"x4"	2"x6" and Wider	2"x4"	2"x6" and Wider
130	75	110	65	100	60	115	70
130	75	110	65	100	60	115	70
130	105	110	85	100	80	115	90
130	105	110	85	100	80	115	90
130	105	110	85	100	80	115	90
130	105	110	85	100	80	115	90
130	105	110	85	100	80	115	90
130	105	110	85	100	80	115	90
130	105	110	85	100	80	115	90

1. The above stresses are for lumber used on edge. When loaded flatwise "f" may be increased 18 percent.

2. The values for compression perpendicular to the grain are for lumber that will be continuously dry in use as in most covered structures. For wet conditions of use reduce the values 33 1/3 percent.

INSERT NEW TABLE NO. 25-A2 - STRUCTURAL GLUED - LAMINATED CALIFORNIA REDWOOD TIMBER

Table No. 25-A2 Structural Glued-Laminated California Redwood Timber

Part A - Members stressed principally in Bending - Loaded perpendicular to Wide Face of Laminations

Dry Conditions of Use[1]

Combination	Extreme Fiber in Bending "f"	Tension to grain "f"	Parallel Compression Parallel to Grain "c"	Horizontal Shear "H"	Compression Perpendicular to Grain "c"
A	2200	2000[2]	2200	125	325
B	2200	2000[2]	2200	125	325
C	2200	2000	2000	125	325

Modulus of Elasticity "E" Dry Conditions of Use, 1,300,000

WET CONDITIONS OF USE[1]

A	1800	1600[2]	1600	110	215
B	1800	1600[2]	1500	110	215
C	1800	1600	1500	110	215

Modulus of Elasticity "E" Wet conditions of Use 1,200,000

Allowable unit stresses for nominal conditions of lading pounds per square inch. If slope of grain in all laminations is no steeper than one in twenty, the tension stress of combination "A" and "B" can be increased to 2200 lbs. per square inch for dry conditions of use, and 1800 lbs. per square inch for wet conditions of use.

PART B-MEMBERS STRESSED PRINCIPALLY IN AXIAL COMPRESSION, AXIAL TENSION, OR LOADED IN BENDING PARALLED AND PERPENDICULAR TO WIDE FACE OF LAMINATIONS

DRY CONDITIONS OF USE[1]

Combination	Compression Parallel to Grain	Tension Parallel to Grain	Extreme Fiber in Bending "f" when Loaded Perpendicular to wide Face of Lamination	Extreme Fiber in Bending "f" when Loaded Parallel to Wide Face of Lamination	Horizontal Compression Perpendicular to Grain	
	"c"	"f"	"f"	"f"	"H"	"c"
D	2200	2200	2200	2200	125	325
E	2000	2000	2000	1400	125	325
F	1800	1800	1400	1000	125	325

Modulus of Elasticity "E" Dry conditions of Use 1,300,000

WET CONDITIONS OF USE[1]

D	1600	1800	1800	1800	110	215
E	1500	1600	1600	1100	110	215
F	1300	1500	1100	800	110	215

Modulus of Elasticity "E" Wet Conditions of Use 1,200,000

1. Allowable unit stresses are for normal conditions of loading, lbs. per square inch.

PART C-GRADE REQUIREMENTS FOR TABULATED ALLOWABLE UNIT STRESSES

Combination	Number of Laminations	Minimum Grade of Laminations Top or Bottom Grade	Number Inner	Grade of Laminations	Slope of Grain Outer 10%	Remainder Lamination
A	4 or more	L1 or L2	-	L1 or L2	1:20	1:15
A-All Heart	4 or more	L1	-	L1	1:20	1:15
B	4 or more	L1 or L2	1	L3	1:20	1:15
B-All Heart	4 or more	L1	1	L3	1:20	1:15
C	4 or more	L1 or L2	2-	L4 or L5	1:20	1:15
C-All Heart	4 or more	L1	2	L4	1:20	1:15
D	All	L1 or L2	-	L1 or L2	1:20	All
D-All Heart	All	L1	-	L1	1:20	All
E-All Heart	All	L3	-	L3	1:15	All
F	All	L4 or L5	-	L4 or L5	1:15	All
F-All Heart	All	L4	-	L4	1:15	All

Chapter 26 Concrete

Section 2605 - Add to end of first paragraph:

Continuous inspection of all concrete, when required by Section 305 (a) shall include inspection of batching and mixing of the concrete. Compression tests on samples of concrete from the place of pouring shall be made whenever the f'c value of which the concrete was designed is greater than 2500 pounds per square inch. The test shall be the cylinder test as specified in the first paragraph of this section.

Chapter 28 - Evcavations, Foundations and Retaining Walls

TABLE NO. 28-A - FOUNDATIONS FOR STUD BEARING WALLS MINIMUM REQUIREMENTS

Number of Stories	Thickness of Foundation Wall (inches) Concrete	Unit Masonry	Width of Footing (inches)	Thickness of Footing (inches)	Depth of Foundation Below Natural Surface of Ground and Finish Grade (inches)
1	8	8	16	8	24
2	8	8	18	8	24
3	10	10	20	10	24

Add to Footnote 28A

In leiu of Table 28A, foundations and footings may be designed by registered architects or engineers.

Add to end of Section 2806A - The depth of frost penetration shall be assumed to be twenty-four (24) inches. All footings shall therefore be at least twenty-four (24) inches below finished grade. (ref. Table No. 28-A and Section 2806 (a)).

Chapter 31 - Floor Construction

Section 3103 - Last paragraph, change to read:

" A thirty-inch by twenty-four inch (30" x 24") minimum access crawl hole shall be provided in exterior foundation wall to under floor space.

Section 3321 (a) Boiler Rooms - Add:

All electrical equipment in boiler rooms shall comply with the Washoe County Electrical Code.

Chapter 37 - Chimneys, Flues, Vents and Fireplaces

Section 3702 - Structural Designs - Add to paragraph (k):
Inlets-There shall be only one (1) inlet connection to a flue.

Chapter 44 - Protection of Pedestrians During Construction or Demolition

Section 4407 - Add:
When an abandoned pit or excavation occurs on any property, and is within three (3) feet of a sidewalk or thoroughfare, the owner shall at all time protect same with a substantial handrail barricade not less than three (3) feet high all along the side next to the sidewalk or thoroughfare and extending fifteen (15) feet at right angles from said sidewalk or thoroughfare at both ends.

Chapter 45 - Permanent Occupancy of Public Property

Section 4503 - Change first paragraph to read:
The space adjoining a building below a sidwalk on public property may be used and occupied in connection with the building for any purpose as may be permitted and designated by the Washoe County Commissioners in writing, on condition that the right so to use and occupy may be revoked by the County at any time and that the owner of the building will construct the necessary walls and footings to separate such space from the building and pay all cost and expense attendant therewith.

Chapter 47 - Lathing, Plastering and Installation of Wallboard

Table No. 47-J - Add footnote to read:
5/8" Gypsum Sheetrock shall be the minimum thickness permissible on ceiling with joist spacing greater than 16". All Gypsum Sheetrock shall be applied according to Manufacturers' recommendations.

APPENDIX

Chapter 13 - Existing Buildings

Section 1309
(b) Change "two stories" to read "one story" in height.
Delete (c) and substitute the following:
(c) Effective Date Immediately following the adoption of the code the Building Official shall cause and inspection to be made of the existing building affected by the Chapter to determine compliance or non-compliance therewith. The Building Official shall then notify the owners of said building of any alterations necessary to make the buildings meet the provisions of this Chapter.

No additions, remodeling, or alterations, other than normal maintenance, shall be permitted on these buildings until they meet the provisions of this Chapter.

Chapter 51 - Heat Producing Appliances

Section 5106
Delete the EXCEPTION to 5106 (c)

Chapter 70 - Excavation and Grading

Section 7001 - Purpose

ADD . . . and regulating the proper and unobstructed flow of water in natural drainage channels.

Section 7003 - 1 (b)

Change 5 feet (5') to 2 feet (2').

Add: Paragraph (7)

Anything to the contrary notwithstanding no grading permit shall be issued without express, written consent of the Board of County Commissioners if fill as herein defined is to be placed below a high water line in any natural body of water in the unincorporated area of Washoe County. Natural bodies of water shall include, but not be limited to, Lake Tahoe, Washoe Lakes and the Truckee River in the unincorporated area of Washoe County. The Board of County Commissioners may, in its' discreption refuse to consent to the issuance of a grading permit if such fill is or would be a hazard or nuisance or if such fill adversely affects the public health, safety or welfare, or if such fill is not or would not be in the public interest.

Section 7005 - Definitions

ADD . . . DRAINAGE CHANNEL shall mean those natural channels, the centerline of which are indicated on the Truckee Meadows Drainage Map, attached hereto and made a part hereof, or any addition or amendments thereto, or any other natural channel or drain which is not specifically shown in said Drainage Map, but which may be shown by surveys, hydrology and hydraulic calculations, or by other means to carry natural runoff or drainage waters.

SETBACK shall mean that area within a specified distance from the centerline of drainage channels within which area no buildings, fences, earth or rock fills or other construction which would obstruct or interfere with the flow of water in drainage channels will be permitted.

Section 7006 (b7)

ADD . . . Computation of runoff and flood flow quantities shall include but not be limited to the following methods and data:

A Use of the Rational Method of computing runoff for drainage area less than three (3) square miles, where Q = CiA.

Q = maximum rate of runoff in cubic feet per second.

C = runoff coefficient

i = Average rainfall intensity, in inches per hour, for the period of maximum rainfall of a given frequency of occurence having a duration equal to the time required for the runoff originating during said period of maximum rainfall to flow from the remotest part of the drainage area to the point under design (time of concentration).

A = Drainage area, in acres, tributary to the point under design.

B = Use of hydrograph methods approved by the Building Official for computation of runoff for area larger than three (3) square miles.

C = Use of the following rainfall-intensity duration frequency curves "A" or "B" or evidence of an alternate analysis of flood flow frequency or rainfall-intensity duration frequency acceptable to the Building Official. Refer to the Truckee Meadows Drainage Map for the area where frequency curves "A" and "B" apply.

For areas not shown on the Truckee Meadows Drainage Map and for areas where the average elevation of the drainage area exceed 5,500 feet in elevation, rainfall-intensity duration frequency curves shall be developed using data published by the U.S. Weather Bureau or other flood flow frequency or rainfall-intensity duration frequency data acceptable to the Building Official.

The following return frequencies shall be used in computing flood flow quantities, unless a higher design standard may be required by any Master Plan of Drainage which may hereafter by adopted by

---

1. Five (5) years for incidental drainage channels (drainage area less than 1000 acres).

2. Five (5) years for secondary drainage channels (drainage area 1000 to 5000 acres).

3. Twenty-five (25) years for major drainage channels (drainage area greater than 5000 acres).

Change third paragraph under Item C to read:

Flood flow quantities shall not be required to be computed for rainfall duration of less than 20 minutes unless in the opinion of the design engineer or the building official a shorter duration time may be required due to configuration or topography of the drainage area.

D = Use of the following listed run-off coefficients or evidence of the adequacy or lesser coefficients acceptable to the Building Official.

Description of Area	Runoff Coefficients
Business:	
Downtown Area	0.70 to 0.95
Neighborhood Area	0.50 to 0.70
Industrial:	0.50 to 0.90
Residential	
Single family areas	0.40 to 0.50
Multi-units	0.40 to 0.75
Parks, playgrounds, cemeteries	0.20 to 0.35
Unimproved area, including agricultural areas	0.15 to 0.30

Coefficients used shall be based on the projected use of land within the drainage basin.

A composite run-off coefficient based on the percentage of different types of surface in the drainage area may be developed.

The coefficients are based upon the assumption that the design storm does not occur when the ground surface is frozen.

Change Item "E" to read:
Use of the following formulas for determining the time of concentration, using a minimum build up time of twenty (20) minutes. The build up time may be shortened if, in the opinion of the design engineer or building official, a shorter time is required due to the configuration or topography of the drainage area.

$$tc_1 = 20 + \frac{L}{V \times 60} \qquad tc_{2,3,4,} + \frac{L}{V \times 60}$$

tc_1 = time of concentration at initial inlet or design point.

$tc_{2,3,4,}$ = time of concentration at any design point.

L = length in feet from top of watershed to initial inlet, or length of channel or conduit between design points.

V = Overland, channel or conduit velocity in feet per second.

Consideration should be given to the fact that in irregularly shaped drainage areas, a part of the area having a shorter time of concentration and thereby subject to a higher intensity-rainfall may cause a greater run-off rate at a design point than that contributed by the entire area with its longer concentration time and correspondingly lower intensity of rainfall.

Design calculations of run-off and hydraulic computation for channels, conduits and other drainage structures shall be submitted along with the detailed plans. All drainage design shall make provisions for the discharge of drainage water into natural drainage channels at the discharge of any improvements. Drainage improvements will not be permitted to discharge into irrigation ditches except under conditions acceptable to the Building Official.

Section 7008 (b)
Add New Paragraph:

ADD . . . In all cases the following minimum setbacks shall be maintained from the centerline of drainage channels and major irrigation ditches.

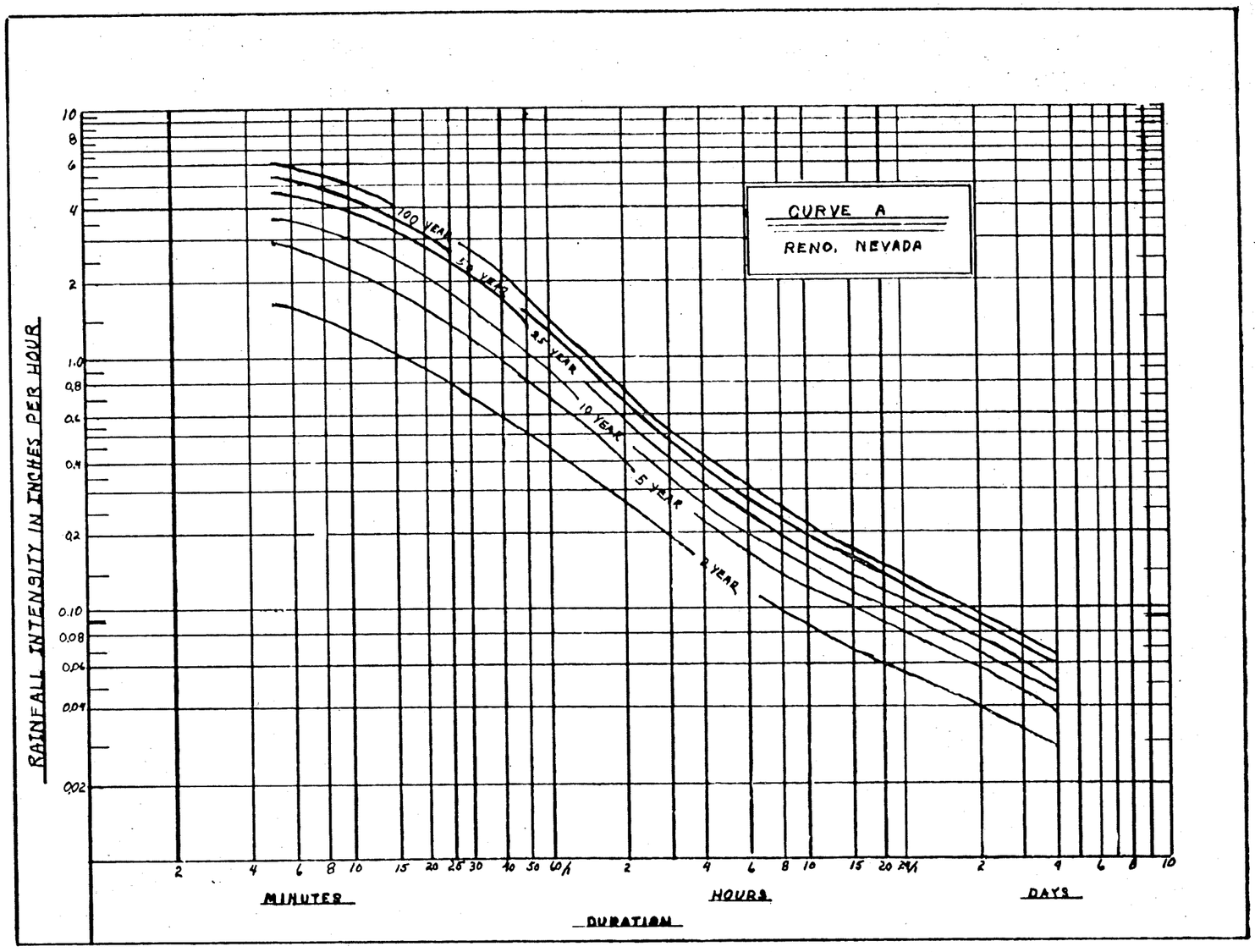
1. 15 feet from the centerline of incidental drainage channels (drainage area 1000 to 5000 acres).

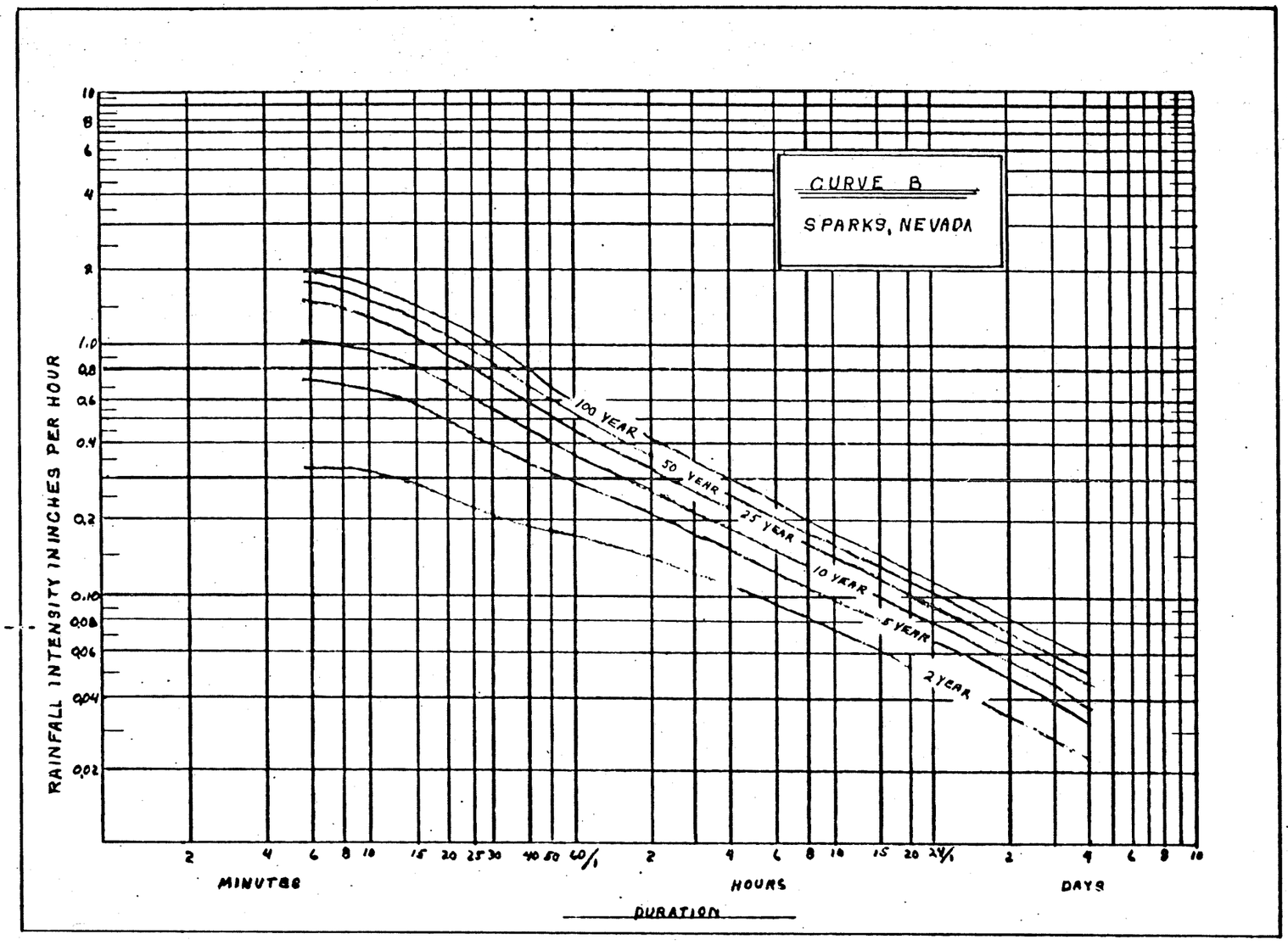
2. 25 feet from the centerline of secondary drainage channels (drainage area 1000 to 5000 acres).

3. 50 feet from the centerline of major drainage channels (drainage area greater than 5000 acres).

The setbacks may be modified upon submission of plans for construction of improvements to drainage channels. Improvements shall provide capacity within drainage channels for the free and unobstructed passage of the required flood flow quantity as determined under Section 7006 of the Chapter.

The Building Official may require that any such improvement conform to any master plan of drainage as may be presently or hereafter adopted by the County of Washoe.


CURVE A
RENO, NEVADA
100 YEAR
50 YEAR
25 YEAR
10 YEAR
5 YEAR
2 YEAR
RAINFALL INTENSITY IN INCHES PER HOUR
10
8
6
4
2
1.0
0.8
0.6
0.4
0.2
0.10
0.08
0.06
0.04
0.02
2 4 6 8 10 15 20 25 30 40 50 60/1 2 4 6 8 10 15 20 24/1 2 4 6 8 10
MINUTES
HOURS
DAYS
DURATION


CURVE B
SPARKS, NEVADA
100 YEAR
50 YEAR
25 YEAR
10 YEAR
5 YEAR
2 YEAR
RAINFALL INTENSITY IN INCHES PER HOUR
10
8
6
4
2
1.0
0.8
0.6
0.4
0.2
0.10
0.08
0.06
0.04
0.02
2 4 6 8 10 15 20 25 30 40 50 60/1 2 4 6 8 10 15 20 24/1 2 4 6 8 10
MINUTES
HOURS
DAYS
DURATION

(41)